1941
Year Book

Anno Domini 1941

January

S	M	T	W	T	F	S
.	.	.	1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	.
.	.	.	.	.	.	.

February

S	M	T	W	T	F	S
.	.	.	.	.	.	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	.
.	.	.	.	.	.	.

March

S	M	T	W	T	F	S
.	.	.	.	.	.	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31	.	.	.	.	.

April

.	.	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	.	.	.

May

.	.	.	.	1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

June

1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	.	.	.	.	.

July

.	.	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31	.	.
.	.	.	.	.	.	.

August

.	.	.	.	.	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31	.	.	.	.	.	.

September

.	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	.	.	.	.
.	.	.	.	.	.	.

October

.	.	.	1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	.
.	.	.	.	.	.	.

November

.	.	.	.	.	.	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	.	.	.	.	.	.

December

.	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	.	.	.
.	.	.	.	.	.	.

The
1941
YEAR BOOK

Richard W. Janson

A
Personal Chronicle
For One Year
of
Richard Janson

NALARI, NALARI!

Domestic and Foreign Postage Rates

(Revised at time of going to Press.)

Domestic mail matter includes matter deposited in the mails for local delivery or for transmission from one place to another within the United States, or to, or from, or between the possessions of the U. S. and is divided into four classes.

First Class includes all letters and sealed parcels, except parcels sealed under special permission (with approved label). It also includes any open letter or parcel which contains writing except that there may be included a single invoice and still retain 4th class rates.) Type written work and carbon copies are first class matter.

First class mail may be registered or sent C. O. D. but cannot be insured.

Letters and other first-class matter as described above, 3c for each ounce or fraction thereof.

Letters for **Local Delivery** 2 cents per ounce.

Drop Letters mailed for delivery at the office where deposited and where carrier delivery service has not been established, 1c for each ounce or fraction thereof.

Postal Cards, Private Mailing or Post Cards within government size limits, written or printed, (get ruling on over and under sizes) 1c each.

SECOND CLASS (transient). Complete copies of newspapers or periodicals, entered at P. O. as second class matter. When mailed by other than publishers, 1c for each two ounces or fraction thereof, regardless of weight or distance, or Parcel Post if cheaper.

Second class matter may be registered but cannot be insured or sent C. O. D.

THIRD CLASS includes circulars, and other matter wholly in print, (except second class publications), proof sheets, corrected proof sheets and manuscript accompanying same, merchandise (including farm and factory products) and all other mailable matter not included in the first, or second, classes. Weight limit of this class: 8 ounces, 1½c for each 2 oz. or fraction thereof. Over 8 ounces the fourth class (Parcel Post) rates apply.

Exception: Books, catalogues, seeds, bulbs, roots, cuttings, scions, and plants (up to 8 oz.) 1c for 2 oz. or fraction thereof.

Special rates for bulk mailings. See your postmaster.

Third class matter may be registered or insured or sent C. O. D.

Restricted delivery on registered articles, if desired, 10c additional.

Return receipt on registered articles, if desired 3c additional. Return receipt on registered articles, showing address where delivered, 23 cents additional.

FOURTH CLASS (Parcel Post) must weigh in excess of eight ounces: includes books, circulars, and other matter wholly in print, proof sheets, corrected proof sheets and manuscript copy accompanying same, merchandise (including farm and factory products), and all other mailable matter not included in the 1st, 2nd and 3rd classes.

Size limit: 100 inches in length and girth combined. NOTE:—Parcels over 84 inches in length and girth combined, and less than 10 lbs. in weight must be prepaid at 10 lb. rate.

Weight limit: 70 lbs.

Parcels containing fourth-class matter (parcel post) are mailable only at post offices, branch post offices and lettered, named or numbered stations.

Parcels must bear the return card of the sender otherwise they will not be accepted for mailing.

Fourth-class matter may be insured or sent C. O. D. up to a maximum of $200 (per parcel).

Zone	Distance	First Lb.	Additional Pounds	Wgt. Limit Lbs.
1	Local within 50 mi.	.08	1.1c	70
2	50-150 "	.08	1.1c	70
3	150-300 "	.09	2c	70
4	300-600 "	.10	3.5c	70
5	600-1000 "	.11	5.3c	70
6	1000-1400 "	.12	7c	70
7	1400-1800 "	.14	9c	70
8	1800 and over	.15	11c	70

Any fraction of a cent resulting in the total postage on a parcel must be counted as a full cent. Local delivery within the city where mailed, 7c for the first pound or fraction thereof, and 1c for each additional 2 pounds or fraction thereof. On parcels collected on rural routes, the postage is to be 2 cents less per parcel than shown above when intended for local delivery, and 3c less per parcel when for other than local delivery, provided parcels are endorsed "Mailed on rural route."

Library books, from non-profit organizations, if sent out or returned, within 3 zones, or within the state, 3 cents for the first pound and one cent for each additional pound.

See local postmaster for "Book and Catalog" rates.

INSURANCE RATES: 3rd and 4th Class Mail

Values to $ 5.00 ..... 5 cts.
Values to $ 25.00 ..... 10 cts.
Values to $ 50.00 ..... 15 cts.
Values to $100.00 ..... 25 cts.
Values to $150.00 ..... 30 cts.
Values to $200.00 ..... 35 cts.

Maximum for Phillipine Isands is $100.00

Restricted delivery, if desired, 10c additional.

Return receipt, 3c additional.

Return receipt, showing address where delivered, 23 cents additional.

C. O. D. RATES: 1, 3, or 4th Class Mail

To $ 5.00 . . . 12 cents To $100.00 . . . 32 cents
To $ 25.00 . . . 17 cents To $150.00 . . . 40 cents
To $ 50.00 . . . 22 cents To $200.00 . . . 45 cents

Restricted delivery, if desired, 10c additional.

1st class C. O. D. articles may be registered in addition for combination rates as follows:

Domestic and Foreign Postage Rates

Amount of C. O. D. charges and limits of indemnity payable up to $200.00	C. O. D. fee (including registration)
Not over $10.00	$0.25
From $ 10.01 to $50	.30
From $ 50.01 to $100	.40
From $100.01 to $200	.50

It should be borne in mind that, in no case, can the collections on any C. O. D. article exceed $200; however indemnity protection (against loss, rifling, or damage) in excess of $200, can be procured by the prepayment of combination C. O. D. Registry fees (in addition to regular 1st class postage, etc.), as follows:

$200 to $300..... .60	$600 to $700.....1.00
$300 to $400..... .70	$700 to $800... 1.10
$400 to $500..... .80	$800 to $1000...1.20
$500 to $600..... .90	

PREFERRED SERVICE FEATURES

	Fees in addition to Regular Postage		
	up to 2 lb.	2 to 10 lb.	over 10 lb.
Special Delivery (First Class Mail ONLY)	10c	20c	25c
Special Delivery (2nd, 3rd and 4th Class Mail). Expeditious dispatch transportation same as first class mail, INCLUDING IMMEDIATE DELIVERY after arrival at post office address.....	15c	25c	35c
Special Handling (Fourth Class Mail only) Expeditious dispatch transportion and delivery same as first class, but DOES NOT include Special Delivery.....	10c	15c	20c

Mark envelopes or wrappers "Special Delivery" or "Special Handling", as the case may be, and add below an inscription to ndicate the fee paid for the special service, in this manner: "Fee Paid.....cents."

Use distinctive "Special Delivery" or "Special Handling" stamps if obtainable.

AIR MAIL—Domestic Air Mail postage rate is 6c for each ounce, or fraction thereof, regardless of distance or routing.

This figure includes all transportation to and from the various routes which now reach directly or indirectly, most of the important cities in the country.

Although Air Mail is used mainly for letters, any mailable matter up to 70 pounds in weight and not exceeding 100 inches in length and girth combined, may be carried (excepting such articles as are subject to damage by freezing).

In order that air mail may be quickly recognized and identified, the P. O. Department urges the use of distinctive Air Mail stamps, and distinctive Air Mail envelopes (with horizontal red, white and blue stripes or alternate red, white and blue parallelogram borders) or similarly striped labels.

If ordinary envelopes are used, it is recommended that two horizontal blue lines be drawn across the envelope, about 1⅛ inch from the top. Envelopes must be prominently marked "VIA AIR MAIL"; parcels, may be sent as Insured or C. O. D. if otherwise conforming to third or fourth class requirements.

All other Air Mail may be registered.

FOREIGN MAIL MATTER
LETTER AND CARD POSTAGE

LETTERS: 3 cents per ounce or fraction thereof. **POST CARDS:** Single 1 cent; double 2 cents to the following.

Alaska, Canal Zone, Guam (U. S. Samoa), Hawaii, Territory of Manua (U. S. Samoa), Phillipine Islands, Porto Rico, Samoa, U. S. St. Croix, St. Thomas, Tutnila (U. S. Samoa), U. S. Naval Hosp., Yokohoma, Japan, Virgin Isl., U. S.

LETTERS: 3 cents per ounce, or fraction thereof. **POST CARDS:** Single 2 cents double 4 cents to the following:

Alhucemas Isl., Andorra, Argentina, Balearic Islands, Bolivia, Brazil, Canada, Canary Islands, Ceuta, Chafarinas or Zafarani Isl., Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Rep. of, Labrador, Melilla, Mexico, Morocco (Spanish Zone), Newfoundland, Nicaragua, Panama, Rep. of Paraguay, Penon De Velez, De La Gomera, Peru, Rio de Oro, Salvador, El, Spain and certain Spanish possessions, Spanish Guinea, Tangier, Urugyua, Venezuela, Zafrina Island.

LETTERS: 5 cents first ounce or fraction thereof, 3 cents each additional ounce or fraction thereof. **POST CARDS:** Single 3 cents, double 6 cents, to all countries not listed above.

(Note: Picture and souvenir post cards, without a message other than a greeting of not more than 5 words, may be sent at the printed matter rate of 1½c for each 2 ounces in the foreign mails.)

Registration: Applicable, if desired, to all letters and articles in the regular mails to all foreign countries (parcel post registration restricted in some instances).

International (Foreign) Parcel Post—(See your Postmaster).

Special Delivery: Fee 20 cents in addition to full regular postage to the following countries: Argentina, Australia, Bahamas, Belgium, Brazil, British Guiana, British Honduras, (Belize only), Chile, China, Cuba, Czechoslovakia, Cyprus, Danzig, Denmark, Dominican Republic, Ecuador, (Quito & Guayaquil only) Egypt, Estonia, Finland, France, Germany, Gibralta, Great Britain, Guatemala, Hungary, Ireland, Italy, including Libya, (Tripolitania and Cyrenaica), Etria & Somaliland, Japan, Kenya and Uganda, Latvia, Lithuania, Luxemberg, Mexico, Morocco (Spanish), Netherlands, Northern Ireland, Norway, Nyasaland Protectorate, Palestine, Panama, Poland, Portugal, St. Pierre and Miquelon, Sweden, Switzerland Trans Jordan. and Union of South Africa. The (French) word "EXPRES" should be boldly marked in red ink directly below (but never on) the stamp. Special Delivery may also be applied to Canada and Newfoundland (including Laborador) (Certain places) but it is permitted only on letters, whereas to the other foreign countries mentioned above, it may be used on all regular mails, excepting parcel post. Special Delivery fees on Canada up to 2 lbs. 10 cents, over 2 Lbs. up to 10 Lbs. 20 cents, over 10 Lbs. 25 cents.

Air Mail: For rates consult your postmaster.

Table of Days Between Two Dates

A TABLE OF THE NUMBER OF DAYS BETWEEN ANY TWO DAYS WITHIN TWO YEARS

Day Mo.	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	1	32	60	91	121	152	182	213	244	274	305	335
2	2	33	61	92	122	153	183	214	245	275	306	336
3	3	34	62	93	123	154	184	215	246	276	307	337
4	4	35	63	94	124	155	185	216	247	277	308	338
5	5	36	64	95	125	156	186	217	248	278	309	339
6	6	37	65	96	126	157	187	218	249	279	310	340
7	7	38	66	97	127	158	188	219	250	280	311	341
8	8	39	67	98	128	159	189	220	251	281	312	342
9	9	40	68	99	129	160	190	221	252	282	313	343
10	10	41	69	100	130	161	191	222	253	283	314	344
11	11	42	70	101	131	162	192	223	254	284	315	345
12	12	43	71	102	132	163	193	224	255	285	316	346
13	13	44	72	103	133	164	194	225	256	286	317	347
14	14	45	73	104	134	165	195	226	257	287	318	348
15	15	46	74	105	135	166	196	227	258	288	319	349
16	16	47	75	106	136	167	197	228	259	289	320	350
17	17	48	76	107	137	168	198	229	260	290	321	351
18	18	49	77	108	138	169	199	230	261	291	322	352
19	19	50	78	109	139	170	200	231	262	292	323	353
20	20	51	79	110	140	171	201	232	263	293	324	354
21	21	52	80	111	141	172	202	233	264	294	325	355
22	22	53	81	112	142	173	203	234	265	295	326	356
23	23	54	82	113	143	174	204	235	266	296	327	357
24	24	55	83	114	144	175	205	236	267	297	328	358
25	25	56	84	115	145	176	206	237	268	298	329	359
26	26	57	85	116	146	177	207	238	269	299	330	360
27	27	58	86	117	147	178	208	239	270	300	331	361
28	28	59	87	118	148	179	209	240	271	301	332	362
29	29	...	88	119	149	180	210	241	272	302	333	363
30	30	...	89	120	150	181	211	242	273	303	334	364
31	31	...	90	...	151	...	212	243	...	304	...	365

Day Mo.	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	366	397	425	456	486	517	547	578	609	639	670	700
2	367	398	426	457	487	518	548	579	610	640	671	701
3	368	399	427	458	488	519	549	580	611	641	672	702
4	369	400	428	459	489	520	550	581	612	642	673	703
5	370	401	429	460	490	521	551	582	613	643	674	704
6	371	402	430	461	491	522	552	583	614	644	675	705
7	372	403	431	462	492	523	553	584	615	645	676	706
8	373	404	432	463	493	524	554	585	616	646	677	707
9	374	405	433	464	494	525	555	586	617	647	678	708
10	375	406	434	465	495	526	556	587	618	648	679	709
11	376	407	435	466	496	527	557	588	619	649	680	710
12	377	408	436	467	497	528	558	589	620	650	681	711
13	378	409	437	468	498	529	559	590	621	651	682	712
14	379	410	438	469	499	530	560	591	622	652	683	713
15	380	411	439	470	500	531	561	592	623	653	684	714
16	381	412	440	471	501	532	562	593	624	654	685	715
17	382	413	441	472	502	533	563	594	625	655	686	716
18	383	414	442	473	503	534	564	595	626	656	687	717
19	384	415	443	474	504	535	565	596	627	657	688	718
20	385	416	444	475	505	536	566	597	628	658	689	719
21	386	417	445	476	506	537	567	598	629	659	690	720
22	387	418	446	477	507	538	568	599	630	660	691	721
23	388	419	447	478	508	539	569	600	631	661	692	722
24	389	420	448	479	509	540	570	601	632	662	693	723
25	390	421	449	480	510	541	571	602	633	663	694	724
26	391	422	450	481	511	542	572	603	634	664	695	725
27	392	423	451	482	512	543	573	604	635	665	696	726
28	393	424	452	483	513	544	574	605	636	666	697	727
29	394	...	453	484	514	545	575	606	637	667	698	728
30	395	...	454	485	515	546	576	607	638	668	699	729
31	396	...	455	...	516	...	577	608	...	669	...	730

Actual Rate of Income

ON DIVIDEND PAYING STOCKS AT VARIOUS PRICES

Price %	4%	5%	6%	7%	8%	Price %	4%	5%	6%	7%	8%	Price %	4%	5%	6%	7%	8%
50	8.0	10.0	12.0	14.0	16.0	79	5.1	6.3	7.6	8.9	10.1	108	3.7	4.6	5.6	6.5	7.4
51	7.8	9.8	11.8	13.7	15.7	80	5.0	6.3	7.5	8.8	10.0	109	3.7	4.6	5.5	6.4	7.3
52	7.7	9.6	11.5	13.5	15.4	81	4.9	6.2	7.4	8.6	9.9	110	3.6	4.6	5.5	6.4	7.3
53	7.6	9.4	11.3	13.2	15.1	82	4.9	6.1	7.3	8.5	9.8	111	3.6	4.5	5.4	6.3	7.2
54	7.4	9.3	11.1	13.0	14.8	83	4.8	6.0	7.2	8.4	9.6	112	3.6	4.5	5.4	6.3	7.1
55	7.3	9.1	10.9	12.7	14.6	84	4.8	6.0	7.1	8.3	9.5	113	3.5	4.4	5.3	6.2	7.1
56	7.1	8.9	10.7	12.5	14.3	85	4.7	5.9	7.1	8.2	9.4	114	3.5	4.4	5.3	6.1	7.0
57	7.0	8.8	10.5	12.3	14.0	86	4.7	5.8	7.0	8.1	9.3	115	3.5	4.4	5.2	6.1	7.0
58	6.9	8.6	10.3	12.1	13.8	87	4.6	5.8	6.9	8.1	9.2	116	3.5	4.3	5.2	6.0	6.9
59	6.8	8.5	10.2	11.9	13.6	88	4.6	5.7	6.8	8.0	9.1	117	3.4	4.3	5.1	6.0	6.8
60	6.7	8.3	10.0	11.7	13.3	89	4.5	5.6	6.7	7.9	9.0	118	3.4	4.2	5.1	5.9	6.8
61	6.6	8.2	9.8	11.5	13.1	90	4.4	5.6	6.7	7.8	8.9	119	3.4	4.2	5.0	5.9	6.7
62	6.5	8.1	9.7	11.3	12.9	91	4.4	5.5	6.6	7.7	8.8	120	3.3	4.2	5.0	5.8	6.7
63	6.4	7.9	9.5	11.1	12.7	92	4.4	5.4	6.5	7.6	8.7	125	3.2	4.0	4.8	5.6	6.4
64	6.3	7.8	9.4	10.9	12.5	93	4.3	5.4	6.5	7.5	8.6	130	3.1	3.9	4.6	5.4	6.2
65	6.2	7.7	9.2	10.8	12.3	94	4.3	5.3	6.4	7.5	8.5	135	3.0	3.7	4.4	5.2	5.9
66	6.1	7.6	9.1	10.6	12.1	95	4.2	5.3	6.3	7.4	8.4	140	2.9	3.6	4.3	5.0	5.7
67	6.0	7.5	9.0	10.5	11.9	96	4.2	5.2	6.3	7.3	8.3	145	2.8	3.5	4.1	4.8	5.5
68	5.9	7.4	8.8	10.3	11.8	97	4.1	5.2	6.2	7.2	8.3	150	2.7	3.3	4.0	4.7	5.3
69	5.8	7.3	8.7	10.1	11.6	98	4.1	5.1	6.1	7.1	8.2	155	2.6	3.2	3.9	4.5	5.2
70	5.7	7.1	8.6	10.0	11.4	99	4.0	5.1	6.1	7.1	8.1	160	2.5	3.1	3.8	4.4	5.0
71	5.6	7.0	8.5	9.9	11.3	100	4.0	5.0	6.0	7.0	8.0	165	2.4	3.0	3.6	4.2	4.8
72	5.6	6.9	8.3	9.7	11.1	101	4.0	5.0	5.9	6.9	7.9	170	2.4	2.9	3.5	4.1	4.7
73	5.5	6.9	8.2	9.6	11.0	102	3.9	4.9	5.9	6.9	7.8	175	2.3	2.9	3.4	4.0	4.6
74	5.4	6.8	8.1	9.5	10.8	103	3.9	4.9	5.8	6.8	7.8	180	2.2	2.8	3.3	3.9	4.4
75	5.3	6.7	8.0	9.3	10.7	104	3.9	4.8	5.8	6.7	7.7	190	2.1	2.6	3.2	3.7	4.2
76	5.3	6.6	7.9	9.2	10.5	105	3.8	4.8	5.7	6.7	7.6	200	2.0	2.5	3.0	3.5	4.0
77	5.2	6.5	7.8	9.1	10.4	106	3.8	4.7	5.7	6.6	7.6						

Distances and Mail Time from New York to Cities in United States

Cities in United States	Miles	Time (hours)	Cities in United States	Miles	Time (hours)
Albany, N. Y.	145	3	Louisville, Ky.	865	22
Atlanta, Ga.	876	26	Memphis, Tenn.	1,158	36
Baltimore, Md.	187	5	Milwaukee, Wis.	994	25
Birmingham, Ala.	990	31	Nashville, Tenn.	998	28
Bismarck, N. Dak.	1,753	49	New Orleans, La.	1,345	41
Boston, Mass.	232	6	Ogden, Utah	2,397	61
Buffalo, N. Y.	396	10	Oklahoma City, Okla.	1,596	42
Charleston, S. Car.	736	21	Omaha, Neb.	1,397	35
Cheyenne, Wyo.	1,913	46	Philadelphia, Pa.	92	2
Chicago, Ill.	909	21	Pittsburgh, Pa.	441	11
Cincinnati, Ohio	751	18	Portland, Me.	341	11
Cleveland, Ohio	579	14	Portland, Ore.	3,162	80
Dallas, Tex.	1,739	45	Raleigh, N. Car.	500	16
Denver, Colo.	1,943	57	Reno, Nev.	2,936	74
Des Moines, Ia.	1,267	33	Richmond, Va.	343	10
Detroit, Mich.	648	15	St. Louis, Mo.	1,053	25
El Paso, Tex.	2,298	66	St. Paul, Minn.	1,307	32
Hartford, Conn.	112	4	San Antonio, Tex.	1,916	54
Helena, Mont.	2,438	69	San Francisco, Cal.	3,180	83
Indianapolis, Ind.	812	19	Savannah, Ga.	845	25
Jacksonville, Fla.	982	29	Seattle, Wash.	3,107	80
Kansas City, Mo.	1,331	37	Spokane, Wash.	2,787	69
Key West, Fla.	1,504	54	Toledo, Ohio	701	17
Little Rock, Ark.	1,291	35	Tucson, Ariz.	2,611	76
Los Angeles, Cal.	3,111	85	Washington, D. C.	227	6

Distances and Mail Time to Foreign Cities from New York City

By Postal Route to—	Statute Miles	Days	By Postal Route to—	Statute Miles	Days
Adelaide, Australia	11,843	32	Istanbul, Turkey	5,809	22
Alexandria, Egypt	6,135	17	Lima, Peru	3,807	14
Amsterdam, Netherlands	4,043	11	Lisbon, Portugal	5.342	12
Antwerp, Belgium	4,015	11	Liverpool, England	3,707	10
Athens, Greece	5,432	18	London, England	3,964	9
Bagdad, Mesopotamia	14,229	42	Madrid, Spain	4,851	13
Belgrade, Jugoslavia	5,217	13	Manila, Phillipine Islands	11,206	30
Berlin, Germany	4,597	12	Melbourne, Australia	11,253	31
Berne, Switzerland	4,349	12	Mexico City, Mexico	3,760	6
Bombay, British India	9,434	25	Natal, South Africa	11,974	30
Brussels, Belgium	4,137	11	Para, Brazil	3,392	15
Budapest, Hungary	4,965	13	Paris, France	3,946	10
Buenos Ayres, Argentina	6,914	18	Leningrad, Russia	5,639	18
Calcutta, British India	11,324	28	Quebec, Quebec	555	2
Cape Town, So. Africa	11,033	27	Rio de Janeiro, Brazil	5,493	13
Christiania, Norway	4,342	13	Rome, Italy	4,854	14
Colombo, Ceylon	9,932	30	St. John's, Newfoundland	628	3
Colon, Panama	2,273	7	Santiago, Chili	5,398	22
Copenhagen, Denmark	4,639	13	Shanghai, China	9,530	23
Dublin, Ireland	4,287	10	Singapore, Straits Set's	13,358	36
Glasgow, Scotland	3,656	10	Stockholm, Sweden	5,405	15
Havana, Cuba	1,560	3	Valparaiso, Chili	5,335	21
Hamburg, Germany	4,317	11	Vienna, Austria	4,795	14
Hong Kong, China	10,453	23	Vladivostok, Siberia	11,343	25
Honolulu, Hawaii	5,599	12	Yokohama, Japan	8,717	18

Common Stains and How to Remove Them

Blood and meat juice. Use cold water; soap and cold water; or starch paste.

Bluing. Use boiling water.

Chocolate and cocoa. Use borax and cold water; bleach if necessary.

Coffee and tea. (Clear.)—Use boiling water; bleach if necessary. (With cream.)—Use cold water, then boiling water; bleach if necessary.

Cream and milk. Use cold water, then soap and cold water.

Egg. Use cold water.

Fruit and fruit juices. Use boiling water; bleach if necessary.

Grass. Use cold water; soap and cold water; alcohol; or a bleaching agent.

Grease and oils. Use French chalk, blotting paper or other absorbent; or warm water and soap; or gasoline, benzine, or carbon tetrachloride.

Iodine. Use warm water and soap; alcohol; or ammonia.

Ink. Try cold water; then use an acid or bleach if necessary.

Iron. Use oxalic acid; hydrochloric acid; salts of lemon; or lemon juice and salt.

Kerosene. Use warm water and soap.

Lampblack and soot. Use kerosene, benzine, chloroform, ether, gasoline, or carbon tetrachloride.

Medicine. Use alcohol.

Mildew. If fresh, use cold water; otherwise try to bleach with javelle water or potassium permanganate.

Paint and varnish. Use alcohol, carbon tetrachloride, chloroform, or turpentine.

Perspiration. Use soap and warm water; bleach in the sun or with javelle water or potassium permanganate.

Pitch, tar, and wheel grease. Rub with fat; then use soap and warm water; or benzine, gasoline, or carbon tetrachloride.

Scorch. Bleach in the sunshine or with javelle water.

Shoe polish. (Black.)—Use soap and water; or turpentine. (Tan.)—Use alcohol.

Syrup. Use water.

Stove polish. Use cold water and soap; or kerosene, benzine, or gasoline.

Vaseline. Use kerosene or turpentine.

Water. Steam or sponge the entire surface of water-spotted materials.

Wax. Scrape off as much as possible. Use French chalk, blotting paper or other absorbent, with a warm iron; or use benzine or gasoline. If color remains, use alcohol or bleach.

ACTUAL TIME IN USE IN THE LARGEST CITIES OF THE WORLD WHEN IT IS 12:00 NOON, WASHINGTON

Athens	7:00 P. M.	**Melbourne next day**	3:00 A. M.
Auckland next day	3:00 A. M.	Milwaukee	11:00 A. M.
Berlin	6:00 P. M.	Minneapolis	11:00 A. M.
Bombay	10:30 P. M.	Natal	7:00 P. M.
Boston	12:00 **noon**	New Orleans	11:00 A. M.
Buffalo	12:00 **noon**	New York	12:00 **noon**
Cape Town	7:00 P. M.	Omaha	11:00 A. M.
Chicago	11:00 A. M.	Ottawa	12:00 **noon**
Cincinnati	11:00 A. M.	Panama	12:00 **noon**
Cleveland	12:00 **noon**	Paris	5:00 P. M.
Constantinople	7:00 P. M.	Philad'p'a	12:00 **noon**
Denver	10:00 A. M.	Pittsb'r'g	12:00 **noon**
Detroit	12:00 **noon**	Portland	9:00 A. M.
Galveston	11:00 A. M.	Quebec	12:00 **noon**
Halifax	1:00 P. M.	Rio de J'n'ro	2:00 P. M.
Hamburg	6:00 P. M.	Rome	6:00 P. M.
Havana	11:31 A. M.	Salt L. City	10:00 A. M.
Hong Kong next day	1:00 A. M.	San Francisco	9:00 A. M.
		St. Louis	11:00 A. M.
Honolulu	6:30 A. M.	Seattle	9:00 A. M.
Jerusalem	7:00 P. M.	Suez	7:00 P. M.
Kansas City	11:00 A. M.	Toledo	12:00 **noon**
Lisbon	4:24 P. M.	Vancouver	9:00 A. M.
Liverpool	5:00 P. M.	Vienna	6:00 P. M.
London	5:00 P. M.	Winnipeg	11:00 A. M.
Madrid	5:00 P. M.	**Yokohama next day**	2:00 A. M.
Manila next day	1:00 A. M.		

RATES OF INTEREST IN ALL THE STATES

States and Territories	Legal Rate	Special Contract Rate	States and Territories	Legal Rate	Special Contract Rate
Alabama	8	8	Nebraska	7	10
Arkansas	6	10	Nevada	7	..
Arizona	6	12	N. Hamp.	6	6
California	7	..	N. Jersey	6	6
Colorado	8	..	N. Mexico	6	12
Conn.	6	6	New York	6	6
Delaware	6	6	N. Carolina	6	6
D. C.	6	10	N. Dakota	7	12
Florida	8	10	Ohio	6	8
Georgia	7	8	Oklahoma	6	12
Idaho	7	12	Oregon	6	10
Illinois	5	7	Penn.	6	6
Indiana	6	8	R. Island	6	..
Iowa	6	8	S. Carolina	7	8
Kansas	6	10	S. Dakota	7	12
Kentucky	6	6	Tennessee	6	6
Louisiana	5	8	Texas	6	10
Maine	6	..	Utah	8	12
Maryland	6	6	Vermont	6	6
Mass.	6	..	Virginia	6	6
Michigan	5	7	Wash.	6	12
Minnesota	6	10	W. Va.	6	6
Mississippi	6	10	Wisconsin	6	10
Missouri	6	8	Wyoming	8	12
Montana	8	..			

Rules for Computing Interest

The following will be found to be excellent rules for finding the interest on any principal for any number of days. When principal contains cents, point off four places from the right of the result to express the interest in dollars and cents. When the principal contains dollars only, point off two places.

TWO PER CENT.—Multiply the principal by the number of days to run, and divide by 180.

TWO AND ONE-HALF PER CENT.—Multiply by number of days, and divide by 146.

THREE PER CENT.—Multiply by number of days, and divide by 120.

THREE AND ONE-HALF PER CENT.—Multiply by number of days and divide by 104.

FOUR PER CENT.—Multiply by number of days, and divide by 90.

FIVE PER CENT.—Multiply by number of days, and divide by 72.

SIX PER CENT.—Multiply by number of days, and divide by 60.

SEVEN PER CENT.—Multiply by number of days and divide by 52

EIGHT PER CENT.—Multiply by number of days, and divide by 45.

NINE PER CENT.—Multiply by number of days, and divide by 40.

TEN PER CENT.—Multiply by number of days, and divide by 36.

TWELVE PER CENT.—Multiply by number of days, and divide by 30.

FIFTEEN PER CENT.—Multiply by number of days, and divide by 24.

Interest Tables

TWO PER CENT

Time	$1	$2	$3	$4	$5	$6	$7	$8	$9	$10	$100	$1,000
4 Day.	0	0	0	0	0	0	0	0	0	0	2	22
8 "	0	0	0	0	0	0	0	0	0	0	4	44
12 "	0	0	0	0	0	0	0	1	1	1	7	67
16 "	0	0	0	0	0	1	1	1	1	1	9	89
20 "	0	0	0	1	1	1	1	1	1	1	11	1.11
24 "	0	0	0	1	1	1	1	1	1	1	13	1.33
23 "	0	0	0	1	1	1	1	1	1	2	16	1.56
1 Mo.	0	0	1	1	1	1	1	1	2	2	17	1.67
2 "	0	1	1	1	1	2	2	3	3	3	33	3.33
3 "	1	1	2	2	3	3	4	4	5	5	50	5.00
4 "	1	1	2	3	3	4	5	5	6	7	67	6.67
5 "	1	2	3	3	4	5	6	7	8	8	83	8.33
6 "	1	2	3	4	5	6	7	8	9	10	1.00	10.00
1 Yr.	2	4	6	8	10	12	14	16	18	20	2.00	20.00

THREE PER CENT

Time	$1	$2	$3	$4	$5	$6	$7	$8	$9	$10	$100	$1,000
4 Day.	0	0	0	0	0	0	0	1	1	1	4	34
8 "	0	0	0	1	1	1	1	1	1	1	7	67
12 "	0	0	1	1	1	1	1	1	1	1	10	1.00
16 "	0	1	1	1	1	1	1	1	1	2	14	1.34
20 "	1	1	1	1	1	1	1	2	2	2	17	1.67
24 "	1	1	1	1	1	1	2	2	2	2	20	2.00
28 "	1	1	1	1	1	2	2	2	2	3	24	2.34
1 Mo.	1	1	1	1	2	2	2	2	3	3	25	2.50
2 "	1	1	2	2	3	3	4	4	5	5	50	5.00
3 "	1	2	3	3	4	5	6	6	7	8	75	7.50
4 "	1	2	3	4	5	6	7	8	9	10	1.00	10.00
5 "	2	3	4	5	7	8	9	10	12	13	1.25	12.50
6 "	2	3	5	6	8	9	11	12	14	15	1.50	15.00
1 Yr.	3	6	9	12	15	18	21	24	27	30	3.00	30.00

TWO AND ONE-HALF PER CENT

Time	$1	$2	$3	$4	$5	$6	$7	$8	$9	$10	$100	$1,000
4 Day.	0	0	0	0	0	0	0	0	0	0	3	28
8 "	0	0	0	0	0	0	1	1	1	1	6	56
12 "	0	0	0	0	1	1	1	1	1	1	9	84
16 "	0	0	0	1	1	1	1	1	1	1	11	1.11
20 "	0	0	1	1	1	1	1	1	1	2	14	1.14
24 "	0	0	1	1	1	1	2	2	2	2	17	1.67
28 "	0	1	1	1	1	2	2	2	2	2	20	1.70
1 Mo.	0	1	1	1	1	2	2	2	2	2	21	2.09
2 "	1	1	2	2	2	3	3	4	4	5	42	4.17
3 "	1	2	2	3	3	4	5	5	6	7	63	6.25
4 "	1	2	3	3	5	5	6	7	8	9	84	8.34
5 "	1	2	4	5	6	7	8	9	10	11	1.05	10.44

SIX PER CENT

Time	$1	$2	$3	$4	$5	$6	$7	$8	$9	$10	$100	$1,000
4 Day.	0	0	0	0	0	0	0	1	1	1	7	67
8 "	0	0	0	1	1	1	1	1	1	1	13	1.33
12 "	0	0	1	1	1	1	1	2	2	2	20	2.00
16 "	0	1	1	1	1	2	2	2	2	3	27	2.67
20 "	1	1	1	2	2	2	2	3	3	3	33	3.33
24 "	1	1	1	2	2	2	3	3	4	4	40	4.00
28 "	1	1	1	2	2	3	3	4	4	5	47	4.67
1 Mo.	1	1	2	2	3	3	4	4	5	5	50	5.00
2 "	1	2	3	4	5	6	7	8	9	10	1.00	10.00
3 "	2	3	5	6	8	9	11	12	14	15	1.50	15.00
4 "	2	4	6	8	10	12	14	16	18	20	2.00	20.00
5 "	3	5	8	10	13	15	18	20	23	25	2.50	25.00

Business Laws

Principals are responsible for the acts of their agents.

Contracts made on Sunday cannot be enforced. Written contracts concerning land must be under seal.

Notes do not bear interest unless it is so stated.

If a note is lost or stolen, the maker is not released if the consideration and amount can be proved.

Demand notes are payable when presented, without grace, and bear legal interest after a demand, if not so written.

An endorser on a demand note can be held only for a limited time, variable in different states.

To be negotiable a note must either be made payable to bearer or be properly endorsed by the person to whose order it is made.

If the endorser desires to avoid responsibility, he can endorse "without recourse."

Notes becoming due on Sunday or a legal holiday are, as a rule, payable on the day following.

A note made on Sunday, or one dated ahead of its issue, is void, but it may be dated back.

If a note is altered in any way by the holder it becomes void.

A note made by a minor is void in some States and is voidable on judicial decision in others.

A contract with a minor or a lunatic is void.

If a note is not paid when due, the endorsers, if any, should be legally notified to be holden.

A note obtained by fraud or given by an intoxicated person cannot be collected.

It is a fraud to conceal a fraud.

Signatures with a lead pencil are good in law.

The acts of one partner bind the others.

Each individual in a partnership is responsible for all the debts of the firm except in the case of a special partnership.

The word "limited" in connection with firm names indicates a limitation of responsibility for each member.

An agreement without consideration of value is void.

"Value received" should be written in a note, but it is not necessary. When not written, it is presumed by law or may be shown by proof.

A consideration is not sufficient in law if it is illegal in its nature.

An endorser of a note is exempt from liability if not served with a notice of its dishonor within 24 hours of its non-payment.

If a letter containing notice of protest of non-payment be put into the Post Office, any miscarriage does not affect the party giving notice.

Notice of protest may be sent either to the place of business or residence of the party notified.

A receipt for money is not legally conclusive.

Points of Constitutional Law

Congress must meet at least once a year.

Congress may admit as many new States as desired.

One State cannot undo the act of another.

By the constitution every citizen is guaranteed a speedy trial by jury.

A power which is vested in Congress alone cannot be exercised by a State.

One State must respect the legal decisions and laws of another.

Congress cannot pass a law to punish for a crime already committed.

A person who commits a felony in one State cannot find refuge in another.

Bills for revenue can originate only in the House of Representatives, but the Senate may propose or concur with amendments.

Treaties with foreign powers are made by the President and ratified by the Senate.

The territories each have a delegate to Congress who is allowed the privilege of debate, but not the right to vote.

The Vice-President, who ex-officio presides over the Senate, has no vote in that body except in case of a tie ballot.

If the President holds a bill longer than ten days while Congress is in session it becomes a law without his signature.

An act of Congress cannot become a law over the President's veto except on a two-thirds vote of both Houses.

The House of Representatives may impeach the President for any crime, but the Senate has the sole power to try all impeachments.

An officer of the United States Government is not permitted to accept any title of nobility, order of honor, except with the permission of Congress.

Amendments to the Constitution of the United States require a two-thirds vote of each House of Congress, and must be ratified by at least three-fourths of the States.

The President of the United States must be at least 35 years of age; a Senator, 30; a Congressman, 25. The President must have been a resident within the United States fourteen years.

A naturalized citizen is not eligible to the office of President of the United States. A male child born in a foreign land to American parents has an equal chance to become the President with one born on American soil.

The United States shall guarantee to every State a republican form of government, and shall protect each of them against invasion, and on application of the Legislature or of the Executive (when the Legislature cannot be convened) against domestic trouble.

Good Rules for Business Men

Don't worry; don't overbuy; don't go security.

Keep your vitality up; keep insured; keep sober; keep cool.

Stick to chosen pursuits, but not to chosen methods.

Be content with small beginnings and develop them.

Be wary of dealing with unsuccessful men.

Keep down expenses, but don't be stingy.

Make friends, but not favorites.

Don't take new risks to retrieve old losses.

Stop a bad account at once.

Make plans ahead, but don't make them in cast iron.

Don't tell what you are going to do until you

Weights and Measures

APOTHECARIES' WEIGHT

20 grains....1 scruple — 8 drams...1 ounce
3 scruples...1 dram — 12 ounces...1 pound
Ounce and pound are the same as in Troy Weight.

AVOIRDUPOIS WEIGHT

27 11/32 grains...1 dram — 25 pounds.1 quarter
16 drams.....1 ounce — 4 quarters.1 cwt.
16 ounces.....1 pound — 2,000 lbs..1 short ton
2,240 pounds.....1 long ton

TROY WEIGHT

24 grains.....1 pwt.
20 pwt.....1 ounce — 12 ounces...1 pound
Used for weighing gold, silver and jewels.

CLOTH MEASURE

2¼ inches.....1 nail — 4 nails....1 quarter
4 quarters.....1 yard

CUBIC MEASURE

1.728 cubic inches.....1 cubic foot
27 cubic feet.....1 cubic yard
128 cubic feet.....1 cord (wood)
40 cubic feet.....1 ton (shipping)
2,150.42 cubic inches.....1 standard bushel
231 cubic inches.....1 U. S. standard gallon
1 cubic foot.....about 4/5 of a bushel

DRY MEASURE

2 pints.....1 quart — 4 pecks...1 bushel
8 quarts.....1 peck — 36 bushels.1 chaldron

LIQUID MEASURE

4 gills.....1 pint — 4 quarts....1 gallon
2 pints.....1 quart — 31½ gals....1 barrel
2 barrels.....1 hogshead

LONG MEASURE

12 inches.....1 foot — 40 rods....1 furlong
3 feet.....1 yard — 8 furlongs1 sta. mile
5½ yards....1 rod — 3 miles...1 league

MARINERS' MEASURE

6 feet = 1 fathom..120 fathoms = 1 cable length
7½ cable lengths.....1 mile
5,280 feet.....1 statute mile
6,085 feet.....1 nautical mile

PAPER MEASURE

24 sheets, 1 quire· 20 quires, 1 ream (480 sheets)
2 reams.....1 bundle — 5 bundles.....1 bale

SQUARE MEASURE

144 sq. in. 1 sq. ft. — 40 sq. rods.1 rood
9 sq. ft.....1 sq. yard — 4 roods...1 acre
30¼ sq. yds.1 sq. rod — 640 acres...1 sq. mile

SURVEYORS' MEASURE

7.92 inches.....1 link
25 links.....1 rod
4 rods.....1 chain
10 sq. chains or 160 sq. rods.....1 acre
640 acres.....1 sq. mile
36 sq. miles (6 miles sq.).....1 township

TIME MEASURE

60 seconds = 1 minute.....60 minutes = 1 hour
24 hours = 1 day.....7 days = 1 week
28 29, 30 or 31 days.....1 calendar month
30 days—1 month.....in computing interest
365 days = 1 year.....366 days = 1 leap year

MISCELLANEOUS

3 inches = 1 palm.....4 inches = 1 hand
6 inches = 1 span.....18 inches = 1 cubit
21.8 inches.....1 Bible cubit
2½ cet.....1 military pace

METRIC EQUIVALENTS—Linear Measure

1 centimeter.....0.3937 inch
1 inch.....2.54 centimeters
1 decimeter.....3.937 inches.....0.328 foot
1 foot.....3.048 decimeters
1 meter.....39.37 inches.....1.0936 yards
1 yard.....0.9144 meter
1 dekameter.....1.9884 rods
1 rod.....0.5029 dekameter
1 kilometer.....0.62137 mile
1 mile.....1.6093 kilometers

Square Measure

1 square centimeter.....0.1550 square inch
1 square inch.....6.452 square centimeters
1 square decimeter.....0.1076 square foot
1 square foot.....9.2903 square decimeters
1 square meter.....1.196 square yards
1 square yard.....0.8361 square meter
1 acre.....3.954 square rods
1 square rod.....0.2529 acre
1 hectare.....2.47 acres
1 acre.....0.4047 hectare
1 square kilometer.....0.386 square mile
1 square mile.....2.59 square kilometers

Measure of Volume

1 cubic centimeter.....0.061 cubic inch
1 cubic inch.....16.39 cubic centimeters
1 cubic decimeter.....0.0353 cubic foot
1 cubic foot.....28.317 cubic decimeters
1 cubic meter.....1.308 cubic yards
1 cubic yard.....0.7646 cubic meter
1 stere.....0.2759 cord
1 cord.....3.624 steres
1 liter = 0.908 quart dry...1.0567 quarts liquid
1 quart dry.....1.101 liters
1 quart liquid.....0.9463 liter
1 dekaliter = 2.6417 gallons.....135 pecks
1 gallon.....0.3785 dekaliter
1 peck.....0.881 dekaliter
1 hektoliter.....2.8375 bushels
1 bushel.....0.3524 hektoliter

Weights

1 gram.....0.03527 ounce
1 ounce.....28.35 grams
1 kilogram.....2.2046 pounds
1 pound.....0.4536 kilogram
1 metric ton.....1.1023 English tons
1 English ton.....0.9072 metric ton

APPROXIMATE METRIC EQUIVALENTS

1 decimeter.....4 inches
1 liter.....1.06 quarts liquid, 0.9 quart dry
1 meter.....1.1 yards
1 kilometer.....⅝ of a mile
1 hektoliter.....2⅝ bushels
1 hectare.....2½ acres
1 kilogram.....2-1/5 pounds
1 stere, or cubic meter.....¼ of a cord
1 metric ton.....2,200 pounds

TEMPERATURES

Fahrenheit

Milk.....Freezes 30° above Zero
Water.....Freezes 32° above Zero
Olive Oil.....Freezes 36° above Zero
Wines.....Freezes 20° above Zero
Vinegar.....Freezes 28° above Zero
Alcohol.....Boils at 173° above Zero
Water.....Boils at 212° above Zero
Petroleum (average)..Boils at 306° above Zero
Blood Heat.....98.4° above Zero
Eggs Hatch.....104° above Zero

Explanation of Weather Bureau Flag Signals

No. 1
White

Clear or Fair

No. 2
Blue

Rain or Snow

No. 3
White and Blue

Local Rains

No. 4
Black Triangular

Temperature

No. 5
White Black Center

Cold Wave

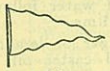
STORM SIGNAL

Red, Black Center

EASTERLY WINDS

Red

WESTERLY WINDS



White

No. 1, alone, indicates fair weather, stationary temperature.

No. 2, alone, indicates rain or snow, stationary temperature.

No. 3, alone, indicates local rain, stationary temperature.

No. 1, with No. 4 above it, indicates fair weather, warmer.

No. 1, with No. 4 below it, indicates fair weather, colder.

No. 2, with No. 4 above it, indicates warmer weather, rain or snow.

No. 2, with No. 4 below it, indicates colder weather, rain or snow.

No. 3, with No. 4 above it, indicates warmer weather with local rains.

No. 3, with No. 4 below it, indicates colder weather with local rains.

No. 1, with No. 5 above it, indicates fair weather, cold wave.

No. 2, with No. 5 above it, indicates wet weather, cold wave. Forecasts made at 10 A. M. and displayed between 12 and 1 P. M. forecast the weather for the following day until 8 P. M.

WIND DIRECTION AND STORM SIGNALS

In use on the Coast and the Great Lake Ports

Cautionary against a wind velocity that will be dangerous to all classes of vessels, that is when a velocity of thirty miles per hour or over is expected.

The Red Pennant hoisted above Storm Signal indicates winds will be from the N. E. When Red Pennant is below Storm Signal it indicates winds from the S. E.

The White Pennant hoisted above Storm Signal indicates winds will be from the N. W. When White Penant is below Storm Signal, it indicates winds from the S. W.

At night a Red Light will indicate Easterly winds, and a Red and White Light Westerly winds.

Weather Wisdom

Sunset Colors: A gray, lowering sunset, or one where the sky is green or yellowish-green, indicates rain. A red sunrise with clouds lowering later in the morning, also indicates rain.

Sky Color: A deep blue color of the sky, even when seen through clouds, indicates fair weather; a glowing whiteness an approaching storm.

Visibility: Unusual clearness of the atmosphere, unusual brightness or twinkling of the stars indicate rain.

Fogs: Fogs indicate settled weather. A morning fog usually breaks away before noon.

Frost: The first frost and the last frost are usually preceded by a temperature very much above the mean.

Halo (Sun Dogs): By halo we mean the large circles, or part of circles, about the sun or moon. A halo occuring after fine weather indicates a storm.

Corona: By this term we mean the small colored circles frequently seen around the sun or moon. A corona growing smaller indicates rain; growing larger, fair weather.

Rainbows: A morning rainbow is regarded as a sign of rain; an evening rainbow of fair weather.

Help in Case of Accident

KEEP COOL—SEND FOR A PHYSICIAN

WOUNDS—Remove patient to a quiet, airy place. Have hot and cold water, several basins, clean towels, cloth and soap. Apply antiseptic treatment as follows:

Thoroughly cleanse your own hands and nails; then cleanse the wounds with some antiseptic. The most easily procured is salt and water. Put a handful of salt in a quart of water and use freely. After the wound is cleansed, it must then be protected from new germs by some covering made germ free by baking, boiling, or ironing. After the salt solution has been carefully used, apply strips of gauze soaked in warm water which has been boiled. This will leave the wound in good condition.

If a more active antiseptic than salt, such as Carbolic Acid (1 per cent) or Bichloride of Mercury (1 part to 2000 of water), is available, it should be used.

ARTIFICIAL RESPIRATION—When the patient is removed from the water, gas, smoke, or electric contact, **get to work at once with your own hands.**

Lay the patient on his stomach. Extend one arm directly over head. Bend the other arm at elbow, and rest patient's cheek on hand, to keep the nose and mouth off the ground and free for breathing.

Kneel facing forward, and straddling patient's legs just above the knees. Place palms of hands on each side of back, just above the belt line, and about four inches apart, thumbs and fingers together, the little fingers over and following the line of the lowest ribs, and the tips of fingers just out of sight.

With arms straight lean gradually forward, pressing downward and forward and counting slowly, one, two, three. Snap your hands sideways, off patient's back. Swing your body back, counting slowly, four, five. Rest. Straighten arms and repeat pressure.

Three movements straight arm pressure (shoulder behind hands to exert forward pressure), **quick release and swing back. Keep up work steadily until breathing begins and continues naturally.**

When helpers arrive put them to work; send for physician; clean patient's mouth of obstructions; stimulate reflexes; loosen tight clothing; rub legs and body toward heart; supply clothing and other heated articles and relieve operator when tired. Place aromatic spirits of ammonia near patient's nose at frequent intervals. When patient begins to breathe naturally, and can swallow, give a teaspoonful of aromatic spirits ammonia in half glass of water, or some hot coffee or tea.

Don't get discouraged. Stick to it for two even three hours if necessary.

IN CASE OF POISON

First. Send for a physician.

Second. Empty the stomach by an emetic—a teaspoonful of mustard or two teaspoonfuls of common salt in tepid water; teaspoonful of alum in water. Tickle the throat with a feather or finger. Apply antidotes as follows:

Poison	Antidote No.	Poison	Antidote No.
Acetic Acid	6	Laudanum	1
Alcoholic Liquors	10	Lye	9
Ammonia	9	Morphine	1
Antimony	5	Muriatic Acid	6
Aqua fortis	6	Nitre	9
Arsenic	2	Nitric Acid	6
Bitter Almond	7	Opium	1
Blue Vitriol	3	Oxalic Acid	6
Bug Poison	3	Paris Green	2
Carbolic Acid	3	Phosphorus	2
Carbonic Acid Gas	10	Prussic Acid	7
Charcoal Fumes	10	Rat Poison	2
Chloride of Zinc	5	Saltpetre	9
Chloroform inhaled	10	Sugar of Lead	4
" swallowed	1	Suplhuric Acid	8
Coal Gas	10	Strychnine	1
Copperas	3	Tartaric Acid	6
Corrosive Sublimate	3	Toad-stools	4
Ether inhaled	10	White Lead	4
" swallowed	1	White Vitriol	5

1. Emetic. If patient is drowsy, give cold coffee; keep awake and moving.

2. Emetic. Warm extremeties; give large doses of magnesia; raw eggs; lime water; milk; flour and water.

3. White of eggs, milk, flour and water; give largely for ten minutes, then give emetic and follow by mild stimulants.

4. Mustard emetic followed by Epsom salt.

5. Emetic. Give warm water to relieve vomiting; tea to tablespoonful baking powder, saleratus, chalk, lime or magnesia, followed by milk and white of egg.

6. Emetic. Baking powder, etc., as in No. 5, followed by linseed tea or slippery elm tea.

7. Emetic. Followed by brandy or by teaspoonful ammonia in pint of water.

8. Large quantities of water followed by large doses of magnesia or lime.

9. Drink diluted vinegar or lemon juice, follow with tablespoonful caster oil, cream, sweet oil or linseed oil; then with teaspoonful doses an hour apart for three hours.

10. Fresh air, inhalation of ammonia; warm extremities; artificial breathing, as in drowning.

Approximate Weight of Substances

Brick, pressed, best	150	lbs. per cu. ft.	Lead	709.6	lbs. per cu. ft.
Brick, common, hard	125	" " "	Limestone, marble, ordinarily	168	" " "
Brick, common, soft	100	" " "	Limestone, marble, piled	96	" " "
coal, broken (anthra.), loose	52-56	" " "	Masonry, granite, dressed	165	" " "
Coal, broken (bitu), loose	47-52	" " "	Masonry, sandstone	145	" " "
Cement, concrete, limestone	148	" " "	Sand, pure quartz, dry, loose	112-113	" " "
Cement, concrete, cinder	112	" " "	lbs. per struck bu	90-106	" " "
Cement, concrete, stone	150	" " "	Sand, ang., large and small	117	" " "
Cement, concrete, trap rock	155	" " "	Sandstone, dry for building	151	" " "
Granite	170	" " "	Sandstone, quarried, piled	86	" " "
Hemlock, dry	25	" " "	Shales, red or black	162	" " "
Hickory, dry	53	" " "	Shales, quarried, piled	92	" " "
Ice	57- 0	" " "	Slate	175	" " "
Iron, cast	450	" " "	Soapstone or steatite	170	" " "
Iron, wrought	485	" " "	Steel, heav'ts, low'st in carb'n	490	" " "

Presidents of the United States

No.	Name	Age	Born	Inaug.	Term in Office	Native of	Died	Party
1	George Washington	57	Feb., 22, 1732	1789	8 years	Virginia	Dec. 14, 1799	Federal
2	John Adams	61	Oct. 30, 1735	1797	4 "	Mass.	July 4, 1826	"
3	Thomas Jefferson	57	Apr. 13, 1743	1801	8 "	Virginia	July 4, 1826	Dem-Rep
4	James Madison	57	Mar. 16, 1751	1809	8 "	"	June 28, 1836	"
5	James Monroe	58	Apr. 28, 1758	1817	8 "	"	July 4, 1831	"
6	John Quincy Adams	57	July 11, 1767	1825	4 "	Mass.	Feb. 23, 1848	Coalition
7	Andrew Jackson	61	Mar. 15, 1767	1829	8 "	N. Car.	June 8, 1845	Dem.
8	Martin Van Buren	54	Dec. 5, 1782	1837	4 "	N. Y.	July 24, 1862	"
9	Wm. H. Harrison	68	Feb. 9, 1773	1841	1 month	Virginia	Apr. 4, 1841	Whig
10	John Tyler	51	Mar. 29, 1790	1841	3 yrs. 11 mos.	"	Jan. 18, 1862	"
11	James Knox Polk	49	Nov. 2, 1795	1845	4 years	N. Car.	June 15, 1849	Dem.
12	Zachary Taylor	64	Sept. 24, 1784	1849	1 year, 4 mos.	Virginia	July 9, 1850	Whig
13	Millard Fillmore	50	Feb. 7, 1800	1850	2 years, 8 mos.	N. Y.	Mar. 8, 1874	"
14	Franklin Pierce	48	Nov. 23, 1804	1853	4 years	N. Ham.	Oct. 8, 1869	Dem.
15	James Buchanan	65	Apr. 23, 1791	1857	4 "	Penn.	June 1, 1868	"
16	Abraham Lincoln	52	Feb. 12, 1809	1861	4 years, 40 days	Ky.	Apr. 15, 1865	Repub.
17	Andrew Johnson	56	Dec. 29, 1808	1865	3 yrs. 10½ mos.	N. Car.	July 31, 1875	"
18	Ulysses S. Grant	46	Apr. 27, 1822	1869	8 years	Ohio	July 23, 1885	"
19	Rutherford B. Hayes	54	Oct. 4, 1822	1877	4 years	"	Jan. 17, 1893	"
20	James A. Garfield	49	Nov. 19, 1831	1881	6½ months	"	Sept. 19, 1881	"
21	Chester A. Arthur	50	Oct. 5, 1830	1881	3 yrs. 5½ mos.	Vt.	Nov. 18, 1886	"
22-24	Grover Cleveland	47	Mar. 18, 1837	'85-'93	4 yrs.—4 yrs.	N. J.	June 24, 1908	Dem.
23	Benjamin Harrison	55	Aug. 28, 1833	1889	4 years	Ohio	Mar. 13, 1901	Repub.
25	William McKinley	54	Jan. 29, 1843	1897	4 yrs. 6 mo. 10 d.	"	Sept. 14, 1901	"
26	Theodore Roosevelt	42	Oct. 27, 1858	1901	7 yrs. 5 mo. 20 d.	N. Y.	Jan. 6, 1919	"
27	Wm. H. Taft	53	Sept. 15, 1857	1909	4 years	Ohio	Mar. 8, 1930	"
28	Woodrow T. Wilson	56	Dec. 28, 1856	1913	8 years	Virginia	Feb. 3, 1924	Dem.
29	Warren G. Harding	55	Nov. 2, 1865	1921	2 yrs. 4 mo. 29 d.	Ohio	Aug. 2, 1923	Repub.
30	Calvin Coolidge	51	July 4, 1872	1923	5 yrs. 7 mo. 2 d.	Vt.	Jan. 5, 1933	"
31	Herbert C. Hoover	54	Aug. 10, 1874	1929	4 years	Iowa	.....	"
32	Franklin D. Roosevelt	51	Jan. 30, 1882	1933	.....	N. Y.	.....	Dem.

Nicknames of the States

Ala.	"Cotton," "Lizard," "Yallerhammers."	Neb.	"Antelope," "Black Water," "Cornhusker."
Ariz.	"Baby," "Sunset," "Apache."	Nev.	"Silver," "Sage Brush."
Ark.	"Bear," "Bowie."	N. H.	"Granite."
Cal.	"Golden," "El Dorado."	N. J.	"Jersey Blue," "Garden." "Mosquito."
Col.	"Centennial," "Silver."	N. M.	"Sunshine," "Spanish."
Conn.	"Constitution," "Nutmeg."	N. Y.	"Empire," "Excelsior."
Del.	"Diamond," "Blue Hen's Chickens."	N. C.	"Old North," "Turpentine," "Tar Heel."
Fla.	"Everglade," "Land of Flowers."	N. D.	"Flickertail," "Sioux."
Ga.	"Empire State of the South," "Cracker."	Ohio	"Buckeye."
Idaho	"Gem."	Okla.	"Sooner."
Ill.	"Sucker," "Prairie."	Ore.	"Beaver," "Web-Foot."
Ind.	"Hoosier."	Pa.	"Keystone," "Steel," "Coal."
Iowa	"Hawkeye."	R. I.	"Little Rhody," "Plantation."
Kan.	"Sunflower," "Jayhawk."	S. C.	"Palmetto."
Ky.	"Blue Grass," "Corn-Cracker."	S. D.	"Sunshine," "Swiagecat."
La.	"Pelican," "Creole."	Tenn.	"Big Bend," "Volunteer."
Me.	"Pine Tree," "Old Dirigo."	Tex.	"Lone Star," "Beef."
Md.	"Old Line," "Cockade."	Utah	"Deseret," "Beehive," "Mormon."
Mass.	"Bay," "Old Colony."	Vt.	"Green Mountain."
Mich.	"Wolverine," "Auto."	Va.	"Old Dominion," "Mother."
Minn.	"Gopher," "North Star."	Wash.	"Evergreen," "Chinook."
Miss.	"Bayou," "Eagle," "Magnolia."	W. Va.	"Panhandle," "Mountain."
Mo.	"Ozark," "Iron Mountain," "Show Me."	Wis.	"Badger," "Copper."
Mont.	"Stub Toe," "Bonanza," "Treasure."	Wyo.	"Equality." (Suffrage Pioneer).

State Flowers

Name of State	Name of Flower	By Whom Chosen	Name of State	Name of Flower	By Whom Chosen	Name of State	Name of Flower	By Whom Chosen
Ala.	Goldenrod	Schools	Me.	Pine Cone & T'sl.	Schools	Ohio	Scarlet Carnat'n	Legisl.
Ariz.	Sahuaro Cactus	Legisl.	Md.	Blackeyed Susan	Legisl.	Okla.	Mistletoe	Legisl.
Ark.	Apple Blossom	Legisl.	Mass.	Mayflower	Legisl.	Ore.	Oregon Grape	Legisl.
Cal.	Golden Poppy	Legisl.	Mich.	Apple Blossom	Legisl.	Pa.	No choice	.....
Col.	Columbine	Schools	Minn.	Moccasin Flower	Legisl.	R. I.	Violet	Schools
Conn.	Mount'n Laurel	Legisl.	Miss.	Magnolia	Schools	S. C.	No choice	.....
Del.	Peach Blossom	Legisl.	Mo.	No choice	.....	S. Dak.	Pasque Flower	Legisl.
Fla.	Orange Blossom	Legisl.	Mont.	Bitter Root	Legisl.	Tenn.	Passion Flower	Hort. S.
Ga.	Cherokee Rose	Legisl.	Neb.	Goldenrod	Legisl.	Tex.	Bluebonnet	Legisl.
Idaho	Syringa	People	Nev.	Sagebrush	People	Utah	Sego Lily	Legisl.
Ill.	Wood Violet	Legisl.	N. H.	Purple Lilac	Legisl.	Vt.	Red Clover	Legisl.
Ind.	Carnation	Legisl.	N. J.	Violet	Legisl.	Va.	Amer. Dogwood	Legisl.
Iowa	Wild Rose	People	N. Mex.	Cactus	Schools	Wash.	Rhododendron	People
Kan.	Sunflower	Legisl.	N. Y.	Rose	Schools	W. Va.	Rhododendron	Legisl.
Ky.	Trumpet Vine	People	N. C.	Goldenrod	People	Wis.	Violet	Schools
La.	Magnolia	Legisl.	N. Dak.	Wild Prairie Rose	Legisl.	Wyo.	Indian Paintb'sh	Legisl.

Population of Principal Cities

1930 Figures are of Fifteenth (1930) Census of the U. S.
1940 Figures are estimates secured from Mayors, Chambers of Commerce, etc.
*Denotes State Capital.
†Indicates estimates not available.

Cities Over 33,000 and State Capitals	1930	1940 Est.
Akron, Ohio	255,040	250,000
Alameda, Calif.	35,033	40,000
*Albany, N. Y.	127,412	140,000
Allentown, Pa.	92,563	98,600
Altoona, Pa.	82,054	84,500
Amarillo, Texas	43,132	55,000
Amsterdam, N. Y.	34,817	35,300
Anderson, Ind.	39,804	44,500
*Annapolis, Md.	12,531	..†..
Asheville, N. C.	50,193	54,000
*Atlanta, Ga.	270,366	294,000
Atlantic City, N. J.	66,198	70,000
Auburn, N. Y.	36,652	37,500
Augusta, Ga.	60,342	68,790
*Augusta, Me.	17,198	18,500
Aurora, Ill.	46,589	47,500
*Austin, Texas	53,120	..†..
Baltimore, Md.	804,874	872,500
*Baton Rouge, La.	30,729	74,000
Battle Creek, Mich.	43,573	46,042
Bay City, Mich.	47,355	50,000
Bayonne, N. J.	88,979	93,000
Beaumont, Texas	57,732	68,000
Berkeley, Calif.	82,109	100,739
Berwyn, Ill.	47,027	53,000
Bethlehem, Pa.	57,892	62,000
Binghampton, N. Y.	76,662	90,000
Birmingham, Ala.	259,678	305,000
*Bismarck, N. D.	11,090	17,000
Bloomfield, N. J.	38,077	45,000
*Boise, Idaho	21,544	26,000
*Boston, Mass.	781,188	800,000
Bridgeport, Conn.	146,716	150,000
Brockton, Mass.	63,797	62,800
Buffalo, N. Y.	573,076	604,000
Butte, Mont.	39,532	55,000
Cambridge, Mass.	113,643	121,000
Camden, N. J.	118,700	122,000
Canton, Ohio	104,906	118,000
*Carson City, Nev.	1,596	2,500
Cedar Rapids, Ia.	56,097	64,000
Charleston, S. C.	62,265	65,000
*Charleston, W. Va.	60,408	70,000
Charlotte, N. C.	82,675	108,921
Chattanooga, Tenn.	119,798	128,000
Chelsea, Mass.	45,816	42,000
Chester, Pa.	59,164	60,000
*Cheyenne, Wyo.	17,361	27,000
Chicago, Ill.	3,376,438	3,700,000
Chicopee, Mass.	43,930	43,000
Cicero, Ill.	66,602	80,000
Cincinnati, Ohio	451,160	489,000
Cleveland, Ohio	900,429	935,000
Cleveland Heights, Ohio	50,945	66,000
Clifton, N. J.	46,875	58,000
Colo. Springs, Colo.	33,237	36,000
*Columbia, S. C.	51,581	70,000
Columbus, Ga.	43,131	50,000
*Columbus, Ohio	290,564	309,000
*Concord, N. H.	25,228	29,000
Council Bluffs, Ia.	42,048	48,000
Covington, Ky.	65,252	68,686
Cranston, R. I.	42,911	48,000
Cumberland, Md.	37,747	40,000
Dallas, Texas	260,475	381,000
Danville, Ill.	36,765	38,300
Davenport, Ia.	60,751	63,500
Dayton, Ohio	200,982	216,000
Dearborn, Mich.	50,358	90,000
Decatur, Ill.	57,510	61,000
*Denver, Colo.	287,861	300,000
*Des Moines, Iowa	142,559	150,000
Detroit, Mich.	1,568,662	1,625,000
*Dover, Del.	4,800	6,000

Cities Over 33,000 and State Capitals	1930	1940 Est.
Dubuque, Iowa	41,679	42,000
Duluth, Minn.	101,463	103,800
Durham, N. C.	52,037	70,000
E. Chicago, Ind.	54,784	58,000
E. Cleveland, Ohio	39,667	42,000
Easton, Pa.	34,468	35,000
East Orange, N. J.	68,020	76,600
E. St. Louis, Ill.	74,347	80,000
Elgin, Ill.	35,929	40,000
Elizabeth, N. J.	114,589	124,000
Elmira, N. Y.	47,397	65,000
El Paso, Texas	102,421	106,000
Erie, Pa.	115,967	124,000
Evanston, Ill.	63,338	72,000
Evansville, Ind.	102,249	115,000
Everett, Mass.	48,424	47,228
Fall River, Mass.	115,274	115,000
Fitchburg, Mass.	40,692	43,500
Flint, Mich.	156,492	160,000
Fort Wayne, Ind.	114,946	123,500
Fort Worth, Texas	163,447	200,000
*Frankfort, Ky.	11,626	15,000
Fresno, Calif.	52,513	64,000
Galveston, Texas	52,938	61,000
Gary, Ind.	100,426	116,102
Glendale, Calif.	62,736	77,500
Gr. Rapids, Mich.	168,592	185,000
Green Bay, Wis.	37,415	46,000
Greensboro, N. C.	53,569	78,166
Hamilton, Ohio	52,176	57,500
Hammond, Ind.	64,560	71,500
Hamtramck, Mich.	56,268	49,422
*Harrisburg, Pa.	80,339	85,000
*Hartford, Conn.	164,072	187,957
Haverhill, Mass.	48,710	49,516
Hazelton, Pa.	36,765	38,261
*Helena, Mont.	11,803	13,000
Highland Pk. Mich.	52,959	..†..
High Point, N. C.	36,745	50,500
Hoboken, N. J.	59,261	56,000
Holyoke, Mass.	56,537	56,600
Houston, Texas	292,352	421,617
Huntington, W. Va.	75,572	83,000
*Indianapolis, Ind.	364,161	400,000
Irvington, N. J.	56,733	65,000
Jackson, Mich.	55,187	58,000
*Jackson, Miss.	48,282	64,500
Jacksonville, Fla.	129,549	163,000
Jamestown, N. Y.	45,155	46,500
*Jefferson City, Mo.	21,596	25,000
Jersey City, N. J.	316,715	314,000
Johnstown, Pa.	66,993	107,653
Joliet, Ill.	42,993	47,300
Joplin, Mo.	33,454	35,500
Kalamazoo, Mich.	54,786	57,000
Kansas City, Kans.	121,857	130,000
Kansas City, Mo.	399,746	436,967
Kearny, N. J.	40,716	43,195
Kenosha, Wis.	50,262	..†..
Knoxville, Tenn.	105,802	120,000
La Crosse, Wis.	39,614	42,438
Lakewood, Ohio	70,509	74,250
Lancaster, Pa.	59,949	61,000
*Lansing, Mich.	78,397	85,000
Lawrence, Mass.	85,068	86,785
Lewiston, Maine	34,948	36,000
Lexington, Ky.	45,736	61,488
Lima, Ohio	42,287	45,000
*Lincoln, Neb.	75,933	85,000
*Little Rock, Ark.	81,679	88,500
Long Beach, Calif.	142,032	180,000
Lorain, Ohio	44,512	48,000
Los Angeles, Calif.	1,238,048	1,375,000
Louisville, Ky.	307,745	342,000

Population of Principal Cities

Cities Over 33,000 and State Capitals	1930	1940 Est.
Lowell, Mass.	100,234	..†..
Lynchburg, Va.	40,661	46,000
Lynn, Mass.	102,320	101,000
Macon, Ga.	53,829	64,045
*Madison, Wis.	57,899	70,000
Malden, Mass.	58,036	58,000
Manchester, N. H.	76,834	80,000
Mansfield, Ohio	33,525	41,500
McKeesport, Pa.	54,632	60,000
Medford, Mass.	59,714	62,000
Memphis, Tenn.	253,143	289,025
Meriden, Conn.	38,481	..†..
Miami, Fla.	110,637	150,000
Milwaukee, Wis.	578,249	630,000
Minneapolis, Minn.	464,356	490,000
Mobile, Ala.	68,202	75,000
Montclair, N. J.	42,017	48,000
*Montgomery, Ala.	66,079	81,000
*Montpelier, Vt.	7,837	..†..
Mt. Vernon, N. Y.	61,499	70,000
Muncie, Ind.	46,548	57,120
Muskegon, Mich.	41,390	51,947
*Nashville, Tenn.	153,866	166,312
Newark, N. J.	442,337	457,000
New Bedford, Me.	112,597	111,521
New Britain, Conn.	68,128	75,000
New Brunswick, N. J.	34,555	37,500
New Castle, Pa.	48,674	48,000
New Haven, Conn.	162,655	167,500
New Orleans, La.	458,762	530,000
Newport News, Va.	34,417	42,000
New Rochelle, N. Y.	54,000	60,000
Newton, Mass.	65,276	70,000
N. Y. City, N. Y.	6,930,446	7,575,339
Niagara Falls, N. Y.	75,460	85,000
Norfolk, Va.	129,710	137,500
Norristown, Pa.	35,853	36,000
Norwalk, Conn.	36,019	42,524
Norwood, Ohio	33,411	35,000
Oakland, Calif.	284,063	314,000
Oak Park, Ill.	63,982	70,000
Ogden, Utah	40,272	42,350
*Okla. City, Okla.	185,389	220,000
*Olympia, Wash.	11,733	15,000
Omaha, Nebr.	214,006	223,000
Orange, N. J.	35,399	36,400
Oshkosh, Wis.	40,108	41,000
Paducah, Ky.	33,541	38,000
Pasadena, Calif.	76,086	85,000
Passaic, N. J.	62,959	63,000
Paterson, N. J.	138,513	140,000
Pawtucket, R. I.	77,149	..†..
Peoria, Ill.	104,969	125,000
Perth Amboy, N. J.	43,516	43,400
Philadelphia, Pa.	1,950,961	2,013,714
*Phoenix, Ariz.	48,118	65,000
*Pierre, S. D.	3,659	4,010
Pittsburgh, Pa.	669,817	715,000
Pittsfield, Mass.	49,677	50,826
Plainfield, N. J.	40,716	43,195
Pontiac, Mich.	34,422	37,000
Port Arthur, Texas	64,928	75,000
Portland, Me.	50,902	59,000
Portland, Ore.	70,810	72,000
Portsmouth, Ohio	301,815	339,850
Portsmouth, Va.	42,560	49,230
Poughkeepsie, N. Y.	45,704	50,000
*Providence, R. I.	40,288	41,500
Pueblo, Colo.	252,981	243,006
Quincy, Ill.	50,096	60,000
Quincy, Mass.	39,241	39,500
Racine, Wis.	71,983	80,000
*Raleigh, N. C.	67,542	73,000
Reading, Pa.	37,379	50,000
Revere, Mass.	111,171	..†..
*Richmond, Va.	35,680	40,000
	182,929	190,000

Cities Over 33,000 and State Capitals	1930	1940 Est.
Roanoke, Va.	69,206	78,000
Rochester, N. Y.	328,132	342,000
Rockford, Ill.	85,864	98,000
Rock Island, Ill.	37,953	42,000
*Sacramento, Calif.	93,750	121,592
Saginaw, Mich.	80,715	90,000
St. Joseph, Mo.	80,935	82,500
St. Louis, Mo.	821,960	843,300
*St. Paul, Minn.	271,606	295,000
St. Petersburg, Fla	40,425	55,000
Salem, Mass.	43,353	43,471
*Salem, Ore.	26,266	31,000
*Salt Lake City, Utah	140,267	149,000
San Antonio, Texas	231,542	275,000
San Bernardino, Calif.	37,481	50,000
San Diego, Calif.	147,995	178,000
San Francisco, Calif.	634,394	775,000
San Jose, Calif.	57,651	81,500
Santa Barbara, Calif.	33,613	42,000
*Santa Fe, N. Mex.	11,176	17,000
Santa Monica, Calif.	37,146	57,000
Savannah, Ga.	85,024	95,000
Schenectady, N. Y.	95,692	96,500
Scranton, Pa.	143,433	147,000
Seattle, Wash.	365,583	406,543
Sheboygan, Wis.	39,251	43,350
Shreveport, La.	76,655	102,000
Sioux City, Iowa	79,183	86,000
Sioux Falls, S. D.	33,362	38,000
Somerville, Mass.	103,908	104,000
South Bend, Ind.	104,193	102,088
Spokane, Wash.	115,514	135,000
*Springfield, Ill.	71,864	77,500
Springfield, Mass.	149,900	151,487
Springfield, Mo.	57,527	70,000
Springfield, Ohio	68,743	78,000
Stamford, Conn.	46,346	70,000
Steubenville, Ohio	35,422	40,000
Stockton, Calif.	47,963	56,525
Superior, Wis.	36,113	36,000
Syracuse, N. Y.	209,326	224,000
Tacoma, Wash.	106,817	110,000
*Tallahassee, Fla.	10,700	16,000
Tampa, Fla.	101,161	100,151
Taunton, Mass.	37,355	37,500
Terre Haute, Ind.	62,810	75,000
Toledo, Ohio	290,718	320,000
*Topeka, Kans.	64,120	75,584
*Trenton, N. J.	123,356	125,000
Troy, N. Y.	72,763	75,000
Tulsa, Okla.	141,258	160,000
Union City, N. J.	58,659	..†..
Utica, N. Y.	101,740	108,000
Waco, Texas	52,848	70,000
Waltham, Mass.	39,247	41,500
Warren, Ohio	41,062	47,200
Washington, D. C.	486,869	630,000
Waterbury, Conn.	99,902	107,300
Waterloo, Iowa	46,191	56,966
Waukegan, Ill.	33,499	35,000
West Allis, Wis.	34,671	36,734
W. New York, N. J.	37,107	40,000
Wheeling, W. Va.	61,659	65,000
White Plains, N. Y.	35,830	43,113
Wichita, Kansas	111,110	120,000
Wichita Falls, Texas	43,690	57,000
Wilkes-Barre, Pa.	86,626	89,000
Williamsport, Pa.	45,729	50,000
Wilmington, Del.	106,597	112,000
Winston-Salem, N. C.	75,274	100,000
Woonsocket, R. I.	49,376	47,000
Worcester, Mass.	195,311	190,000
Yonkers, N. Y.	134,646	150,000
York, Pa.	55,254	59,000
Youngstown, Ohio	170,002	180,000
Zanesville, Ohio	36,440	41,389

Legal Holidays in the Various States

JANUARY 1. NEW YEAR'S DAY: In all the States, Territories and Colonial possessions.

JANUARY 8. ANNIVERSARY OF THE BATTLE OF NEW ORLEANS: In Louisiana.

JANUARY 19. LEE'S BIRTHDAY: In Ala., Ark., Fla., Ga., Miss., N. C., S. C., Tenn. and Va.

FEBRUARY 12. GEORGIA DAY: In Georgia. Date of Oglethorpe's landing in 1733.

FEBRUARY 12. LINCOLN'S BIRTHDAY: In Alaska, Calif., Colo., Conn., Del., Ia., Ill., Ind., Kan., Ky., Mich., Minn., Mo., Mont., Neb., Nev., N. J., N. Y., N. Dak., Ohio, Pa., S. Dak., Tenn., Utah, Wash., W. Va., Wyo., and observed by Governor's Proclamation in Mass.

FEBRUARY 14. ADMISSION DAY: In Arizona.

FEBRUARY 22. WASHINGTON'S BIRTHDAY: In all the States, Territories and Possessions.

MARCH 2. ANNIVERSARY OF TEXAN INDEPENDENCE: In Texas.

MARCH 4. INAUGURATION DAY: Every four years in the Dist of Columbia only.

MARCH 25. MARYLAND DAY: In that State only.

MARCH 30. SEWARD DAY: In Alaska.

GOOD FRIDAY: In Conn., Del., Fla., La., Md., Minn., N. J., Pa., Philippines, Porto Rico, Tenn.

APRIL 12. HALIFAX INDEPENDENCE RESOLUTIONS: In North Carolina.

APRIL 13. THOMAS JEFFERSON'S BIRTHDAY: In Alabama.

APRIL 19. PATRIOTS' DAY: In Me. and Mass.

APRIL 21. ANNIVERSARY OF THE BATTLE OF SAN JACINTO: In Texas.

APRIL 26. CONFEDERATE MEMORIAL DAY: In Alabama, Florida, Georgia and Mississippi.

MAY 10. CONFEDERATE MEMORIAL DAY: In Kentucky and North Carlina.

MAY (Second Sunday). MOTHER'S DAY: Is observed but not a legal holiday.

MAY 20. ANNIVERSARY OF THE SIGNING OF THE MECKLENBURG DECLARATION OF INDEPENDENCE: In North Carolina.

MAY 30. DECORATION DAY: In all the States and Possessions except Ala., Ark., Fla., Ga., La., Miss., N. Mex., N. C., S. C., Tenn. and Texas.

JUNE 3. JEFFERSON DAVIS'S BIRTHDAY: In Ala., Ark., Fla., Ga., Ky., La., Miss., Tenn., Tex. and Va.

JUNE 11. KAMEHAMEHA DAY: In Hawaii.

JUNE 14. FLAG DAY: Is widely observed but not a legal holiday.

JUNE 15. PIONEER DAY: In Idaho.

JULY 4. INDEPENDENCE DAY: In all the States, Territories and Possessions.

JULY 10. ADMISSION DAY: In Wyoming.

JULY 24. PIONEERS' DAY: In Utah.

AUGUST 1. COLORADO DAY: In Colorado.

AUGUST 16. BENNINGTON BATTLE DAY: In Vt.

SEPTEMBER (First Monday). LABOR DAY: In all the States and Territories except Ala., Wyo. and the Philippines.

SEPTEMBER 6. LAFAYETTE DAY: Also the anniversary of the First Battle of the Marne. Is not a legal holiday, but is celebrated in New York and ten other States.

SEPTEMBER 9. ADMISSION DAY: In California.

SEPTEMBER 12. "OLD DEFENDERS' DAY": In Baltimore, Md.

OCTOBER 1. MISSOURI DAY: In that State's schools.

OCTOBER 12. COLUMBUS DAY: In Ark., Ariz., Calif., Colo., Conn., Del., Fla., Idaho, Ill., Ind., Kan., Ky., La., Me., Md., Mass., Mich., Mo., Mont., Neb., Nev., N. H., N. J., N. M., N. Y., N. Dak., Ohio, Ore., Pa., R. I., Tex., Utah, Vt., Wash., W. Va., also in Porto Rico. In Arkansas and Kansas it does not affect notes or judicial proceedings.

OCTOBER 12. FRATERNAL DAY: Alabama only.

OCTOBER 18. ALASKA DAY: In Alaska only.

OCTOBER 31. ADMISSION DAY: In Nevada.

NOVEMBER. GENERAL ELECTION DAY: 1st Tuesday after 1st Monday. In every State and Territory except Alaska, Dist of Col., Hawaii, Ill., Mass., Miss., Ohio, Philippines and Vt. In Illinois it is a legal holiday in Chicago, Springfield, East St. Louis, Galesburg, Danville, Cairo and Rockford. In Ohio it is a half holiday. In Maine it is a legal holiday only as to the courts, which also close on the State Election Day (biennially, 2nd Monday in Sept.).

NOV. 11. ARMISTICE DAY: In Ala., Ariz., Ark., Calif., Colo., Fla., Ill., Iowa, La., Mass., Minn., Mo., Mont., Neb., N. J., N. C., N. Dak., Pa., R. I., S. Dak., Tenn., Tex., Vt., Va. and Hawaii. In other States by Governor's Proclamation only.

NOVEMBER. THANKSGIVING DAY: Last Thursday in November. Is observed in all the States, Territories and Possessions.

DECEMBER 25. CHRISTMAS DAY: In all the States, Territories and Possessions.

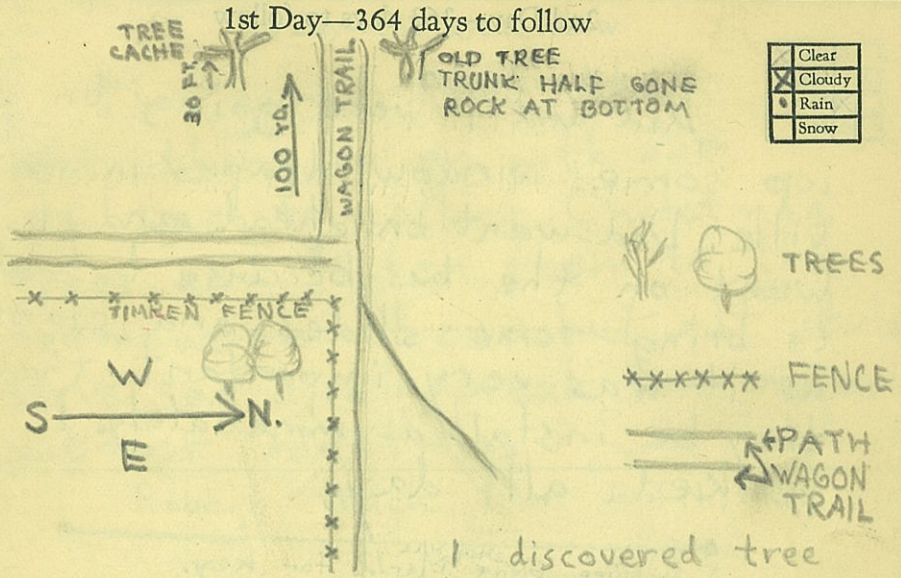
DECEMBER 30. RIZAL DAY: In Philippines.

There are no statutory holidays in Mississippi, but by common consent the Fourth of July, Thanksgiving and Christmas are observed. In New Mexico, Washington's Birthday, Decoration Day, Labor Day, Flag Day (June 14), and Arbor Day are holidays, when so designated by the Governor. In South Carolina, Thursday of Fair Week is a legal holiday.

ARBOR DAY is a legal holiday in many States, although in some it is observed as designated by the Governor.

Wednesday, January 1, 1941

1st Day—364 days to follow



I discovered tree lookout. Fine place for cache.

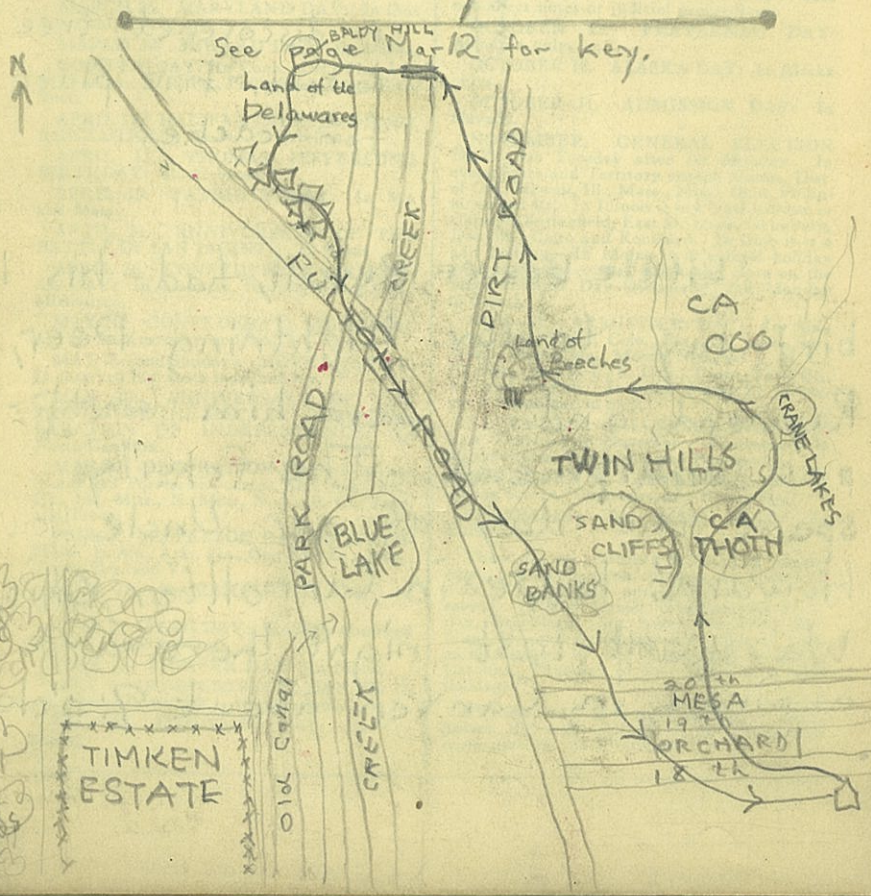
Little Beaver, Russell, had his 10th birthday to-day. Lightning Deer, Raymond, and I gave him camping equipment. The family spent the day at our Uncle Howard's house in Carrollton, Ohio. We spent last night there and arrived in Canton about 9 o'clock

Thursday, January 2, 1941

2nd Day—363 days to follow

	Clear
	Cloudy
X	Rain
	Snow

Dad and I were going to put up some window drapes in Steubenville. Dad went on ahead and I went on the bus because I had to bring some slides and clamps as it was very important that they be installed immediately. I worked all day.



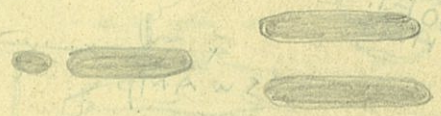
Friday, January 3, 1941

3rd Day—362 days to follow

	Clear
X	Cloudy
	Rain
	Snow

I figured that the best thing to do with our hut was to collect Christmas trees and fasten them to the framework of our hut. It would serve as a windbreak for winter outdoor meetings.

Rabbit track (seen Jan. 11, 1941)



At Camp Tuscarora or anywhere else

NALAKI, NALAKI!

THE BLACK GOD

CHAPTER ONE

NALAKI'S SURPRISE

A dark skinned savage came racing to a stop in front of Chief Nalaki's hut. "Nalaki, Nalaki," he cried, "He came, he came!"

"Who came?" was Nalaki's quick question. "Where are the rest of the warriors in the hunting party?"

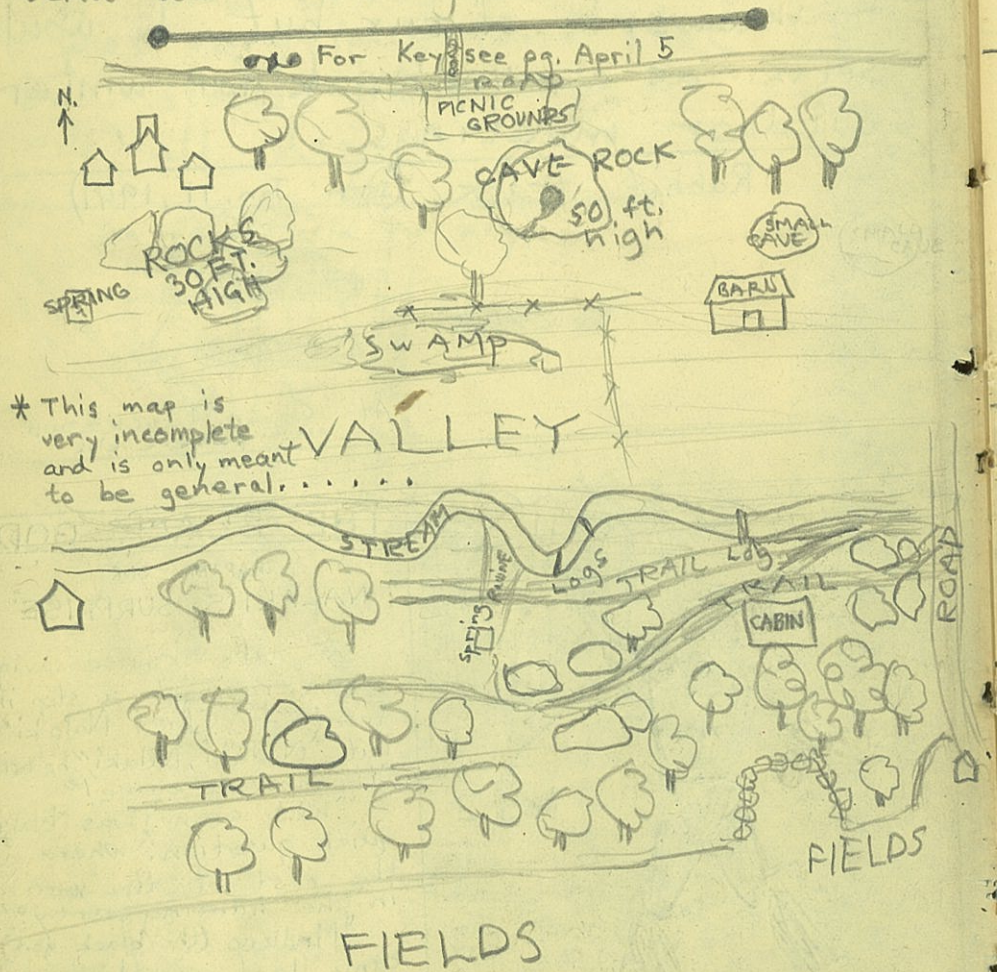
"Moduco (the black god) came last night! When I awoke all were killed but me. The fire was dead and each hunter was stabbed in the heart."

Saturday, January 4, 1941

4th Day—361 days to follow

	Clear
	Cloudy
	Rain
X	Snow

Lightning Deer, Little Beaver and I looked for discarded trees. We now have two trees. It was very cold to-day, 15 degrees, and we didn't get much done.



Sunday, January 5, 1941

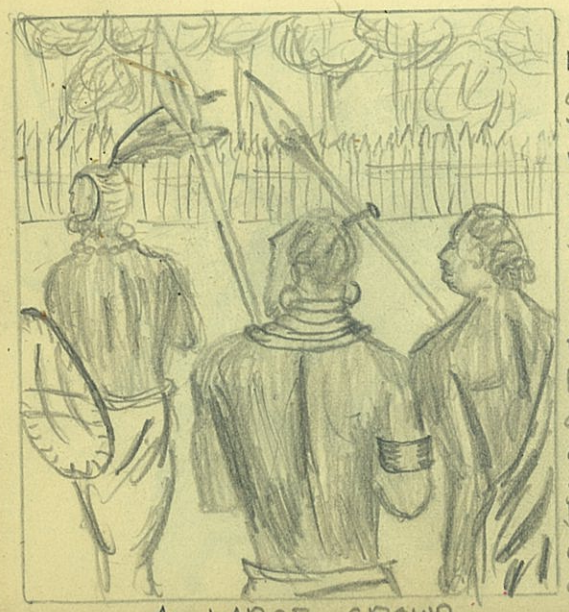
5th Day—360 days to follow

	Clear
	Cloudy
	Rain
X	Snow

It was very cold to-day, therefore got very little done to ward the construction of the hut. I went to sunday school this morning and saw my sister back off to Columbus to O.S.U. this afternoon.

Fox tracks (seen Jan. 11, 1940)

At Camp Tuscazoar



A LARGE CROWD

The noise and confusion, by now, had drawn a large crowd of the superstitious blacks. The negroes were gibbering wildly. Who was this strange god that worked at night and had killed three of their warriors in one blow?

Nalaki also was worried. He was losing some of his former prestige. The old witch doctor, himself, did not know who this god of the night might be. At any rate Nalaki was certain that if he did not soon stop these

Monday, January 6, 1941

6th Day—359 days to follow

	Clear
X	Cloudy
	Rain
	Snow

Christmas vaction is at an end. Back to school I must go. I went to header's club this evening. It is still cold although warming up somewhat.

* * *

Nazis scuttle Graf Spee Dec. 17-39.

* * *

Tuesday, January 7, 1941

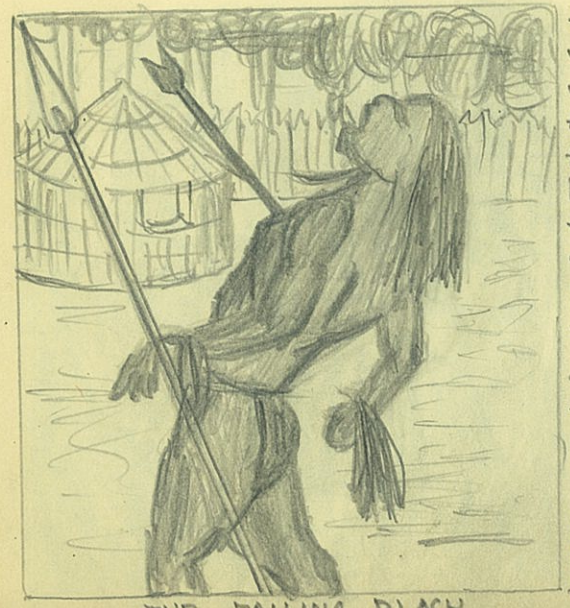
7th Day—358 days to follow

	Clear
X	Cloudy
	Rain
	Snow

After supper Roy Schwitzgebel and I went looking for trees. We found four trees, three with long needles and one large piece of wire netting. It can be nailed to the side of the hut and thatched with fir boughs.

Racoon track (seen Jan. 11)

At Camp Tuscazoar



THE FALLING BLACK

terrors of the night the very tribe that he ruled with a tyrant's hand, might turn against him. "Lead us to the place where it happened," he ordered the trembling savage. "If you do not I will whip you and tie you, deep in the jungle, for Moduco to kill."

There was a twang of an arrow, a scream from the falling black, and a mocking cry from the jungles depths, "That will not be necessary. I have killed him already. And if you or your warriors try to follow me this sam

Wednesday, January 8, 1941

8th Day—357 days to follow

	Clear
	Cloudy
	Rain
	Snow

Roy and I got one more Scotch pine tonight, the best yet. While I went to a HiY committee meeting. Don Silver, Ron McGaw, Posey, and Richard Spilker were the culprits. The one Richard Spilker stole was re-secured by Lightning Deer.

Thursday, January 9, 1941

9th Day—356 days to follow

	Clear
	Cloudy
	Rain
	Snow

Raymond and I prepared our menu for the overnight hike to-morrow. An official check showed that about four poorly formed trees were hooked. This is not enough to start a row about.

Bob White track (Seen Feb. 24, 1941)

At the orchard

THE JUNGLE'S GLOOM

fate will be yours," There was a taunting laugh — then deep silence seemed to fill the jungle's gloom.

Moduco, the warrior, strode into the trackless denizens of the jungle. He walked slowly, confident that there would be no whole-hearted attempt to pursue him. Through almost impenatrable jungle lands Moduco and his black Leopard, Midnight, marched on.

Meanwhile Nalaki was having his troubles. It worked out almost exactly as Moduco had expected. With much urging, coaxing and finally threatening Nalaki's

Friday, January 10, 1941

10th Day—355 days to follow

	Clear
	Cloudy
	Rain
	Snow

Immediately following school I helped deliver papers for Cline. I hurried home and packed our blanket roll while Raymond packed the food. We arrived at Tuscazoar about 7:15 because the roads were so bad. We ate supper and went on a hike to Pioneer Point. We went to bed at 12:30.

Saturday, January 11, 1941

11th Day—354 days to follow

	Clear
	Cloudy
X	Rain
	Snow

We got up about 8:00. I cooked breakfast of pancakes, bacon, and pineapple. Later, we played fox and hound. Lightning Deer and I were hounds. While standing in the gulley between the parking lot and the road a red fox shot into our view! I was within 10 feet of it. It was running easily and shot up the almost vertical bank. Lightning Deer and I trailed it until it went off scout property. About 5 minutes later a noise as of a dog fight was heard. Three baying hounds were hot on Reynard's trail.

MODUCO, THE WARRIOR

warriors finally hit the trail after Moduco, but when they noticed the leopard tracks following the exact footprints of Moduco the superstitious blacks turned and fled. There was no choice; with his warriors temporary deserters Nalaki turned toward home. His manhunt for Moduco was stopped, for the present.

By this time Moduco had reacked his destination. It was a cave in the side of a cliff, closely guarded by two black leopards. Midnight was obviously the lord of the group. He strutted around the cave proudly displaying his sleek black coat.

Moduco talked softly to each of the leopards and

Sunday, January 12, 1941

12th Day—353 days to follow

	Clear
	Cloudy
	Rain
	Snow

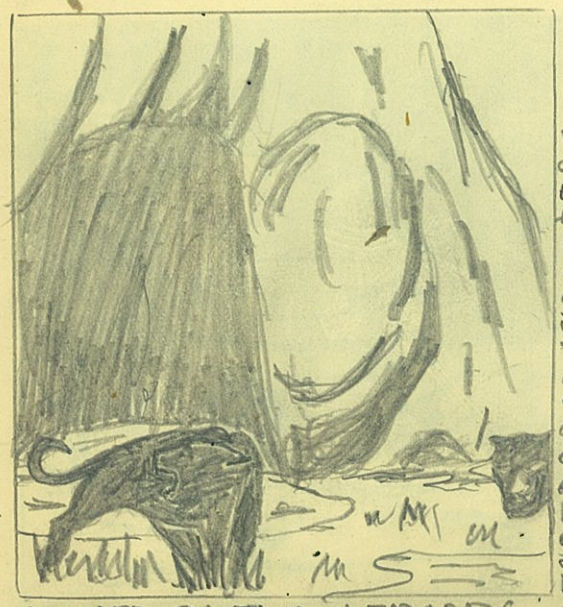
I worked on signs for Dad practically all day, except for Sunday School and Church. They are for a grange in Tarentum, Pa.

Monday, January 13, 1941

13th Day—352 days to follow

	Clear
	Cloudy
	Rain
	Snow

I went to Leader's club meeting to-night. It was reported to me that Little Beaver and Earl Franz got more trees. This is unofficial.



GUARDED BY TWO LEPARDS

then went into his cave. The interior was of a very elaborate design. In the very center of the cavern was a huge circular pedestal arranged so that there were three steps, each one smaller than the one it was resting on. Leaning against the lower step was a long cylindrical drum, one that is commonly found in an African witchdoctor's odobe. To one side was a long pole driven into the bare ground and on the top of the pole was a large grotesque mask. It was carved from some specie of African hardwood with two horns, shaved to paper thinness, glued to the top. These are all common sights in a witchdactor's hut but the strange thing about this hut was the way

14th Day—351 days to follow

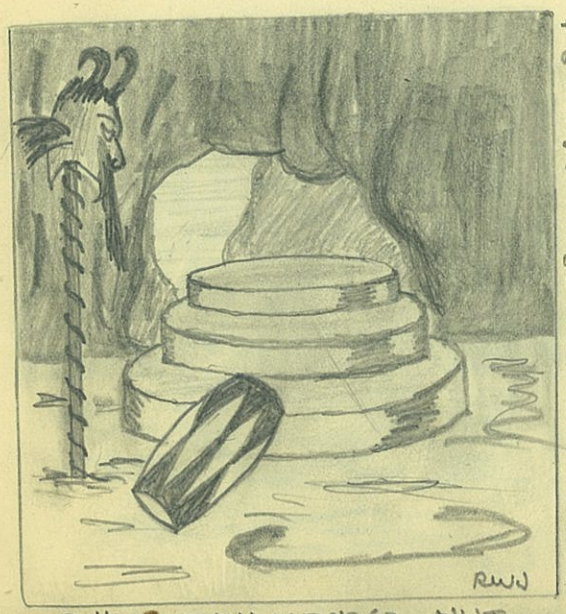
Clear
Cloudy
Rain
Snow

I worked on some ads today and went to Hi Y in the evening. The construction work on the hut is still not completed.

15th Day—350 days to follow

Clear
Cloudy
Rain
Snow

I worked on ads for Tarentum today and also made some signs for the church play.



THE WITCHDOCTOR'S HUT

the fixtures were arranged and most of all, the fact that the pedestal in the middle of the room was absolutely absent of any object.

In the rear of this room was a narrow passage leading off to the left. It was to this passage that Moduco went.

During all this time the two leopards outside the cavern door never deserted their posts, while the leopard, Midnight, followed Moduco like a faithful do

Thursday, January 16, 1941

16th Day—349 days to follow

	Clear
	Cloudy
	Rain
	Snow

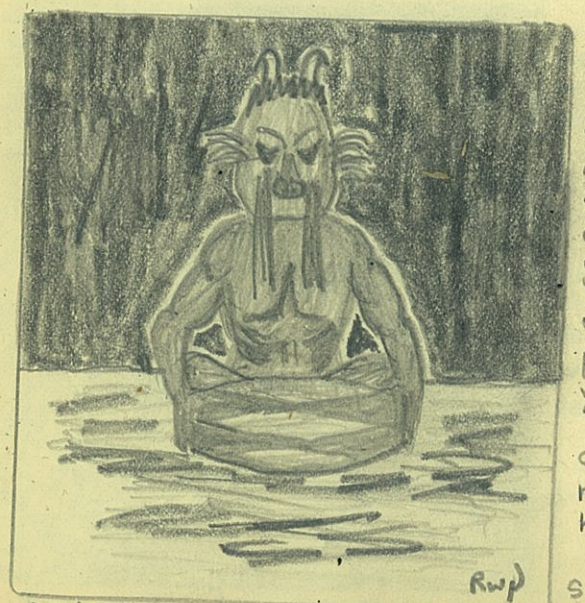
I was making signs for the church play to-day. I also made some ads for Tarentum. Miss Rose, the Lehman art teacher wants me to make some signs for the gym.

Friday, January 17, 1941

17th Day—348 days to follow

	Clear
	Cloudy
	Rain
	Snow

I stayed up 'till almost 12:30 to-nite getting all the ads ready for tomorrow. Dad wants me to go with him to Pa.



BEATING THE CEREMONIAL DRUM

chapter Two

The WITCHDOCTOR'S DANCE

Following his supper, Moduco the warrior, became a thing of the past and Moduco the Witchdoctor was arrayed in all his savage glory.

He was stripped to the waste and his body was painted in gaudy reds, yellows, and blues.

A hideous, but finely carved wooden dance mask was worn by him.

All this time he was softly and slowly beating on his ceremonial drum

Saturday, January 18, 1941

18th Day—347 days to follow

	Clear
	Cloudy
X	Rain
	Snow

I went to Tarentum to help Dad and Krepps put up the curtain. I had several ads to make on the job and got sick, tonsilitis. The best part of traveling, whether it is walking, riding, driving, or something else is watching and observing the country, the people, the wild-life that live in, other places. - whether it is another country, another state, or another neighborhood.

Sunday, January 19, 1941

19th Day—346 days to follow

	Clear
X	Cloudy
	Rain
	Snow

I went to Sunday School to-day even if I was pretty sick. Examinations coming up next week.

THE WITCHDOCTOR'S DANCE

The beat of the drum was getting louder and louder, the walls of the cavern were echoing and re-echoing untill the pitch of the drum reached to a crescendo of roaring, pulsating beats;

Then silence, complete silence reigned, untill it was shattered by a hideous, shrieking cry and the witchdoctor's dance had begun!

Moduco danced for hours. When he finally dropped to his knees the first streaks of dawn were appearing in the east. All during

Monday, January 20, 1941

20th Day—345 days to follow

X	Clear
	Cloudy
	Rain
	Snow

I remembered when I was going to school this morning that I had a history notebook to turn in. I knew pretty well what I was going to write and wrote it during English class, I got a "very good." I almost fell over.

from page 21

better than any other person that ever went to Lehman. I don't know which record I'll try for. I'll probably never be able to develop the skill, endurance, and strength necessary to beat all previous records.— — — Time will tell.

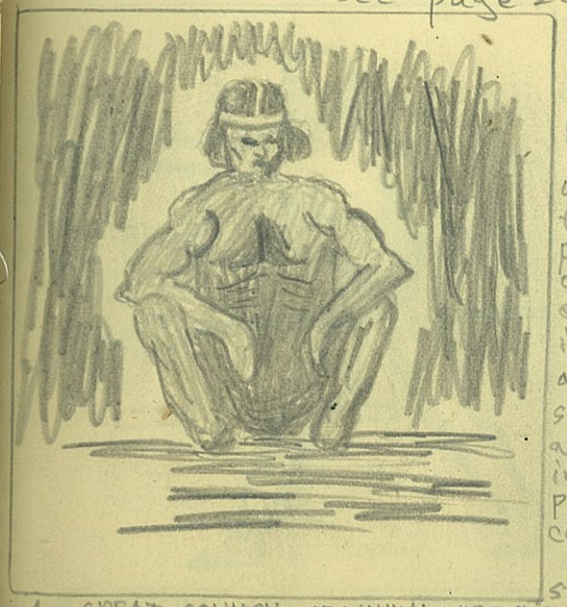
Tuesday, January 21, 1941

21st Day—344 days to follow

	Clear
X	Cloudy
	Rain
	Snow

Examinations start to-morrow. I am only worried about Latin. I made one of the plaques for the school gym. Some day, I hope, perhaps one of those plaques will have my name on it. Perhaps it seems strange but I would rather be the holder of one of those records than to be on any Lehman Football team. A football team is composed of 11 fellows, the best players of that year while one of those plaques means that one single fellow has made a record

see page 20.



A GREAT COUNCIL OF WAHIMA WARRIORS

this time his black leopard "Midnight" was standing, a setinel at the cave's entrance.

The witchdoctor had worked himself into a frenzy and when he dropped it was not from his own will but from sheer exhaustion. He lay as if in a trance but with a quick catlike motion sprang to his feet and once again fell on his face in front of the circular pedastal situated in the center of the cavern.

Then began one of the strangest ceremonies

Wednesday, January 22, 1941

22nd Day—343 days to follow

	Clear
	Cloudy
X	Rain
	Snow

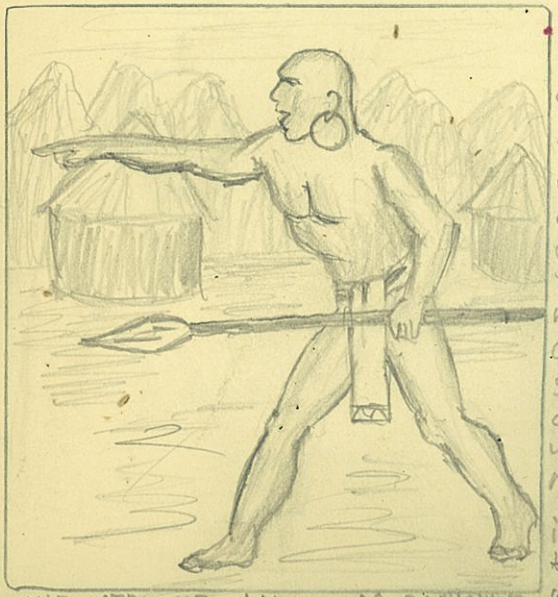
I had my Latin exam this morning. I think I got about 90%. The algebra exam was in the afternoon. I finished the other plaque to-day.

Thursday, January 23, 1941

23rd Day—342 days to follow

X	Clear
	Cloudy
	Rain
	Snow

This morning I had my English exam. I know I got a 91 because I saw my grade. The history exam was this afternoon. It was simple.



THE MEDICINE MAN WAS BANISHED

that ever took place in all Africa and I can assure you that Africa is just full of strange things.

In a low sing-song voice Moduco began to chant a prayer to his god.

"Oh, Father listen to me and help me for I am weak and need thy strength. Many, many moons ago my father's father was the chief medicine man of the Wahima tribe.

One day he was guarding the sacred idol of the black ebony leopard when he was surprised

24th Day—341 days to follow

	Clear
	Cloudy
	Rain
X	Snow

It snowed about 4½ inches last night. Roy and I shovelled people's walks to-day as we had a vacation. I earned $1.00 in a few hours.

25th Day—340 days to follow

	Clear
X	Cloudy
	Rain
	Snow

Dad came home with ad copy to-day. I worked steadily and made 17, a new record for me.

by a band of warriors from the Touchezla tribe, which Nalaki now rules. The idol was stolen and a great council of Wahima warriors was held. It was decided that the medicine man be banished from the tribe.

This was a great disgrace but he took the decision calmly and without fear. He and his family moved from the tribe and forever thereafter he struck terror into the hearts of everyone in the Touchezla tribe, so much that he

Sunday, January 26, 1941

26th Day—339 days to follow

	Clear
X	Cloudy
	Rain
	Snow

I went to Sunday School and worked the rest of the day. I finished the job at about 9:30 P.M. I have completed a total of 25 signs. Dad left for Newark but left me the ad copy for the other job.

Monday, January 27, 1941

27th Day—338 days to follow

	Clear
X	Cloudy
	Rain
	Snow

School again! I made several signs for the new job. It is hard as I have 5 or 6 emblems. I went to Leader's Club.

was given the name of Moduco, the black god. When he was old and feeble his son continued in his footsteps until he also was too old to be a warrior. Now I have become the black god. The black ebony leopard is still the Touchezla's. Oh father, let me pass on into the other world, knowing that my clan is no longer an exile from the Wahima tribe.

With this, Moduco sank to the ground, exhausted.

28th Day—337 days to follow

	Clear
	Cloudy
	Rain
X	Snow

I have a record of 40 signs in four days. (not bad). I stayed up 'till 12:30 making signs. Dad left immediately.

cont. from pg. 31

" She sighed as she whispered manyana
Never dreaming that we were parting
And I lied as I whispered manyana
For our tomorrow never came.

" South of the border, I rode back one day
There in a veil of white
By candlelight
She knelt to pray.
The mission bells told me
That I musn't stay
South of the border
Down Mexico way."

29th Day—336 days to follow

	Clear
X	Cloudy
	Rain
	Snow

A day of rest has come at last. I only have 4 signs to make. I worked on art to-day.

Chapter Three

Thursday, January 30, 1941

30th Day—335 days to follow

	Clear
	Cloudy
	Rain
	Snow

I worked on my art work to-day. I didn't do much of importance.

SOUTH OF THE BORDER

"South of the border down Mexico way
That's where I fell in love
When stars above
Came out to play
And now as I wander
My thoughts ever stray
South of the border
Down Mexico way.

"She was a picture in old
Spanish lace
Just for a tender while
I kissed the smile
Upon her face

Friday, January 31, 1941

31st Day—334 days to follow

	Clear
	Cloudy
	Rain
✓	Snow

Lehman played Timken to-night. I didn't see the game but listened to a Joe Louis fight instead. I like to wrestle but I am not much of a boxer. I'm learning the hard way. After a guy gets beat up often enough he just naturally learns how to take care of himself.

For it was fiesta
And we were so gay
South of the border
Down Mexico way. (back to page 28)

WIND CHART

Wind from the Southeast — Rain

Changing from Southeast to East — Storms to South with rain.

Wind from the South — Rising Temperature

Changing from South to Northeast — Rain or Snow

Wind from the West — Fair

Changing from South to Northwest — Clear & Colder

Wind from the North — Falling Temperature

Changing from North to West — Clear + Dry.

Wind from the East — Stormy

Changing from East to Southeast — Rain soon

32nd Day—333 days to follow

	Clear
	Cloudy
	Rain
X	Snow

The snow is deep to-day. Little Beaver, Swift Fox, Lightning Deer, Yellow Bird, and Roy made a snow fort in front of our hut. We had a snowball battle.

	Canada Violet	Viola Canadensis
Height	Tall	
Petals	White above — Violet tinged beneath	5
Spur	Very Short	
Remarks	Follows the rules of the genus	
Where seen	Stadium woods	
Date	April 11, 1939	

	Downy Violet	Viola Pubescens
Height	Tall leafless	
Spur	Very short	
Corolla	Downy yellow	
Remarks	Follows rules of genus	
Where seen	Stadium woods	
Date	April 11, 1939	

Sunday, February 2, 1941

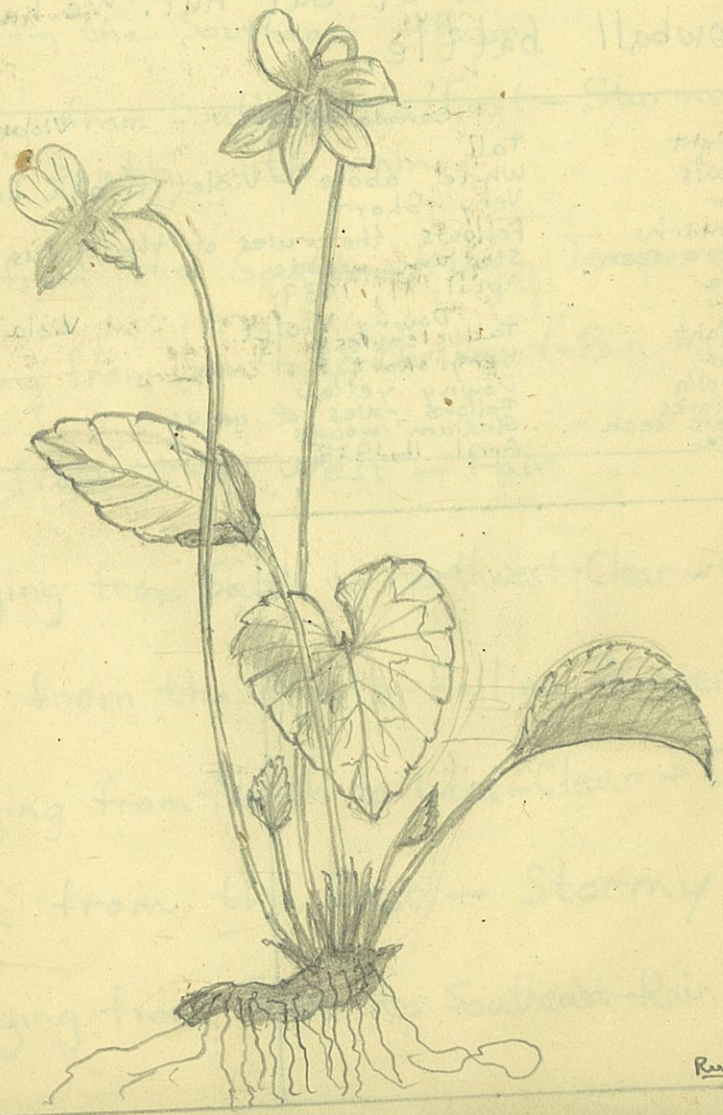
33rd Day—332 days to follow

	Clear
	Cloudy
	Rain
	Snow

I went to Sunday School and church to-day. The snow fort is holding together well.

VIOLA CUCULLATA

Common Blue Violet



Monday, February 3, 1941

34th Day—331 days to follow

	Clear
	Cloudy
	Rain
X	Snow

I went to Leader's club to-night. It was pretty windy and cold to-day.

	Common Blue Violet
Where Seen	Scout Camp - Stadium woods
Date	May 9, 1939
Leaf	Heart shaped - Slightly toothed or lobed
Habitat	Low ground - Deep damp woods
Sepals	Five
Petals	Five
Stamens	Five
Color	Blue, deep
Flowering	In spring
Remarks	Flower on naked slender stem. Lower petal enlarged at bottom into projecting sac or spur.

Tuesday, February 4, 1941

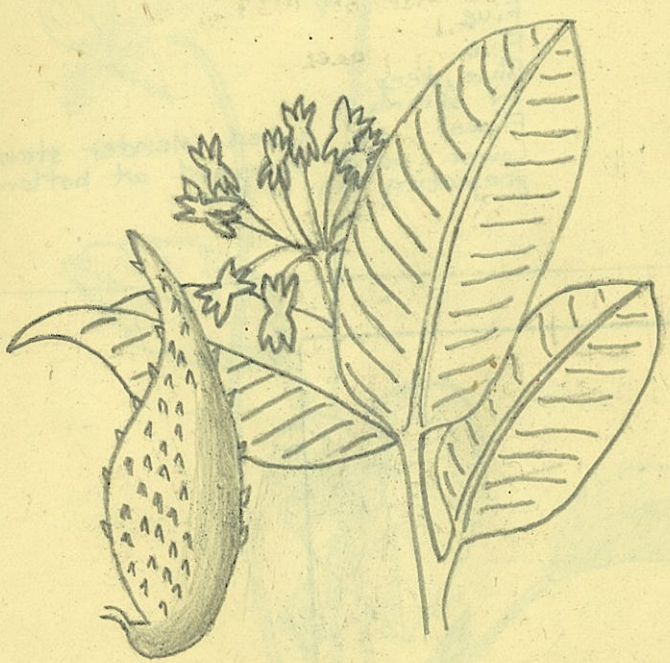
35th Day—330 days to follow

	Clear
	Cloudy
	Rain
	Snow

I sold ice cream bars at the Lehman - Cuyahoga Falls game to-day and earned about 70¢. Not so good as usual.

ASCLEPIAS SYRIACA

Common Milkweed or Silkweed



Wednesday, February 5, 1941

36th Day—329 days to follow

	Clear
	Cloudy
	Rain
	Snow

We had swimming to-night at Hi Y. The reason the meeting is on Wednesday is because we could not get the pool on Tues. I was defeated in the freshman presidential election.

Where seen	Milkweed orchard
Date	Summer of 1941, July
Leaf	Oval
Habitat	Sunny places
Sepals	
Petals	
Stamens	5 short
Color	
Flowering	
Remarks	Milky juice - Tough bark

37th Day—328 days to follow

	Clear
	Cloudy
	Rain
	Snow

I borrowed the book "Heroes of Science from the school library. I read about one third of it. Our snow fort is still standing.

MENTHA PIPERITA

Peppermint

38th Day—327 days to follow

	Clear
	Cloudy
	Rain
	Snow

Lehman played Alliance to-night. I sold ice cream bars and earned about $1.20 cents, besides the ticket to get in. Pretty good!

	Peppermint
Where Seen	Back yard
Date	Summer, 1939
Leaf	Fuzzy - aromatic - opposites
Habitat	Meadows - Near creeks
Color	Pale violet
Flowering	Clusters - Fall
Stem	Square
Remarks	Oil is extracted and a tea is made. Many very small flowers are to be found on the ovary.

Saturday, February 8, 1941

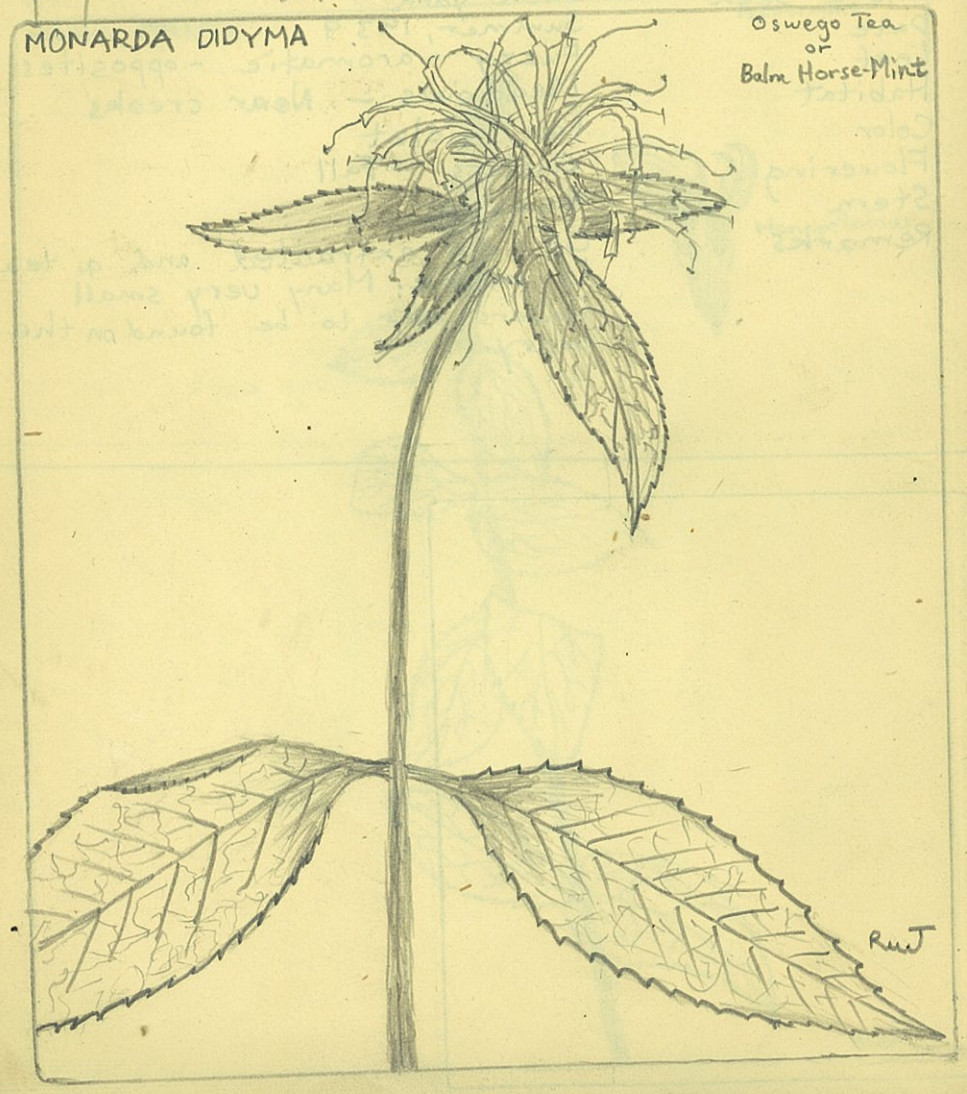
39th Day—326 days to follow

	Clear
	Cloudy
	Rain
X	Snow

The wind cuts like a knife to-day. Little Beaver & I were planning on going on a hike to-day. We had wood chopped but had to deliver papers instead.

MONARDA DIDYMA

Oswego Tea
or
Balm Horse-Mint



Sunday, February 9, 1941

40th Day—325 days to follow

	Clear
	Cloudy
	Rain
	Snow

I went to Sunday School and church to-day. Since this is Scout Week we went as a troop.

Oswego Tea

where Seen	Kaplan's back yard
Date	Summer 1939
Petals	Monopetalous, hairy, rather long, red
Habitat	Moist banks, N. and in gardens
Leaves	Uppermost tinged with red, Lance shaped Opposites
Stem	Square - Two or Three feet high
Remarks	The petals are brewed to make tea

Monday, February 10, 1941

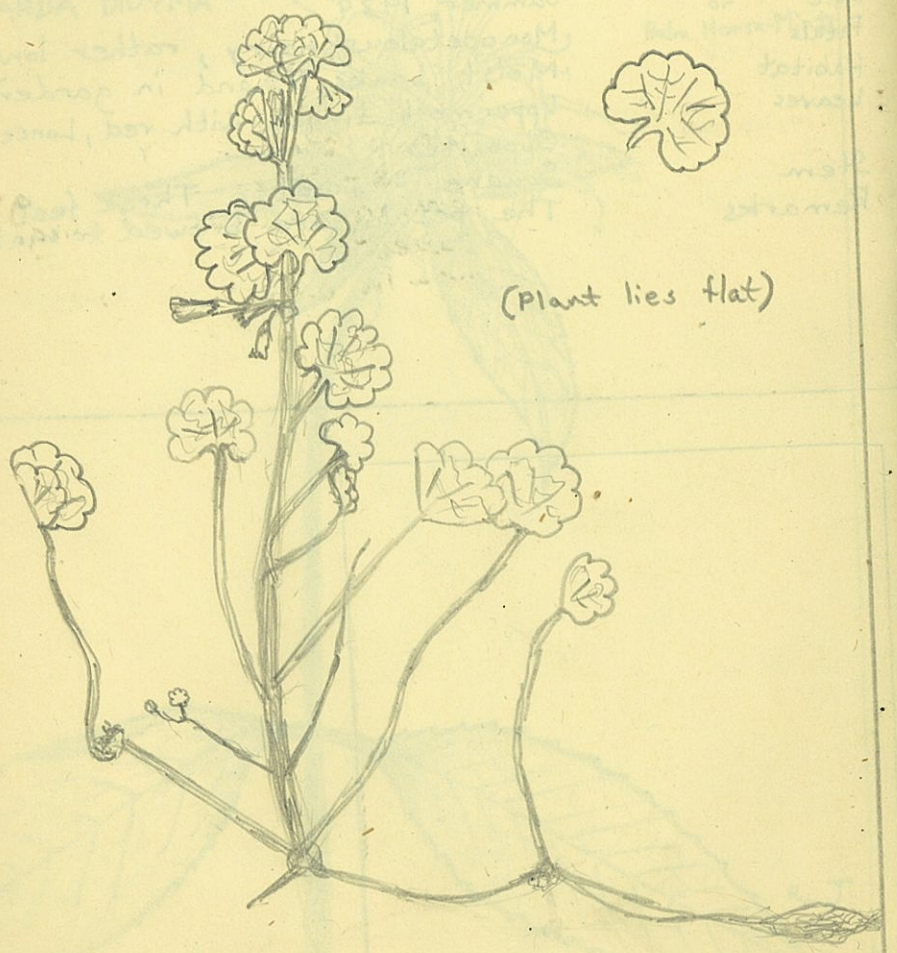
41st Day—324 days to follow

	Clear
	Cloudy
	Rain
	Snow

I went to header's Club to-night. I learned the crotch circle and I can do the knee drop correctly.

GLECHOMA

Ground Ivy



Tuesday, February 11, 1941

42nd Day—323 days to follow

	Clear
	Cloudy
	Rain
	Snow

Lehman had a basketball game to-night. I sold ice cream bars and earned $1.01.

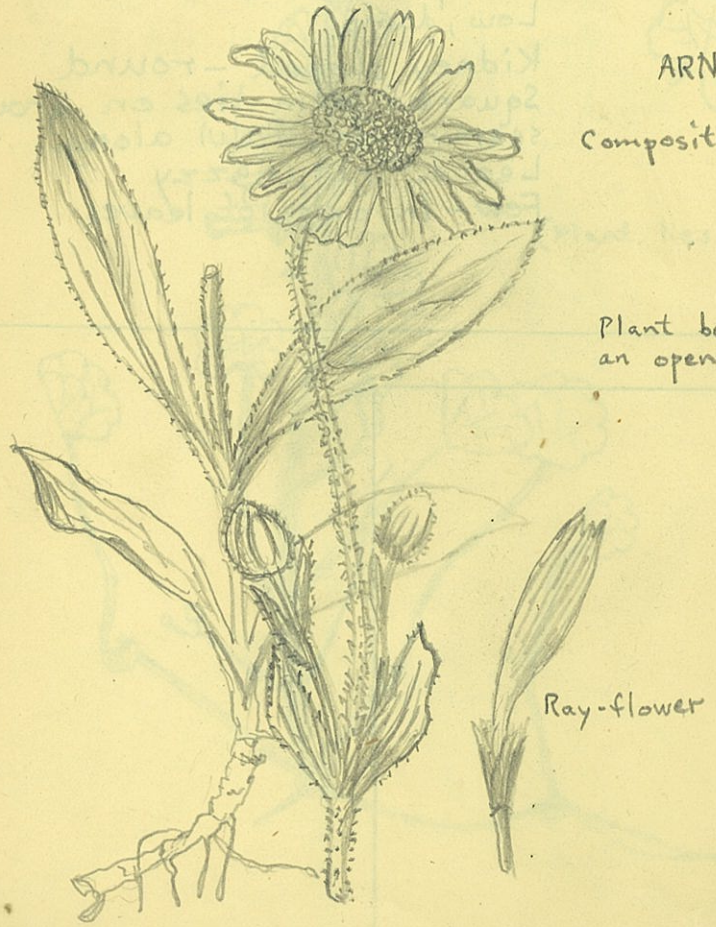
	Ground Ivy
Where Seen	Backyard
Date	Summer, 1939
Petals	Monopetalous - Pale Violet
Habitat	Low, damp
Leaves	Kidney shaped - round
Stem	Square - Stem lies on ground seeming to crawl along.
Remarks	Leaves not fuzzy
Flowers	Few - In axles of leaves

Wednesday, February 12, 1941

43rd Day—322 days to follow

	Clear
	Cloudy
	Rain
	Snow

We had Hi Y to-day as there was a basketball game yesterday. More play practice to-day after school. I spoke at Hi Y meeting on the topic "propoganda." I drew cartoons while talking.



Thursday, February 13, 1941

44th Day—321 days to follow

X	Clear
	Cloudy
	Rain
	Snow

We practiced the play to be given at the freshman party to-night. I passed handbills for the church supper to-night. I also passed bills for Wilkofs.

Friday, February 14, 1941

45th Day—320 days to follow

X	Clear
	Cloudy
	Rain
	Snow

Valentine Day! I practiced the play to-day. We give it to-morrow. Went to the Lehman Band Concert.

Saturday, February 15, 1941

46th Day—319 days to follow

	Clear
	Cloudy
	Rain
X	Snow

Freshman party to-day. We gave the play fairly well. I was on the food committee and had to help clean up.

Sunday, February 16, 1941

47th Day—318 days to follow

- [ ] Clear
- [ ] Cloudy
- [ ] Rain
- [x] Snow

I made 4 signs for the play "No Men Admitted." I finished reading the book "Against the Jungle" and ushered in church.

Monday, February 17, 1941

48th Day—317 days to follow

- [ ] Clear
- [ ] Cloudy
- [ ] Rain
- [x] Snow

I finished painting the signs for Mom. Leader's Club was called off so I went to Scout meeting instead. I was elected treasurer of the Latin Club.

Tuesday, February 18, 1941

49th Day—316 days to follow

	Clear
	Cloudy
	Rain
X	Snow

I read the book Sinopah (Swift or Kit Fox) to-day. Sinopah was later to be known as Pitamakan (Running Eagle) chief of the Blackfeet. I have changed my Indian name from Yellow Bird to Running Eagle (Pitamakan). I went to Hi Y.

Wednesday, February 19, 1941

50th Day—315 days to follow

X	Clear
	Cloudy
	Rain
	Snow

I borrowed the book "In Deserts + Jungle" from the school library. I am learning Jack Stokie's paper route as I am out of a job since Cline lost his paper route.

51st Day—314 days to follow

X	Clear
	Cloudy
	Rain
	Snow

I delivered bills for Wilkots to-day. I read part of the book but didn't do much else.

52nd Day—313 days to follow

X	Clear
	Cloudy
	Rain
	Snow

I painted some signs for Coach Hackenberg a few days ago and he said I could go with the team to the Akron East game. We won.

53rd Day—312 days to follow

	Clear
	Cloudy
	Rain
	Snow

I am teaching Lightning Deer how to paint signs. I figure that after this he can make all signs for Worley School while I will paint those for Dad and for extra money.

54th Day—311 days to follow

X	Clear
	Cloudy
	Rain
	Snow

Raymond is progressing rapidly. I had planned on making an Indian peace pipe but didn't get to it.

Monday, February 24, 1941

55th Day—310 days to follow

X	Clear
	Cloudy
	Rain
	Snow

I finished the book "In Jungles and Wilderness" to-day. It is about a boy of 14 and a girl of 8 who are kidnapped in Egypt by Mohammedans and finally escape after wandering thru the jungles of Africa. I went to Leader's Club. The book isn't much good.

Tuesday, February 25, 1941

56th Day—309 days to follow

X	Clear
	Cloudy
	Rain
	Snow

I went to Hi Y tonight. We had a speaker from the State Highway patrol. Have made no progress on the peace pipe.

57th Day—308 days to follow

X	Clear
	Cloudy
	Rain
	Snow

I worked on my plant sketches to-day after school. I finished 3. Rena Ross visited mother.

58th Day—307 days to follow

X	Clear
	Cloudy
	Rain
	Snow

I delivered bills for Wilkofs. The rest of the day I was drawing sketches in this book.

59th Day—306 days to follow

	Clear
	Cloudy
	Rain
X	Snow

After school Roy and I went down behind the Fulton Tavern looking for rats. We saw many tracks but nary a sign of a rat. It was very cold.

An official history of the re
from the founding to the present date.
Written by the eef, a charter
member, with special thanks to
Little Beaver, the only other charter
member, who was a big help in
Part I of this history.

Part One

From the founding to Little Beaver's resignation

"On November 11, 1939 (Armistice Day) Russell Janson and I started a club." That statement was taken from an old diary of mine. There was no other entry pertaining to this club but on Wednesday, December 27, 1939 there was the following entry. "Russ and I started an [1]dntiniaeibr. We have a [2]angluega. We have [3]oruf words. Ever increasing."

Re-aranged the letters [1]dntiniaeibr mean Indian Tribe,

Re-arranged the letters
[2] angluega mean language.
Re-arranged the letters
[3] oruf mean four.

I am of the conviction that the club founded Saturday, November 11 was the forerunner of the Indian tribe founded Wednesday December 27.

The diary to which I referred ran out the last day of that year, December 31.

The four words mentioned in the December entry are, I think, om (come), oc (now), ozz (soon), ko (go).

The club was a secret society. We rapidly developed a language of ten or fifteen words. There was much trouble with Raymond Janson (Lightning Deer) as the meetings were held in our bedroom and he was

continually spying. Therefore the first words developed were bick (spy), ank (sentry), coom (danger), re (tribe), and clee (camp).

We soon discovered the advantage in having fixed clees. The first one, naturally enough, was our bedroom where all the meetings were held. We discovered that a person could find a place with only a few markings on the map, if he knew his clees. This was very important and we decided that each member ought to know this. We invented a system of tests that a person must pass to become a tef. One was the pam test (map test), one was mar building (fire building), one was to be able to pick out a good clee (camp) and there were others.

I was elected éef and Little Beaver quickly advanced. We had a ceremony that each person must go through when advancing to a higher step. (something like the ug ceremony.)

We decided that when a din advances to a higher step he must be accepted by the cil ring.

We wrote these things all down in a book (the coom records.) At one time these fell into the hands of Lightning Deer, not yet in the re. We soon secured them, however, before he had a chance to examine them.

We went on a few hikes and tried to make our re as much like an Indian tribe as possible.

One day Russell (Little Beaver) and I (Eef Yellow Bird) went on a hike, one that founded the

Continued on page "Special Data" following page "March 31"

60th Day—305 days to follow

X	Clear
	Cloudy
	Rain
	Snow

It has warmed up today. Little Beaver and I went on a hike to ca thoth. Someone had started to build three huts. We la mar.

COOMRETIFNA . . . .

LITERALLY

COOM = DANGER
RE = TRIBE
TIF = FIGHT
*NA = TOGETHER

Therefore the word "Coomretifna" means: "A fierce tribe that fights together"

* ORIGINALLY NA MEANT 'SNAKE' BUT ITS NEW MEANING IS 'TOGETHER'

The official test guide of the Re.

PAPOOSE

On the night of the initiation the new member is led to a secluded spot and is told what the re is, and what it stands for. He is then asked if he wants to join the re, and if so, is ordered

Sunday, March 2, 1941

61st Day—304 days to follow

X	Clear
	Cloudy
	Rain
	Snow

The re went on a hike today. We went to ca thoth and la mar. Those present were Running Eagle, Lightning Deer, Swift Fox, Little Beaver, and Roy, and Otter.

Monday, March 3, 1941

62nd Day—303 days to follow

	Clear
	Cloudy
X	Rain
X	Snow

I helped dad put up four window drapes to-day right after supper. Rain was falling which later turned to ice.

The Oath of Allegiance and Secrecy.

"I promise to obey my cef in all that is asked of me, during the meetings of there, other than any order which will hinder my own or another's character.

I promise also to absolute secrecy of any thing that I have seen or heard or done or of anything that I will see or will hear or will do.....

to take the oath of allegience and secrecy. If he conducts him self thru this ceremony, which is called the ug rite for a papoose, as befits an Indian warrior, the council ring, which has previously voted to have him join there, automatically passes to him the rank of papoose. Any member of the re is a papoose.

63rd Day—302 days to follow

	Clear
	Cloudy
	Rain
X	Snow

Today was my birthday. Mother surprised me by inviting Roy Schwitzgebel and Raymond Wilkof to supper. I had gifts of clothing, books and money. We had swimming at Hi Y to-night and I passed my First Class swimming requirement. I have already passed five merit badges so non-officially I am a Star Scout. I should have done it a long time ago but I keep putting things off.

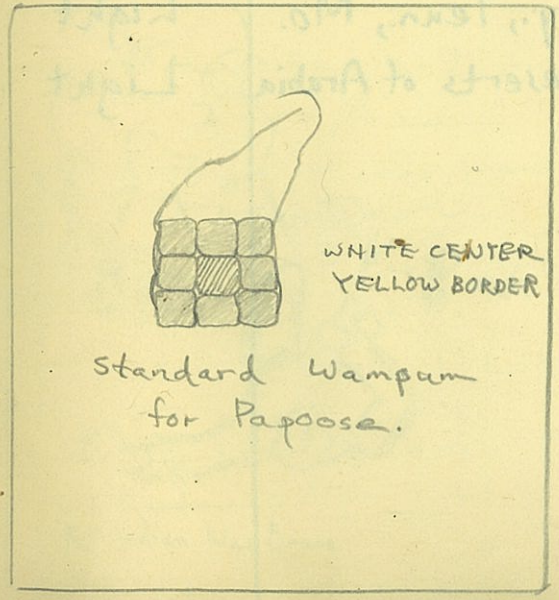
1941

British Commandos raid Norway near Narvik

64th Day—301 days to follow

	Clear
	Cloudy
	Rain
	Snow

I delivered papers for Jack Stockoes route today and earned a quarter. His route is simple.



Standard Wampum for Papoose.

The requirements for a papoose are as follows:

1. He must conduct himself as befits an Indian warrior.
2. He must pass the Council Ring.
3. He must pass the Ug rite.

All tests are passed on the first day of a new member.

--- ON TO TEE ---

65th Day—300 days to follow

X	Clear
	Cloudy
	Rain
	Snow

We were supposed to deliver bills today but they were late and we were to wait untill Friday. I fooled my time away instead.

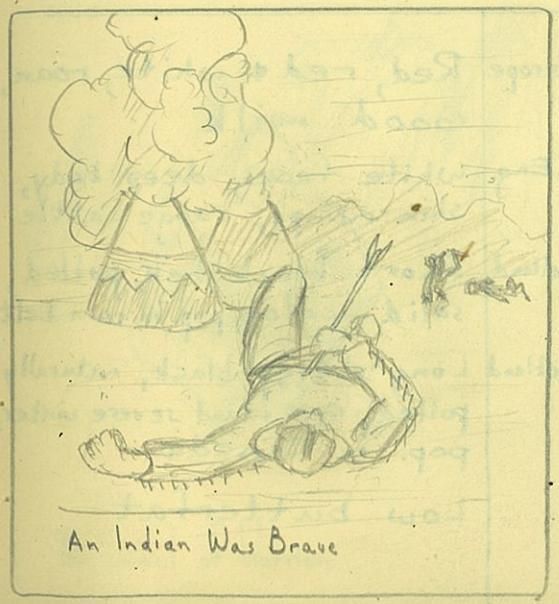
THE HORSE

NAME	ORIGINATED	USE Type
Percheron	Perche- N. France	Draft
Belgian	Belgium	Draft
Shire	England	Draft
Am. saddle horse	Ky., Tenn., Mo.	Light
Arabian	Deserts of Arabia	Light

66th Day—299 days to follow

	Clear
X	Cloudy
	Rain
	Snow

I delivered bills today for Wilkof's and read a portion of the book "The Pathfinder" by J. Fenimore Cooper. His stories are interesting but to long to be fully enjoyed by me. Lightning Deer and I visited ca thoth.



BUCK or TEE

Requirements

1 Be brave
2 Council Ring
3 Medicine Man Rite
4 * Language + Spelling
5 Handicraft
6 Climb 15 ft. Pole or Rope
7 Broad Jump
8 Indian Lore
9 Know Camps
10 Build Fire
11 Outdoor Cooking
12 Sign Language
13 Indian Name

* Discontinued 5/11/42

67th Day—298 days to follow

	Clear
	Cloudy
	Rain
X	Snow

Today Lehman was defeated in the basketball tournament at Goodyear Hall, Akron. I went along because I had made some signs for Coach Hackenberg.

CATTLE

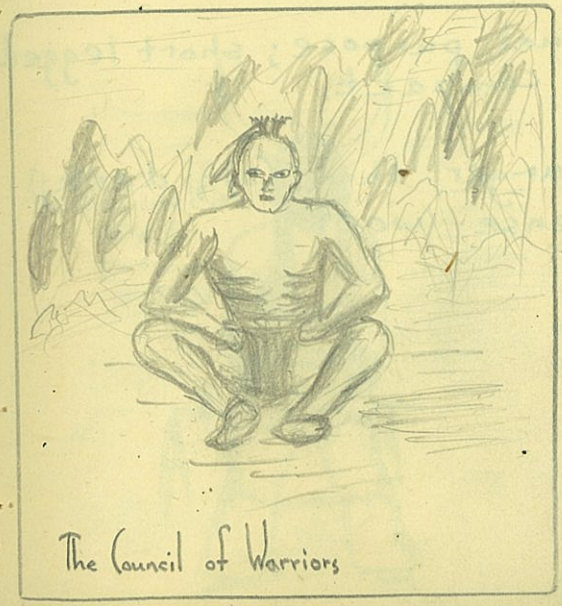
NAME	NOTES
Jersey	yellow milk rich in butterfat
Holstein Friesian	quantity great, low butterfat
Guernsey	yellow, rich butterfat
Ayrshire	vigor, low fat, 4th pure bred in U.S.

Shorthorns	N.E. Europe	Red, red & white, roan, Good milk
Hereford	S.W. Eng.	White faces, deep body, shin rumps, range cattle
Aberdeen Angus	N.E. Scotland	Short black hair, polled, solid color, pop. in corn belt
Galloway	S.W. Scotland	Long shaggy black, naturally polled, can stand severe winter, pop. in Canada
Dual-Purpose Red-polled Milking shorthorn		Low butterfat

68th Day—297 days to follow

X	Clear
	Cloudy
	Rain
	Snow

Ricketts visited us today. Charles Ray, Lighting Deer, and Little Beaver and I went on a hike to ca thoth. We had a marshmallow roast.



The Council of Warriors

REQUIREMENT 1.
Be Brave

The Din should conduct himself as befits an Din Tee. The Counciler should be firm on this test.

Requirement 2.
Council Ring

Before the ug rite, the cil ring must meet and decide if the papoose has passed his tests for tee correctly. If so, he is passed and is ready for the ug rite.

Monday, March 10, 1941

69th Day—296 days to follow

	Clear
	Cloudy
	Rain
	Snow

I went to Latin and Leader's Clubs after school tonight and I went to Scout meeting after my supper.

SHEEP

NAME	NOTES
(1) Mirino	Wool
(2) Rambouillit	Mutton, wool; large horns
(3) Shropshire	Dual purpose; short legged; compact.
(4) Hampshire	Larger than (3); dark, dense wool

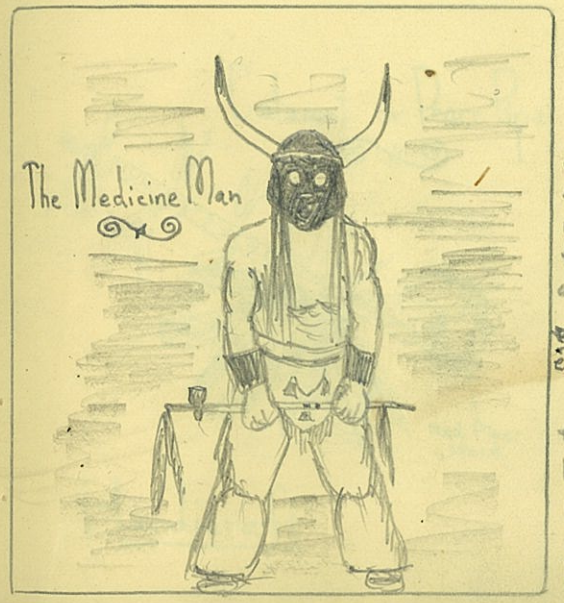
Tuesday, March 11, 1941

70th Day—295 days to follow

	Clear
	Cloudy
	Rain
X	Snow

I went to Freshman H Y tonight. We had our pictures taken at the meeting. Lightning Deer, Little Beaver and I practised trailing in the orchard. I was surprised at Lightning Deer who is progressing rapidly.

1941
Roosevelt signs Lend-Lease
March 11-41



REQUIREMENT 3
UG RITE
After the Din has passed his other tests for tee and the Cil ring accepts; he must go thru a ceremony called the Ug Rite. The eef and ug are the examiner

By cil sinat eef Beaver (REQUIREMENT 4) Language + Spelling) Discontinued 5/11/42

Memorize and be able to spell the following 15 words. Naturally know their meanings and be able to use in sentences.

CONTINUED

Wednesday, March 12, 1941

71st Day—294 days to follow

	Clear
	Cloudy
	Rain
	Snow

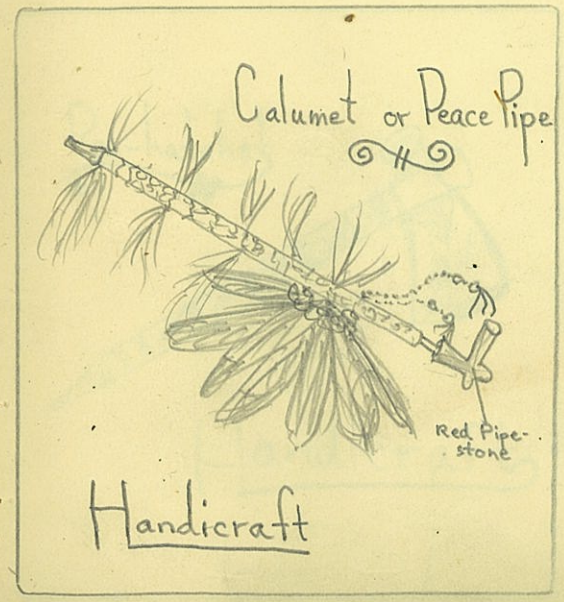
I went for a hike by myself today and covered a good bit of territory some of which I hadn't been over since fall. A map of my wanderings will be found on page January 2.

Thursday, March 13, 1941

72nd Day—293 days to follow

	Clear
	Cloudy
	Rain
	Snow

I delivered papers and also bills to-day. There were extra bills advertising some other company and I earned 60¢.



Requirement 4 - Continued

1 om ..... come
2 coomel ... quiet
3 tee ..... buck
4 rill ..... warrior
5 tef ..... brave
6 ug ..... medicine man
7 eef ..... chief
8 din ..... Indian
9 clee ..... camp
10 ko ..... go
11 oc ..... now
12 lee ..... [illegible]rry
13 ozz ..... soon
14 coom ... danger
15 re ..... tribe

Discontinued

73rd Day—292 days to follow

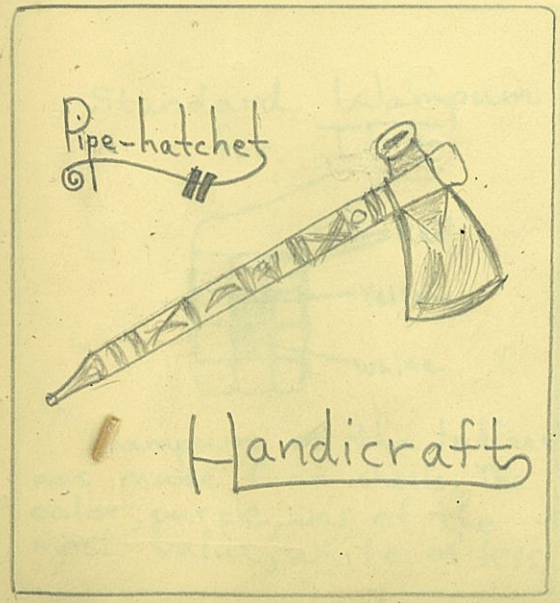
	Clear
	Cloudy
	Rain
	Snow

There was a meeting after school to-day concerning spring sports. I would like to try out for track.

74th Day—291 days to follow

	Clear
	Cloudy
X	Rain
	Snow

Dad, mother, and I went to Columbus to-day. Dad had business near there. While there, I went thru Robert's fraternity house, and ate lunch there. I played ping pong in Oxley hall, where Rheda is staying. We ate supper at Isaly's. and arrived home about midnite. While at Oxley Hall Aunt Eva came up. She wants me to make some sample hand painted Christmas cards.



REQUIREMENT 5
Handicraft
Make at least one article of handwork, Preferably something in connection with the American Indians such as a peacepipe, costume, or dance mask.

REQUIREMENT 6
climbing
Be able to climb a fifteen foot pole, rope, or vine. Also, be able to climb trees with a reasonable degree of skill.

75th Day—290 days to follow

	Clear
	Cloudy
	Rain
	Snow

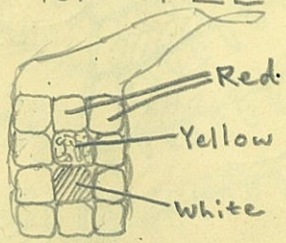
I went to Sunday School to-day. Russ and I went on a hike today. We covered the territory I covered on Wed. March 12. He left me at the sandbanks and I went towards Stadium woods. I found a nice straight 15 ft. pole and got the idea of making a teepee shaped hut with Lightning. Peer who wants to pass hut building.

76th Day—289 days to follow

	Clear
	Cloudy
	Rain
	Snow

At Leader's Club moving pictures were taken of the group. I went to Scout Meeting tonite.

Standard Wampum for TEE



Wampum of the Indians was made from shells. The color, purple, was of the most value, white of less.

REQUIREMENT 7
Broad Jump

Be able to do a running broad jump of 1½ times your height. For example a 6 foot person must be able to jump 9 feet.

Requirement 8
Indian Lore

Indian Lore is really nature study. Any bird, plant, tree or animal passed must be able to be recognized at any time by the tee.

CONTINUED

77th Day—288 days to follow

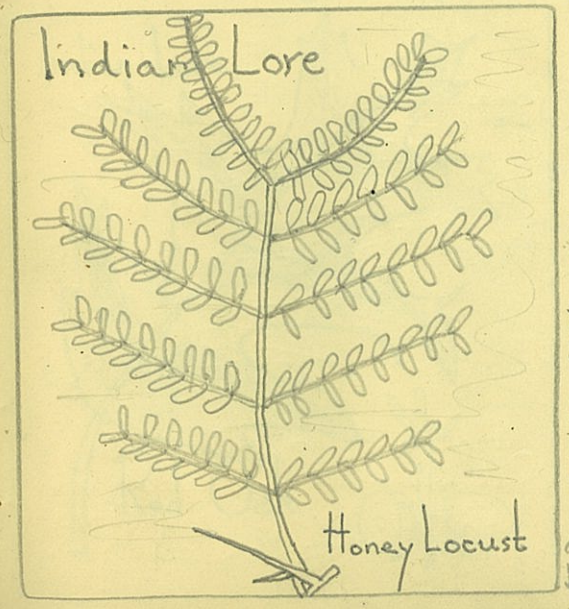
	Clear
	Cloudy
	Rain
	Snow

At Hi Y meeting tonite we had moving pictures of foot-ball games in the '40 season. We, also, had a comedy.

78th Day—287 days to follow

	Clear
	Cloudy
	Rain
	Snow

During Spring vacation the Ra is going to have its first meeting of the new season. I am making a pair of moccasins and would like to make a peace pipe. It will probably be in the Land of the Delawares. Little Beaver has learned an Indian legend and Lightning Deer is learning a frontier story.



Requirement 8-Continued

Be able to point out at least one edible wild plant and eat it, cooking if necessary....

Know at least 8 wild flowering plants by leaf or flower.....

Know at least 4 trees by leaves or bark.....

Be able to discribe and to have seen 3 animals not in captivity.....

Be able to discribe and to have seen 8 birds not in captivity.

Point out one rock.

79th Day—286 days to follow

	Clear
	Cloudy
	Rain
	Snow

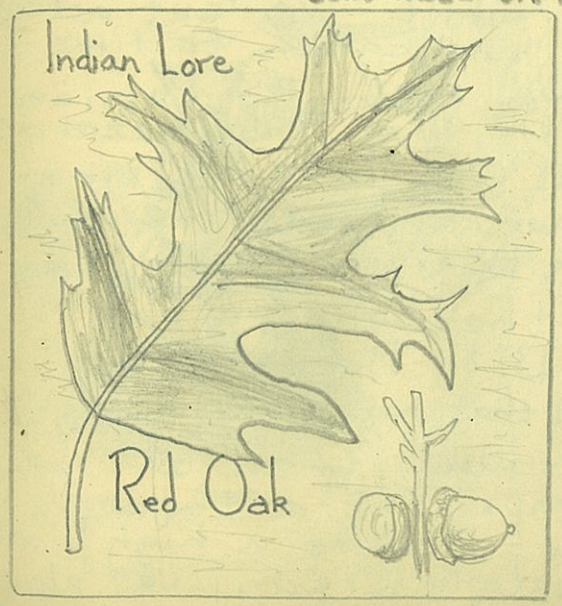
I delivered hand bills for Wilkots today. Lightning Peer and I got ready for Scout Camp.

80th Day—285 days to follow

	Clear
	Cloudy
	Rain
	Snow

Spring is here again. I for one am glad because it means that Spring Vacation will soon be here. I went on an overnight hike to Camp Tuscazoar with the Scout Troop. Lightning Peer was along too. We had individual cooking but Lightning Peer and I cooked together as it was as easy to cook for one as for two. We had a hike tonight after supper. Last time we were at Tuscazoar Lightning Peer took a bottle of pop which the other cabin had

Continued on Page Mar. 23.



REQUIREMENT 9
Camps

Know the names of the following camps in English and in the language of the re if possible, and visit them at least once.

Know that the best places for an over night camp are those that: are not too public, is near drinking water, and has natural drainage. (see "Camping" requirement 12 for ref.)

Be able to draw a map from memory of any of the following places.

continued

81st Day—284 days to follow

	Clear
	Cloudy
	Rain
	Snow

Our Scout master said we could hike anywhere over camp property today. This morning taking him literally, I took Lightning Deer, Ray Langenecker, Ted Davidson, and Bill Barker to the Camp ceremonial ring. It is supposed to be in a secret place although I honestly know that I could guide anyone to it, day or night, rain or shine, any time of the year. The Leaders were looking for a Cabin site and some of us followed them. They followed the train bed while we cut across country. When we came to limestone gully we met Tip Passion and went with him to Buzzard's Roost. On the way home at limestone Gully we sighted the Leaders again on the R.R. tracks. Near the Pioneer Unit the Leader's cut in ahead of us. Bill Barker, Lightning Deer, and I (All that had gone to Buzzard's Roost) circled around them and beat them into camp. That afternoon they picked for a camp a high bluff overlooking Limestone Creek. I was along

82nd Day—283 days to follow

	Clear
	Cloudy
	Rain
	Snow

Went to Sunday School today and this afternoon Uncle Howard came up. Roy bought a 5'6" bow and three arrows. I scared up two rabbits, chased one for a good distance, and gave him about three good shots, but he missed.

Continued from page Mar. 21

out on their porch. They brought pop this time but were natually careful. After supper it was pretty dark. The leaders kept us ahead of them for obvious reasons so I jumped off the path into the underbrush and lay on my stomach. I waited almost 20 minutes on my stomach. The hikers had gone about a half a mile,

Continued on pg. Mar. 24

Requirement 9 Continued

English Re	Map pg.
Tree cache —	Jan. 1
Land of Delawares / Land of Swinging Vines —	Jan. 2.
Big Rock Woods —	Jan. 2.
Thicket Clee —	Jan. 2.
Orchard —	Jan. 2.
Valley of Sun, Ca Coo,	Jan. 2.
Valley of Moon, Ca Thoth,	Jan. 2.
Land of Beeches —	Jan. 2.
Crane or Twin Lakes —	Jan. 2.

Camp overnite at least one night in a tent, lean to, or cabin, or under the stars and discuss trip with examiner.

83rd Day—282 days to follow

	Clear
	Cloudy
	Rain
	Snow

Leader's Club tonight after school and Scout meeting tonight. I made a sign for the '41 football schedule.

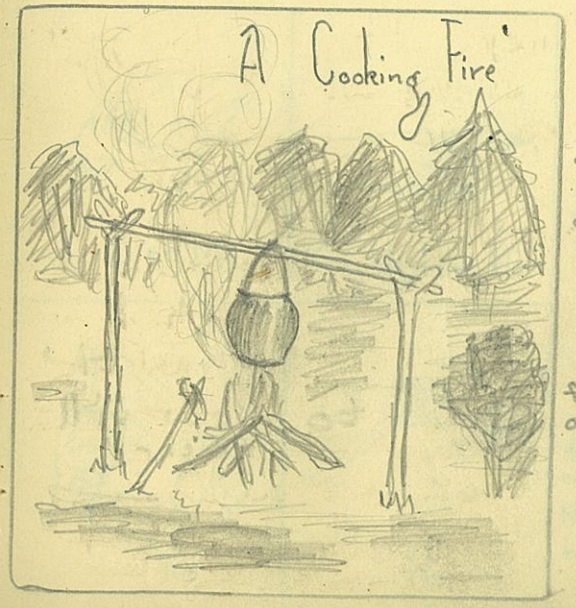
Continued from pg. Mar. 23.

while I was still lying there, (from Turkey Village to Pioneer Point) I heard the door squeak and Butler and Johnson came out of the Leader's Cabin. There was a great deal of confusion by a big tree about 100 yds. from their cabin. I guessed they were hiding the pop. I waited 'till they too were out of sight and hearing. I searched the Leaders cabin but finding nothing went down to the big tree which was next to a supply cabin. I searched every where but found nothing. I used up every match but finally stumbled upon it. I took two bottles of pop and hid them a few yards behind their camp. I went around the camp by the road to the hill behind Pettits cabin. I finally saw the hikers on the road to Zoarville. I waited untill they had passed me and then stood up and went with them into camp. Naturally I gave the pop back.

84th Day—281 days to follow

	Clear
	Cloudy
	Rain
	Snow

Hi Y tonight. We went through Western Union during the meeting. Plans are being laid for an overnight hike. Robert and Rheda came home from Ohio State for Spring Vacation while I was at Scout Camp. John from Phoenix, Arizona was with them.



REQUIREMENT 10
Fire Building
Be able to build a fire with two matches and a knife in any kind of weather without the aid of lumber, leaves, or paper.

REQUIREMENT 11
Outdoor Cooking
Be able to cook the following things in the open on a wood fire.
Cook any four (4)
Eggs
Cocoa
Potatoes
Corn on ear
Applesauce or stew

continued

85th Day—280 days to follow

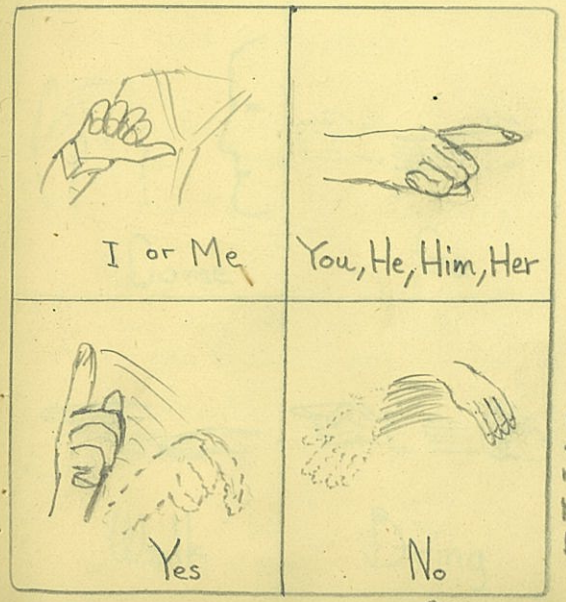
	Clear
	Cloudy
	Rain
	Snow

I made signs for a job at Beverly near McConnelsville today. I worked from 3:30 to about 11:30.

86th Day—279 days to follow

	Clear
X	Cloudy
	Rain
	Snow

I delivered papers for Stokoe and afterwards made signs. Krepps came in with six more. (He sold the job for Dad.)



Requirement 11 - Cont.
Berry stew
Hunter's stew
Ground Steak
Steak
Cook and eat at least one meal in the open using at least two of the dishes listed.

REQUIREMENT 12
Sign Language
Know the Indian sign language for the following 8 words: I or me; you, him, he, or her; yes; No; come; go; walk; bring.

Over

87th Day—278 days to follow

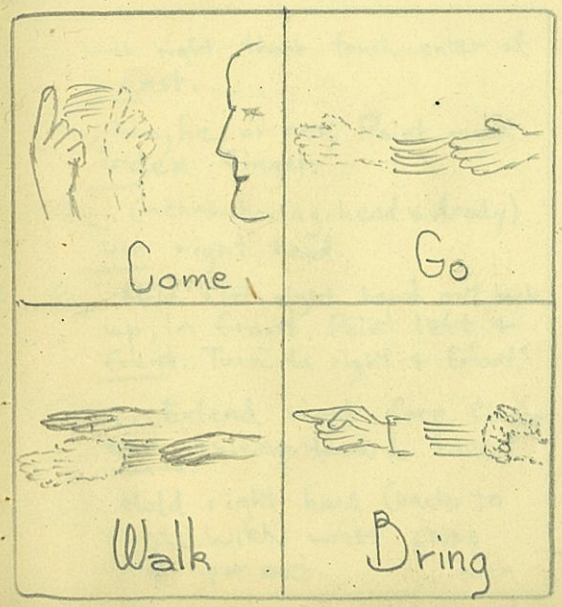
	Clear
	Cloudy
	Rain
	Snow

To-day I had to make a display for two tables representing November and December for the Sunday Birthday Party tonight. I went to it and also to the Scarlet and Gray basketball game at Lehman.

88th Day—277 days to follow

	Clear
	Cloudy
	Rain
X	Snow

This afternoon Roy and I were shooting his bow and arrow. It was in the orchard and he lost one of his arrows in the grass. We burned the top of the field. It was windy but the wind was blowing towards the cliff so we were safe. At one time we had to force it to the cliff's edge to keep it from spreading.



REQUIREMENT 13
Choose Indian Name

Before an Din can become a rill he must choose for himself an Din name. It can be in English or Indian. At the ug rite the name he has choser officially becomes his.

--ON TO RILL--

Sunday, March 30, 1941

89th Day—276 days to follow

Clear
Cloudy
Rain
Snow

Today was much like any other Sunday. I went to Sunday school this morning and Tuxis this evening.

Monday, March 31, 1941

90th Day—275 days to follow

Clear
Cloudy
Rain
Snow

Robert and Rheda had to go back to Ohio State today. We're beginning the last week of school before vacation.....

I. With right thumb touch center of breast.

You, him, he, or her, Point right index finger.

Yes. (means bowing head & body) Use right hand.

No. Hold flat right hand out back up, in front. Point left & front. Turn to right & front.

Come. Extend right fore finger and sweep toward face.

Go. Hold right hand (back to right) with wrist snap hand up & out.

over

WARRIOR or RILL

Requirements

1 Be brave
2 Council Ring
3 Medicine Man Rite
4 * Language and Spelling
5 Handicraft
6 First Aid
7 Signaling
8 Map
9 Indian Lore
10 Indian Sign Language
11 Directions
12 Scouting

* Discontinued 5/11/42

Continued from page "special data" before page "March 1"

destinies for the rest of the re.

On that hike Little Beaver and I named the land in the vicinity of the third clee. The third clee we named the ca thoth (the valley of the moon) because, when we reached the bottom and looked up, the first thing we saw was the moon. The long rolling valley north of the ca thoth we called the ca coo (the valley of the sun) but the important thing that happened that day was that we decided to expand.

All this time, in which our re was forming the backbone for the powerful Din re that we now have,

Then one day I was surprised into my senses for Little Beaver resigned!

Continued on page "special data" after page "April 30"

91st Day—274 days to follow

	Clear
	Cloudy
	Rain
	Snow

At Hi Y this evening we decided finally that we would have the overnite hike this coming Friday and Saturday. I am laying plans.

Walk. (motion of feet) Hold flat hands equally advanced in front. Go up and down making an oval. For animal, make a fist (same movement.)

Bring. Move right hand well in front of body. Index finger out. Draw hand to body curving the index finger.

Entering the Cil Ring!

When a buck becomes a rill he has the honor of sitting in the council ring, the great war making body of the tribe.

The privilege of a cil member is to cast one vote on the following issues: *war, punishment, election of eef and ug, expulsion of Din, advancement.

These rights and no more.

*Amendment: The council ring has the power to amend the Re's book.

Wednesday, April 2, 1941

92nd Day—273 days to follow

	Clear
	Cloudy
	Rain
	Snow

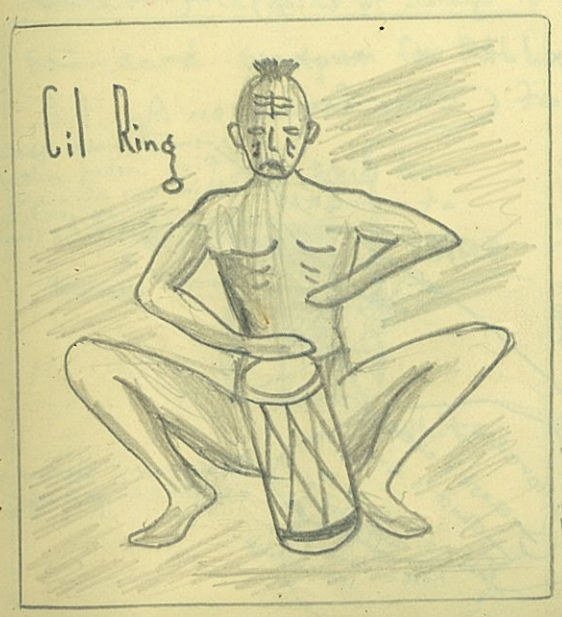
Track has officially started in Lehman High School. I am going out for it.

Thursday, April 3, 1941

93rd Day—272 days to follow

	Clear
	Cloudy
	Rain
	Snow

I didn't deliver bills today because track practice has started. It lasts from about 3:30 to 4:30 in the afternoon.



REQUIREMENT 1
Be Brave
The Din should conduct himself as befits a Din Rill. The eef is the examiner.

REQUIREMENT 2
Council Ring
Before the ug rite, the cil ring must meet and decide if the tee has passed his tests for rill correctly. If so, he is passed and is ready for the ug rite.

94th Day—271 days to follow

	Clear
	Cloudy
X	Rain
	Snow

I delivered papers for Stokes and went immediately to Pickard's house where I met Bill Figley's sister who drove several of us to the beginning of the little lane that leads to the cabin where we were to stay overnite. Until about 7 o'clock I spent my time exploring the land between the cabin and the road to the east. I cooked and ate supper and afterwards went on a night hike along the trail west of the cabin (map on page Jan 4) where I showed Mr. Pickard the skeleton that Red and I had found earlier. Afterwards two boys, Red Himmelright and Bob Leak, were "initiated" by having an egg squashed in their face.

* * * * * *

A diagram of cave found on April 5,

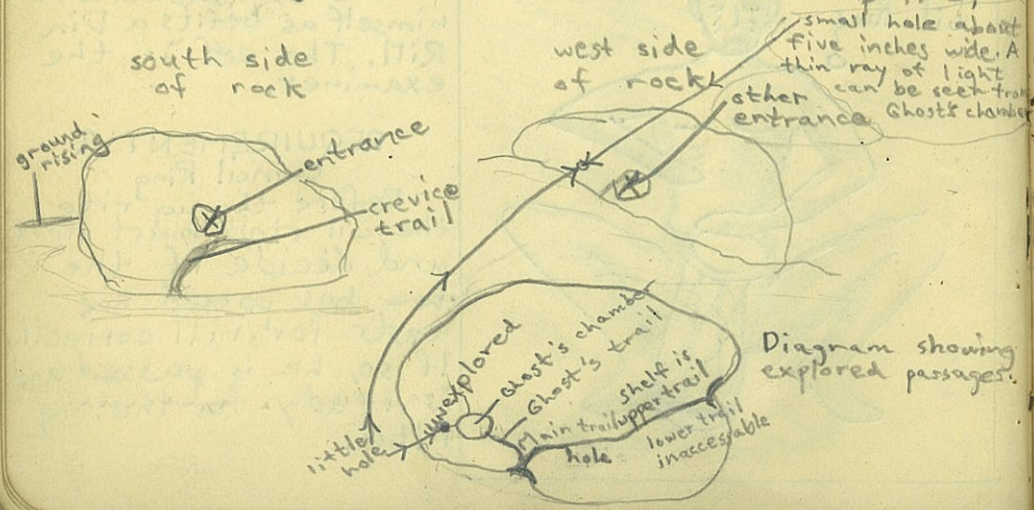


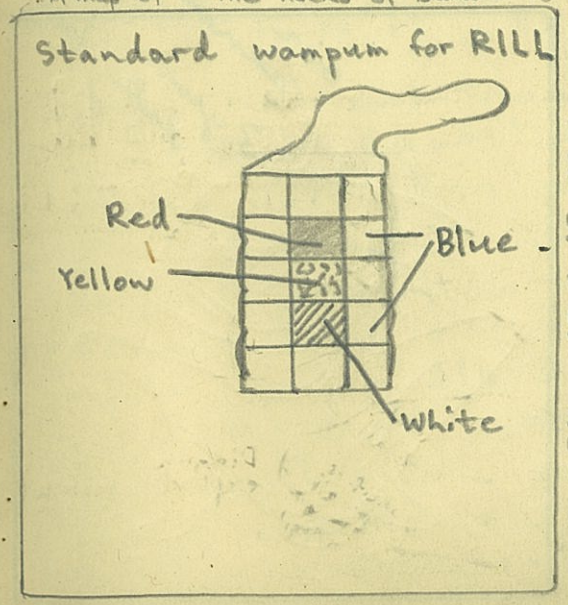
Diagram showing explored passages.

95th Day—270 days to follow

X	Clear
	Cloudy
	Rain
	Snow

It seems that I was the only one that slept last nite. Rogers had an egg thrown in his face. I had pancakes for breakfast and then went for a hike north of of the cabin while Jerry Dutton went south. We planned to meet at the spring since we were looking for Wendal Pickard and Bob Leake. We four found and explored the cave (Diagram of cave is on opposite page.) in the huge rock north of the cabin and also all the rocks west of the cave. We climbed many hard rocks. That afternoon Pickard fell asleep and while looking for him I explored the land south of the creek.

A map of "The Rocks of Dundee" is found on pg. Jan. 4.



REQUIREMENT 3
Ug Rite

After the Din has passed his other tests for rill and the Cil ring accepts him, he must go thrud ceremony, the Ug rite. The eef and ug are the examiners.

Dis-continued 5/11/42 REQUIREMENT 4
Language + Spelling

Memorize + be able to spell the following 15 words. Know meanings + be able to use 30 words (see Tee) in sentences.

continued

Tuesday, April 8, 1941

98th Day—267 days to follow

	Clear
	Cloudy
	Rain
	Snow

The re went on a hike today. We started at about 10:45 A.M. and went to the ca thoth. From there we went down the wagon road on the western hill of "Twin Hills." We crossed the creek at the bridge east of the "Land of the Delawares." We proceeded to the valley on the side of the hill W.S.W. of the bridge and cooked our dinners. We went thru the "Land of the Mingoes" toward the stadium. Little Beaver and lightning Deer left us but Lightning Deer met us again in the "Clee in the Thicket." We went from the stadium to the "Clee in the Thicket." There, Otter and Lightning Deer cleaned the clee and made a stone pile while Sinopah and Pitamaker (I) went into the "Land of the Big Rock" where we heard ducks in the middle of the land submerged in water. We did not get to see the ducks. Those that went on the hike were Little Beaver, Lightning Deer, Otter, Sinopah and Pitamaker. Lightning Deer acted as bick.

Wednesday, April 9, 1941

99th Day—266 days to follow

	Clear
	Cloudy
	Rain
	Snow

Even though this is vacation I practiced track today. The Interclass meet at school is scheduled for sometime next week.

1940
Denmark seized by Nazis

1940
Nazis invade Norway

REQUIREMENT 5
Handicraft
Make at least one (more) article of handwork, preferably something in connection with the American Din; such as tom-tom, rattle, or tomahawk.

REQUIREMENT 6
First Aid
Tie on a person the following bandages: knee, foot, forearm, head, eye, chest.
Put a forearm splint in sling on person.

continued

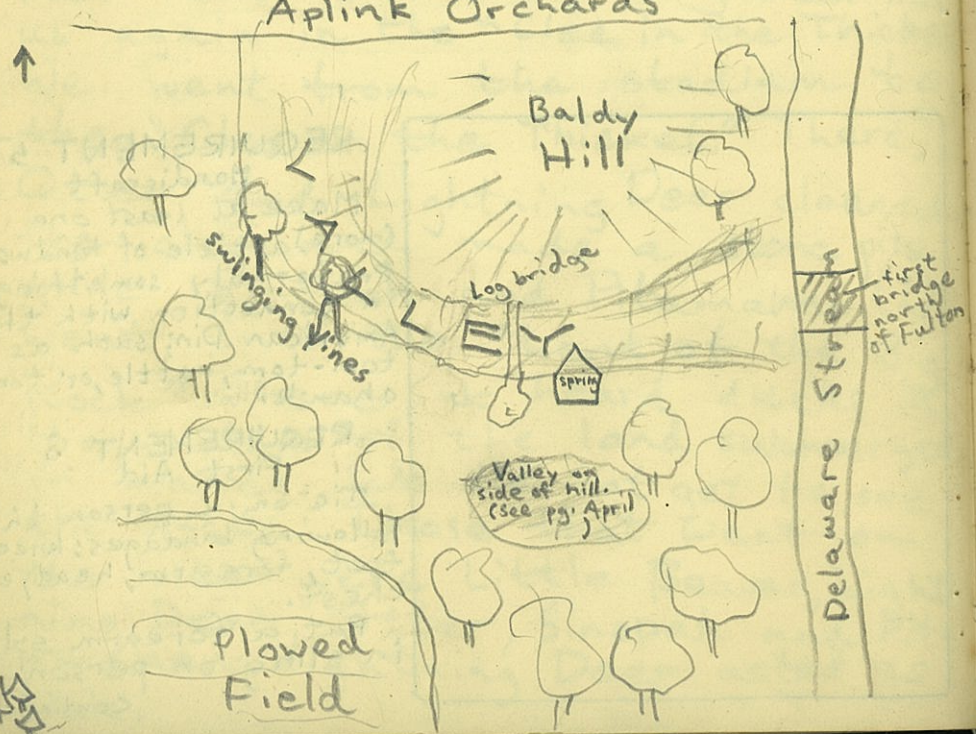
100th Day—265 days to follow

X	Clear
	Cloudy
	Rain
	Snow

Today Roy and I visited the "Land of Swinging Vines" as Roy had not been there before. On the way Roy found an old shovel in the orchard and while there, found a large coil of rope which we took home. Roy beat Lightning Deer's and Otter's swinging records while I made a new record for the re. I also delivered bills.

* * * * * *

A map of "The Land of the Delawares" or "The Land of Swinging Vines."



101st Day—264 days to follow

	Clear
	Cloudy
	Rain
	Snow

I helped Mother clean house a large part of the day. We cleaned the wall paper in the dining and living rooms.

REQUIREMENT 6-Cont.

Tell what to do for sunstroke, frost bite, shock, poison ivy, and snake bite.

Demonstrate artificial respiration.

Demonstrate and tell what to do for a cut on vein; on artery.

Apply a tourniquet and finger pressure.

Tell difference between vein and artery.

Saturday, April 12, 1941

102nd Day—263 days to follow

X	Clear
	Cloudy
	Rain
	Snow

Rheda came home today. Robert will not be home for Easter. This evening at about 8:30 the re had a marshmallow and weiner roast in the 17th street ballfield. We burned the Christmas trees that we had collected early this year since they were so dry it was dangerous to keep them near houses. Twice we had the flames at least 20 or 30 feet high!! Those present were Roy Schwitzgeble, Sinopah, Lightning Deer, Little Beaver, Otter, and Pitamaken.

Sunday, April 13, 1941

103rd Day—262 days to follow

X	Clear
	Cloudy
	Rain
	Snow

Easter dawned a perfect day. I went to a Tuxis Easter breakfast, Sunday School, and church. Rheda went back to State.

REQUIREMENT 7
Signalling
Demonstrate blanket signal from 1/3 mile. Tell relative merits and explain how to use a smoke signal.
Demonstrate the use of the cardinal and pigeon call for signalling.

One signal means — Come
Two signals mean — Enemy
Three signals mean — Danger
Many signals mean — Hurry

104th Day—261 days to follow

	Clear
	Cloudy
	Rain
	Snow

After track practice I went to Leader's Club and after supper I went to Scout meeting. A Board of Review will be held next week and I will officially become a first class scout.

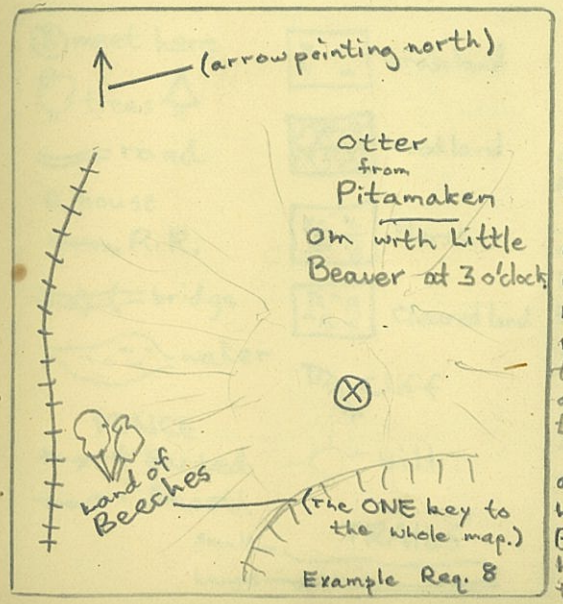
105th Day—260 days to follow

	Clear
	Cloudy
	Rain
	Snow

I practiced track this evening after school and skipped Hi Y tonight so that I could practice for the inter class meet which will be held tomorrow, right after school.

1940

British and French land in Norway



Example Req. 8

REQUIREMENT 8

Map

To be able to pass the test for mapping one must know the various clees of the re. (requirement 9 for tee)

He must be able to draw from memory any of the clees listed. In this manner with just one clee mentioned a rill is able to find any spot within a reasonable distance from the clee. (see example)

The map is from Pitamaken to Otter telling him to come with Little Beaver to the western hill of Twin Hills at three o'clock.

continued

Wednesday, April 16, 1941

106th Day—259 days to follow

	Clear
	Cloudy
	Rain
	Snow

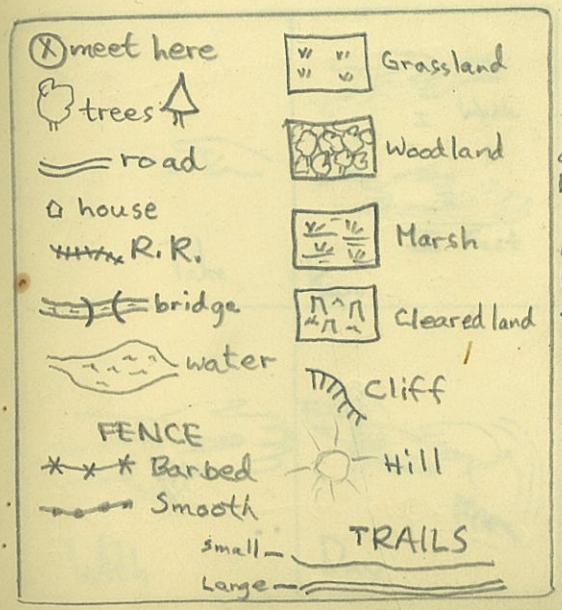
Interclass Track Meet was today, I entered in both the mile and the half mile events, I had to snap it up (to get there) as I had to deliver papers for Stokoe, I didn't do so badly in the mile but the half mile race was a slow one as most of the entries had run in the mile first. After this I think I will specialize in the half mile.

Thursday, April 17, 1941

107th Day—258 days to follow

	Clear
	Cloudy
	Rain
	Snow

I practiced track after school and then waited for the bills which didn't come. I'll have to deliver them tomorrow. Yesterday and today Mr. Williams and Jack have been tearing down our hut on 17th street. No one in the re objects as it was mutually agreed at our last hike that it must be torn down. It looks like the dickens in the middle of all the good homes on 17th street.....
I at least salvaged the big wire netting and the heavy door.



REQUIREMENT 8 - Cont.
The Rill must make at least two maps resembling the example and one map, accurate in detail, of one-half square mile area.
The Rill must know the map signs for the following words: meet here, trees, road, house, R.R., bridge, water, barbed wire, smoothwire, grassland, woodland, marsh or swamp, cleared land, cliff, trail, and hill.
Use pacing in making map.
Use correct directions.

Friday, April 18, 1941

108th Day—257 days to follow

	Clear
	Cloudy
	Rain
	Snow

I delivered bills today as we didn't deliver them yesterday. This evening I got some things ready towards compiling a new handbook for the re.

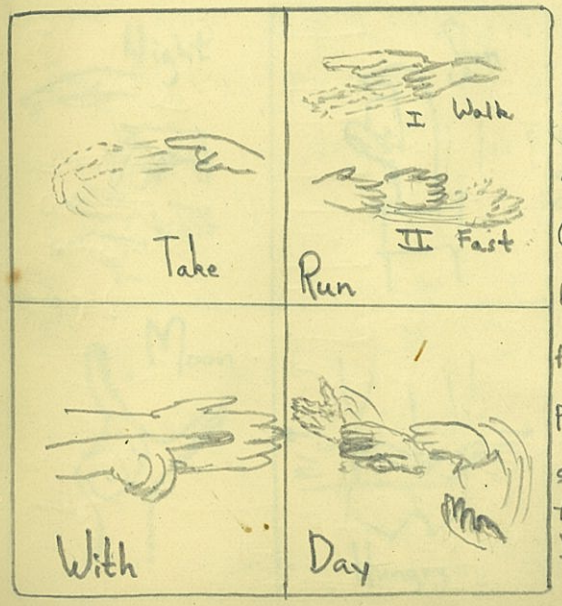
Saturday, April 19, 1941

109th Day—256 days to follow

	Clear
	Cloudy
	Rain
	Snow

I didn't do much today, I did a little work towards compiling records for re's book.

1941
Pro-Axis Iraq attack British



REQUIREMENT 9
Indian Lore
All numbers include the requirements for tee.
Eat raw, or cook 4 edible wild plants.
Point out 15 wild plants. (flowering.)
Point out 8 trees by bark and leaf.
Describe 5 animals seen personally in the field.
Describe 15 birds seen personally while in the field.
Point out the north star, the big dipper, the little dipper, and Draco, the dragon.
Point out 2 rocks.

Sunday, April 20, 1941

110th Day—255 days to follow

	Clear
	Cloudy
	Rain
	Snow

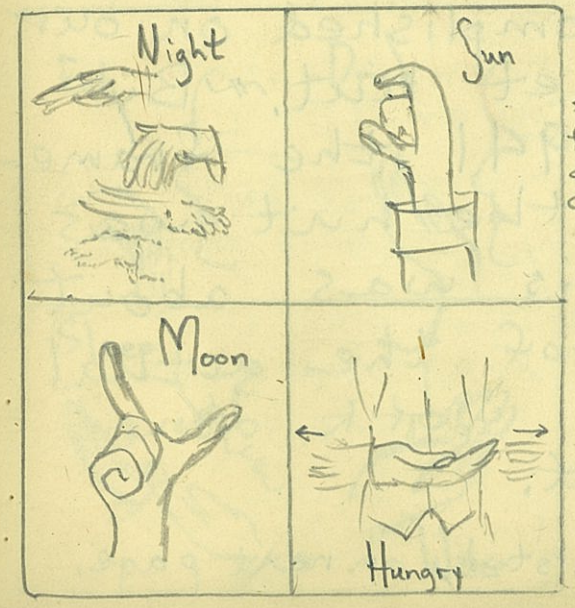
I went to Sunday School this morning. Tomorrow I will become a First Class Scout when I pass the Board of Review.

Monday, April 21, 1941

111th Day—254 days to follow

	Clear
	Cloudy
	Rain
	Snow

I went to Leader's Club and also Scout Meeting today. I hope we soon have outdoor meetings. At Scout Meeting I became a First Class Scout.

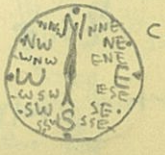


REQUIREMENT 10
Indian Sign Language

Know the following 12 signs plus the 8 required for tee: take, run, with, day, night, sun, moon, hungry, eat, drink, sleep, water.

REQUIREMENT 11
Directions

Know five ways of telling directions: compass,[1] sun,[2] north star,[3] moss,[4] and trees.[5]



Compass

Tuesday, April 22, 1941

112th Day—253 days to follow

	Clear
	Cloudy
	Rain
	Snow

I don't know if I made it clear or not (on page April 17) that the hut which we started to build about October 23, 1940 (see pg. "Special Data" at end of book) was actually torn down and destroyed on April 17 + 18. Before I forget it, I want to give an exact account of the work accomplished on our 17 th Street hut. By January 1941 the framework of the hut was built. This was about the last of the actual carpentry work done on the hut.

More History on next page.

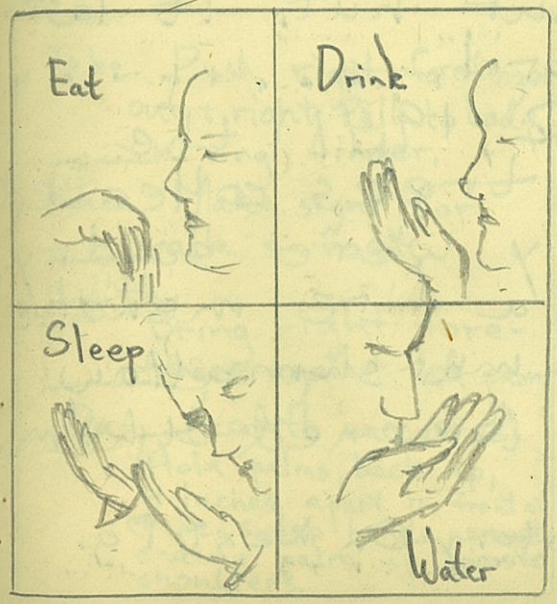
Wednesday, April 23, 1941

113th Day—252 days to follow

	Clear
	Cloudy
	Rain
	Snow

January 3, 1941 I figured that the best thing to do with our hut was to collect Christmas trees and fasten them to the framework of our hut. It would serve as a wind break for winter outdoor meetings. By January 20, 1941 this was accomplished.

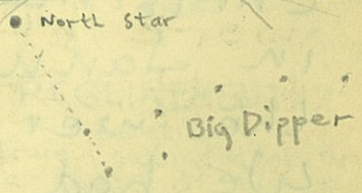
More History on Next Pg.



REQUIREMENT 11 — Cont.

2 Sun

Rises in east and sets in west. At noon, shadow points north



3

4 Moss

Usually on north side of tree.

Thursday, April 24, 1941

114th Day—251 days to follow

	Clear
	Cloudy
	Rain
	Snow

Today is the day to deliver bills for Wilkof's. Raymond couldn't deliver because he had to do something concerning his operetta.

A HISTORY

On February 1, 1941 Little Beaver, Swift Fox, Lightning Deer, Roy and I made a snow fort in front of our hut. It lasted till April.....
On April 12, 1941 the Christmas trees collected in January were so dry the were a fire menace. We had a marshmallow roast and burned them.

More History On Next Pg.

Friday, April 25, 1941

115th Day—250 days to follow

	Clear
	Cloudy
	Rain
	Snow

After supper I went to three short plays at Lehman they weren't so good.

A HISTORY

On April 12, 1941 the re mutually agreed that our 17 th Street hut was entirely out of place. When Mr. Williams began to tear it down on April 17 no one in the re objected.

* * * * * * * * *

Take. Push right forefinger out + right. Pull to body curving finger.

Run. Make signs for walk + fast.

With. Bring right forefinger against left palm.

Day. (earth uncovered) Hold palms, back up, 4 inches apart in front of face. Sweep hands up + out ending palm up opposite shoulders.

REQUIREMENT 11-Cont.

5

Trees windswept side often on north side.

REQUIREMENT 12

Scouting

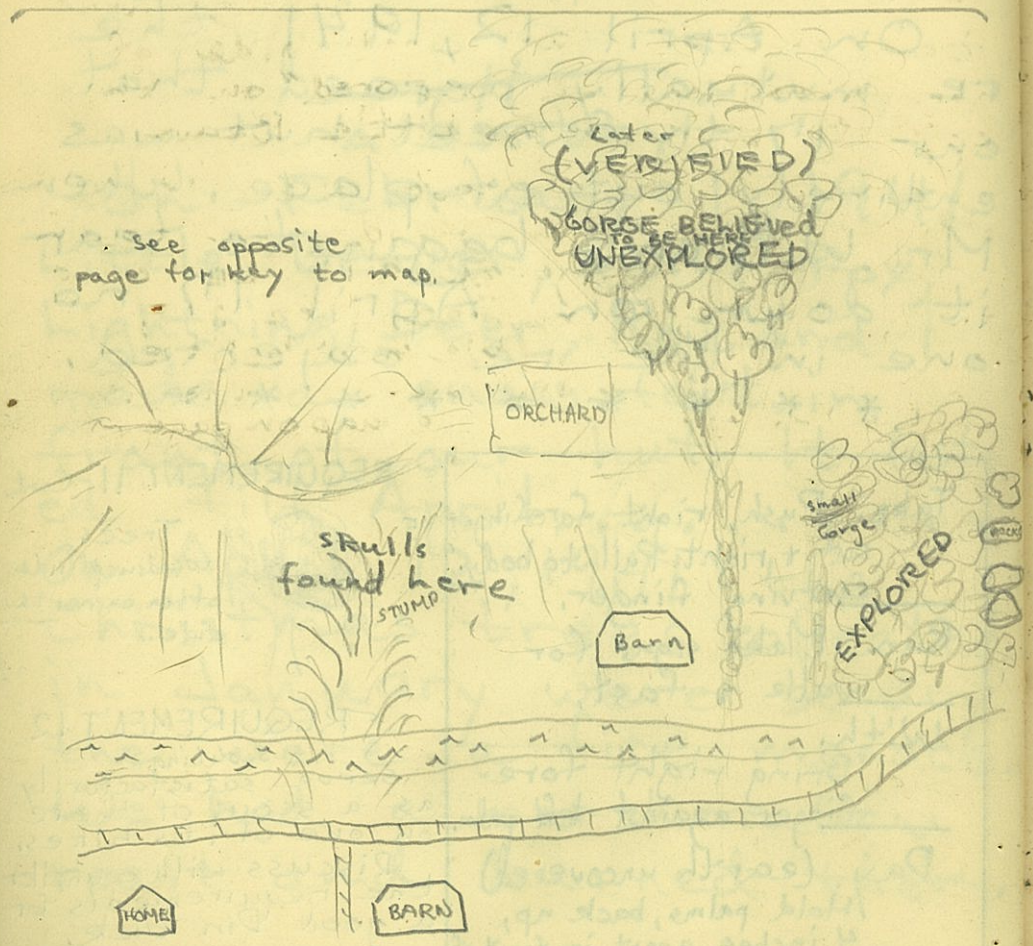
Serve satisfactorily as a scout of the re on one of its hikes. Discuss with councilor the requirements for a good Din bick.

Saturday, April 26, 1941

116th Day—249 days to follow

Clear
Cloudy
Rain
Snow

For once I didn't do much on Saturday. I got up late and fooled the day away.



Sunday, April 27, 1941

117th Day—248 days to follow

Clear
Cloudy
Rain
Snow

Today the family went to Carrollton and from there to my Uncle Don's farm. While there Lightning Deer, Little Beaver and I went on a hike looking for a gorge which James, my cousin, showed me several years ago. Lightning Dear scouted the west side of the woods marked "explored" on the opposite page map. Little Beaver and I covered the east and the north side of the same woods. We could not find the gorge but we found three skulls from sheep, I believe, which we brought home. We now believe that the gorge is to be found in the woods marked "Unexplored" on the map on page April 26.

Night. (earth covered over) Hands 10 in. apart, backs up, right hand a little higher. Cross.

Sun. With right hand form incomplete circle. Bring hand from left to right. Also shows time.

Moon. (night sun) Sign for night, then quarter moon. Hold up in line of vision.

Hungry. (cuts one in two) Move to right and left.

REQUIREMENT 13
Hiking

Hike 10 miles in one day or 15 miles on an overnite camp or hike 4 miles in 40 minutes. Run one mile in 8 minutes or 1/2 mile in 3 1/2 minutes or 1/3 mile in 2 minutes 15 seconds or 220 yards in 45 seconds.

REQUIREMENT 14
Tracking

Track at least one mile, using trail signs, in twenty minutes. Use grass, pebbles, sticks, stones, twigs, arrows, etc.

Monday, April 28, 1941

118th Day—247 days to follow

	Clear
	Cloudy
	Rain
	Snow

I went to Leader's Club after school and Scout meeting after supper. There was an inspection at Scout Meeting.

Tuesday, April 29, 1941

119th Day—246 days to follow

	Clear
	Cloudy
	Rain
	Snow

At HiY meeting tonight we had moving pictures of Mexico and also a moving picture sponsored by the Coco Cola Co.

Eat. Right hand, pass tips of fingers downward pass mouth two or three times.

Drink. (drinking from curved hands) Carry to mouth from above.

Sleep. Made to right, Hands six inches apart.

Water. (drinking from palm of hand.)

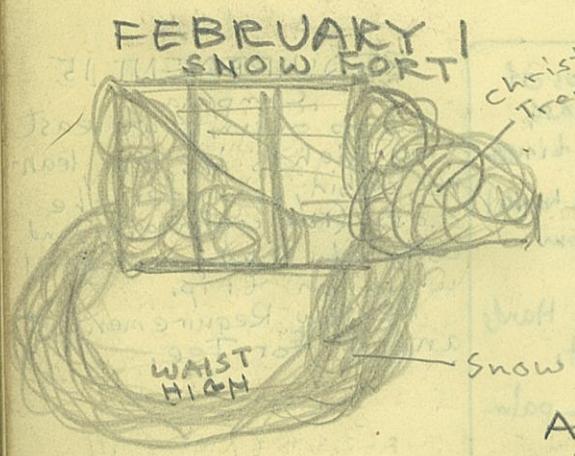
REQUIREMENT 15
Camping
Camp overnite at least two nights in: tent, lean-to, cabin, or under the stars, (Not continuously) and cook at least one meal while on trip.
Review Requirement 9 and 11 for Tee.

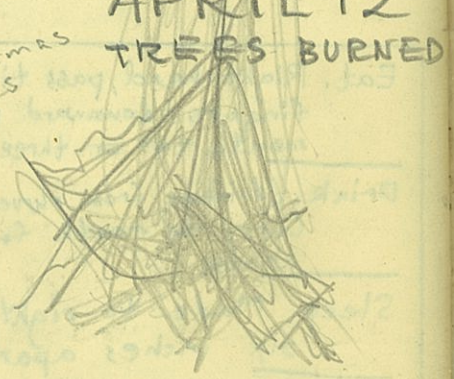
—ON TO TEF!—

120th Day—245 days to follow

	Clear
	Cloudy
	Rain
	Snow

To actually finish the history of the 17 th Street hut I want to draw a few diagrams. (see page April 22, 1941)





continued from page "Special Data" before page "April 1"

Part Two

From Little Beaver's resignation to the expansion

If you will recall, before Little Beaver had resigned we had decided to expand. It was my plan to carry this into effect.

For almost six weeks I did nothing but plan. It was about the middle of April (1940), to the best of my knowledge, that Little Beaver quit and it was about the first of June (1940) that I decided to re-organize.

Sidney Kaplan (now called Otter) was the first person I asked to join after the re-organization. I appointed him to the position of ug in the new re.

We immediately added some fifteen new words. Most of these

words will be found in the language requirements for a tee. (The rest of the words have been added one at a time until we have the total of thirty-five.)

After careful preparation I prepared to rewrite the coom records. It was finished about the last of June (1940). Many new tests and requirements were added such as signaling, building leanto, Indiancraft, and Indian lore.

We both agreed that we should have Little Beaver back in the re. The others we decided to admit were Raymond Janson and Earl Franz.

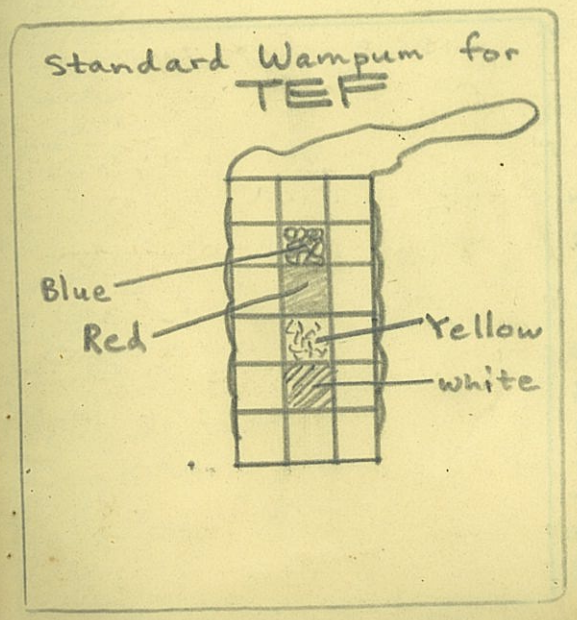
Otter and I planned an ug ceremony to be given to the new members. All was in readiness for the expansion.

Continued on page "special data" after page "May 31"

121st Day—244 days to follow

✓	Clear
	Cloudy
	Rain
	Snow

Raymond was the leading man in the Worley School operetta. He was Jack in "Jack and the Beanstalk." He did his part exceptionally well. The operetta will also be given tomorrow.



BRAVE or TEF
Requirements

1. Be brave
2. Council Ring
3. Medicine Man Rite
4. Choose two of the following subjects

A. Hiking
B. Camping
C. Cooking
D. Signaling
E. Indian Crafts
F. Indian Lore
G. Pioneering

Friday, May 2, 1941

122nd Day—243 days to follow

X	Clear
	Cloudy
	Rain
	Snow

The Lehman Gym Exhibition was held tonite. I was in the jumpstick relay in which our team won; and the ropeclimb, and tumbling relay in which our team lost. I believe that I broke my previous rope climb record. "Our team" was the Freshman team in competition with the other classes.

Saturday, May 3, 1941

123rd Day—242 days to follow

	Clear
	Cloudy
	Rain
	Snow

Today Dad, Mother, Raymond and Russell went to Columbus to see Rheda in the "Stroller's" play, "Nick of the Woods," or as the Indians called him "Jibonainosay," the avenger. While there Ray, Russ and I say part of the baseball game between Indiana and Ohio State. We also saw the track meet between Ohio State, Indiana, and Purdue in which Ohio State won by thirteen points. They highjumped 6'2." They pole vaulted 12'8." An Indiana fellow broke the stadium discus throw record.

REQUIREMENTS 1 2 and 3

Be brave - Cil ring - Ug rite

When the requirements for tef are successfully passed the tef must meet the Ug and Eef, and a test must be given to him to determine if he is worthy to be a tef. This is the last requirement for a brave.

Sunday, May 4, 1941

124th Day—241 days to follow

	Clear
X	Cloudy
	Rain
	Snow

This afternoon Raymond Wilkof, Otter, Lightning Deer and I went on a hike to the "Land of the Swinging Vines." We came back by the sandbanks and the ca thoth. Although not a re hike all the hikers were members of the re.

Monday, May 5, 1941

125th Day—240 days to follow

X	Clear
	Cloudy
	Rain
	Snow

At Scout meeting tonite I was made Patrol Leader! The members in my patrol are: Dick Janson, Ray Janson, Horton, Jack Harry, Balcom, Van Horn, and Harrison.

REQUIREMENT 4
choose two of the following subjects:

A Hiking
B Camping
C Cooking
D Signaling
E Indian Crafts
F Indian Lore
G Pioneering

A Hiking

Hike: One 15 mile bike hike
Three 10 mile hikes.
One 15 mile hike.
One 20 mile hike.
(All hikes may be overnite.)

Tuesday, May 6, 1941

126th Day—239 days to follow

	Clear
X	Cloudy
	Rain
	Snow

Hi Y meeting tonite. We had a round table discussion on whether or not the United States should convoy ships to England in the present war.

Wednesday, May 7, 1941

127th Day—238 days to follow

	Clear
	Cloudy
X	Rain
	Snow

Today I read several articles in the Patrol Leader's hand-book. I hope for Lightning Deer to go to the Camporal this June.

B. Camping

Camp five continuous days. (In Scout Camp, etc.)

Camp 2 days and nights doing your own cooking.

Take 10 overnite hikes.

Camp once under the stars on a bed of boughs or on the ground.

Know how to pitch and ditch a tent.

C. Cooking

Cook hunters stew or hunter's chowder, biscuits or twist, steak and rice, on a wood fire, have the meal correctly timed.

Prepare a starvation meal (with staples) cooking one dish.

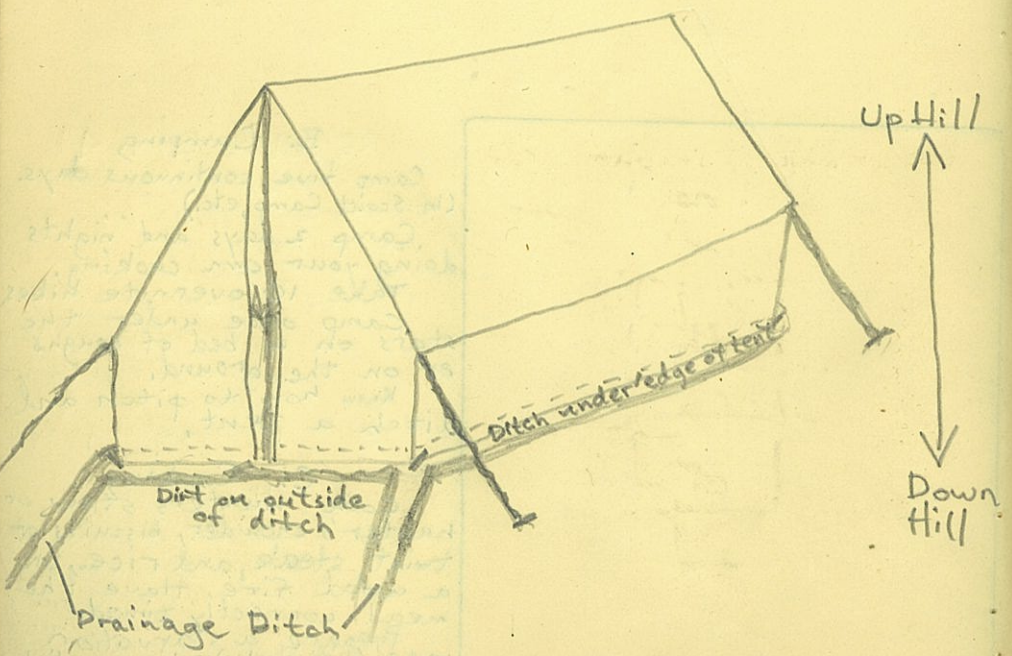
over

Thursday, May 8, 1941

128th Day—237 days to follow

	Clear
	Cloudy
	Rain
	Snow

I noticed in a book I was reading, the proper way to ditch a tent. The ditch should be made directly under the edge of the tent. The dirt should be piled on the side of the ditch away from the tent. See diagram below.

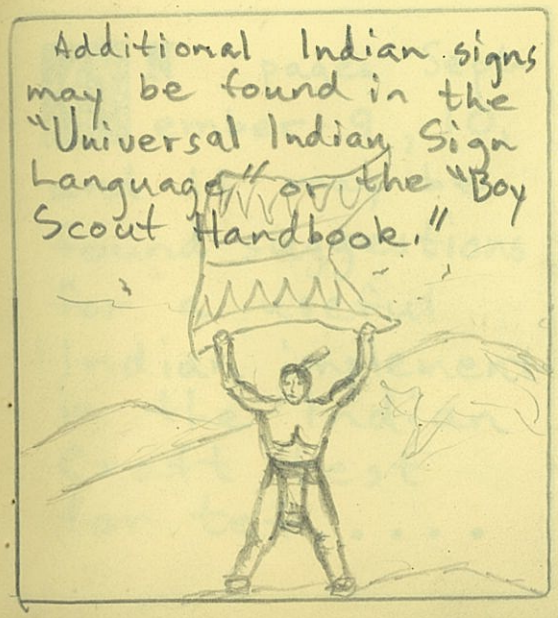


Friday, May 9, 1941

129th Day—236 days to follow

	Clear
	Cloudy
	Rain
	Snow

Raymond has been a Tenderfoot Scout long enough. If he goes to the Camp-o-ral he ought to be at least a second class Scout.



C. Cooking continued

Prepare a menu for supper, breakfast, and dinner for a person or party traveling "light."

D. Signaling

*Know the re's following words. Know correct spelling.

1	nan	blanket
2	la	make
3	ope	stop
4	ick	hike
5	pam	map
6	*This section of	
7	requirement "D"	
8	Signalling was	
9	discontinued 5/11/42.	
10		

over

Saturday, May 10, 1941

130th Day—235 days to follow

	Clear
	Cloudy
	Rain
	Snow

Tomorrow is Dad's birthday. I don't yet know what I will get for him. Probably something edible!

1941

Hess, No. 3 Nazi, lands near Glasgow

Sunday, May 11, 1941

131st Day—234 days to follow

	Clear
	Cloudy
	Rain
	Snow

I went to Sunday School today. Today was Dad's birthday. I got a gift for him.

ON pages September 9, 10, and 11 may be found suggestions for a useful Indian implement in the Indian Craft test for tef.....

D. Signaling - continued
Know how to count in the Indian sign language and know at least 60 signs.

E. Indian Crafts
Carve a useful Indian implement. Tool leather. Make an Indian costume containing moccasins, wrist band, breech cloth, vest, and head dress.

F. Indian Lore
Point out 35 plants.
Point out 15 plants.
Describe 25 birds personally seen while in the field.

Continued

Monday, May 12, 1941

132nd Day—233 days to follow

	Clear
	Cloudy
	Rain
	Snow

Leader's Club after school and Scout Meeting tonite. Jack Harry brought a new member, Johnny Shirack, who was added to the Fox Patrol

Tuesday, May 13, 1941

133rd Day—232 days to follow

	Clear
	Cloudy
	Rain
	Snow

At HiY tonight we had an open round-table discussion on the topic: "Should America convoy ships to England?

F. Indian Lore -cont.
Point out 5 rocks.
Point out 8 constellations.
Describe 5 non-domesticated animals seen in the field.
Eat (cook at least one) 10 edible wild plants.

G. Pioneering
Pitch a tent or teepee. Explain how to ditch a tent. (see page May 8.)
Make at least two of the following: leanto, hut, bridge, raft, catamaran (see page June 18.)

The End of requirements.

134th Day—231 days to follow

	Clear
	Cloudy
	Rain
	Snow

I have often wanted to follow the creek near the foot of 18th Street hill. It is the West Branch of the Nimshillen Creek, which flows into the Muskingum river, which flows into the Ohio River at Marietta. Down the Ohio River to the Mississippi, the Gulf of Mexico; thence to the Atlantic Ocean!

135th Day—230 days to follow

	Clear
	Cloudy
	Rain
	Snow

Another thing I have often wanted to do is to follow the B+O R.R. north. A railroad winds around too much. I can make better time going by other ways or cross-country. I've followed it to North Canton already. I can never get much interest in a hike with no special object in view but to walk.

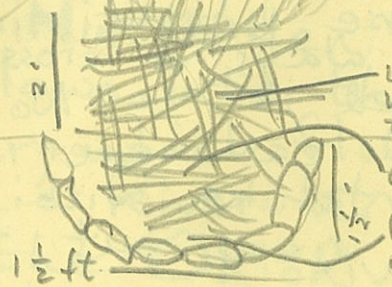
Friday, May 16, 1941

136th Day—229 days to follow

	Clear
	Cloudy
	Rain
	Snow

I noticed a diagram of how to roast chicken, fowl, fish, rabbits, etc. in a hole in the ground. Below is a diagram

A



Let a 2' pile of hardwood burn to embers.

Clean embers

Put layers of sweet leaves on hot stones

Place chicken, corn, eggs potatoes on leaves.

Cover chicken with leaves or wet burlap

B

Anchor with stones

Cover with earth

Wait several hours.

Saturday, May 17, 1941

137th Day—228 days to follow

	Clear
	Cloudy
	Rain
	Snow

I'm glad it's Saturday again. We've just got about one more month of school left. — Just! (with disgust)

Sunday, May 18, 1941

138th Day—227 days to follow

	Clear
	Cloudy
	Rain
	Snow

I went to Sunday School this morning. Mother, Dad, Ray, Russ, and I went to Warren tonite. Dad had some business there.

Monday, May 19, 1941

139th Day—226 days to follow

	Clear
	Cloudy
	Rain
	Snow

I went to Leader's Club after school and to Scout Meeting after supper. There will probably be a Scout overnite hike to High Mill the Friday and Saturday following Memorial Day.

Tuesday, May 20, 1941

140th Day—225 days to follow

	Clear
	Cloudy
	Rain
	Snow

At the Y tonite we were going to make the final arrangements for the overnite hike to Dundee but our sponsor, Mr. Pickard, was absent. The trip Will have to be called off.

Wednesday, May 21, 1941

141st Day—224 days to follow

	Clear
	Cloudy
	Rain
	Snow

This evening for supper my cousin Raymond from California visited us. He played guard for the University of Chicago in 1908 when they won the Western Conference. He told us a lot about the west.

Thursday, May 22, 1941

142nd Day—223 days to follow

	Clear
	Cloudy
X	Rain
	Snow

Today while Raymond and I were delivering bills one of the worst thundershowers that I can remember. It started when we were at our house, which was quite a coincidence! When the storm was at its worst a fire engine speed past our house. For a while it hailed.

Friday, May 23, 1941

143rd Day—222 days to follow

	Clear
	Cloudy
	Rain
	Snow

I am working on the merit badge "Safety." It is pretty complicated but still it is easy enough.

Saturday, May 24, 1941

144th Day—221 days to follow

	Clear
	Cloudy
	Rain
	Snow

I went down to Scout Headquarters today and bought three merit badge pamphlets. They were; Conservation, Rocks and Minerals, and Personal Health.

1941

H. M. S. Hood sunk

Sunday, May 25, 1941

145th Day—220 days to follow

X	Clear
	Cloudy
	Rain
	Snow

Mother, Dad, Raymond, Russell and I, also Roy Schwitzgebel and Richard Falhabers went to Uncle Cecil's farm. The others fished and I went on a hike.

Monday, May 26, 1941

146th Day—219 days to follow

	Clear
	Cloudy
	Rain
	Snow

I went to Leader's club after school and after supper went to an outdoor Scout Meeting at Twin Hills.

Tuesday, May 27, 1941

147th Day—218 days to follow

X	Clear
	Cloudy
	Rain
	Snow

At Hi Y tonite Joe Wilson, the sports commentator for W H B C, gave a talk. It was pretty good.

Wednesday, May 28, 1941

148th Day—217 days to follow

	Clear
X	Cloudy
	Rain
	Snow

Tonite the Lehman High School Band gave a festival, I ate like a pig, which was foolish because tomorrow is the day for the Freshman Track Meet

Thursday, May 29, 1941

149th Day—216 days to follow

	Clear
	Cloudy
X	Rain
	Snow

Today was the day for the Freshman Track Meet. I entered the half mile run, the high jump, and the running broad jump. It was the first time I have never high jumped but I was lucky enough to take third place. I didn't even place in the broad jump but in the half mile run I took second place, time 2 minutes forty five seconds. I lost to "Red" Himmelbright. I made 4 points. It rained after supper.

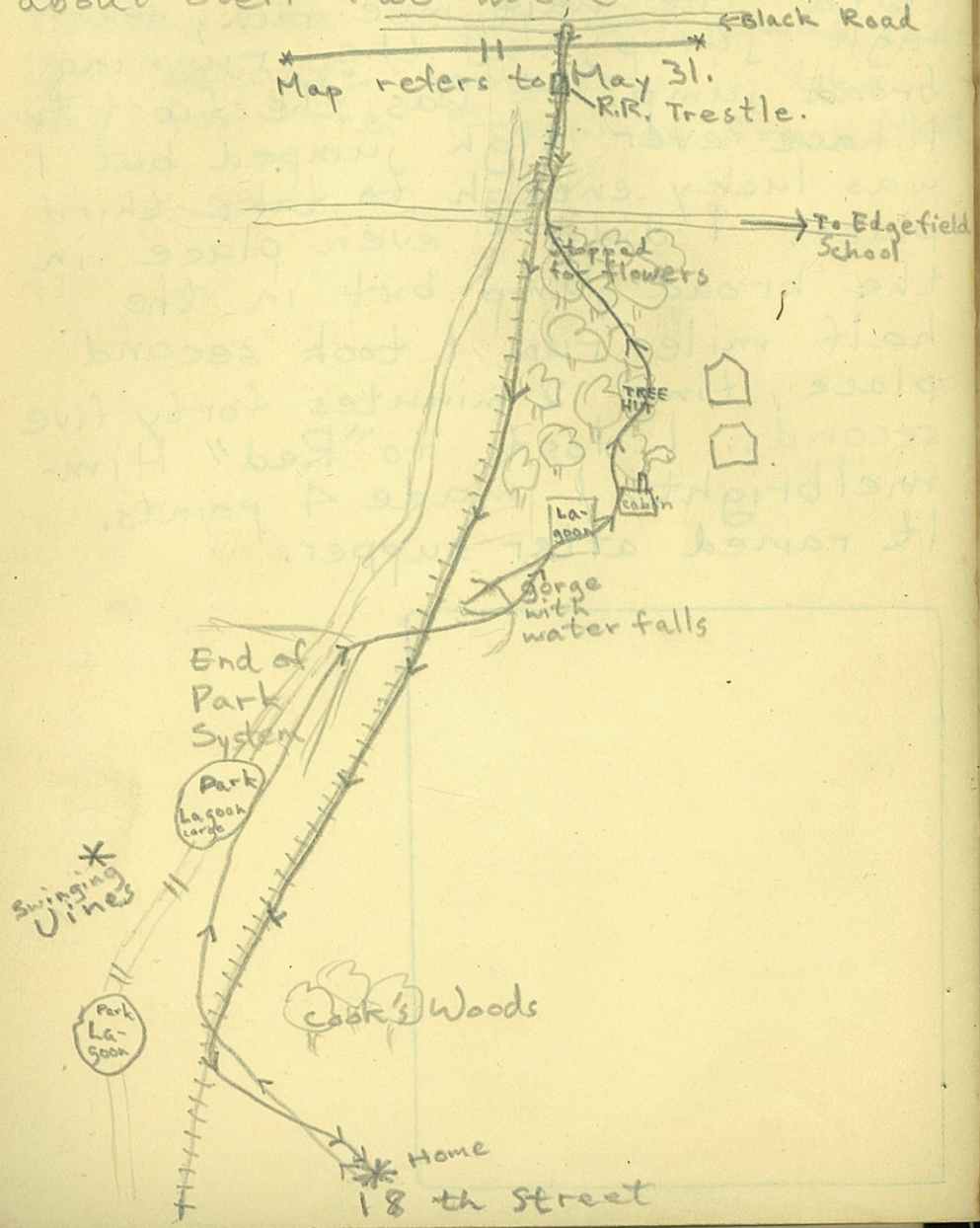
N. Canton

Friday, May 30, 1941

150th Day—215 days to follow

	Clear
	Cloudy
	Rain
	Snow

I can't remember of doing much today. School is just about over. Two more weeks - - -.



Saturday, May 31, 1941

151st Day—214 days to follow

	Clear
	Cloudy
	Rain
	Snow

Little Beaver and I went on a hike. We reached as far north as 50 telephone poles (one mile) past Edgefield. We followed the B + O R.R. On the way up we stopped at a cliff with water trickling down. We climbed it and kept going north parallel with the tracks until we found a tree shack. I believe it was in a big beech tree. There is a line of woods between the shack and the Edgefield road on the side of the hill. About 100 yards south of the road we came to a woods with a likely looking camp plot. We then followed the R.R. about a mile but saw no good spots. We hiked approximately 5 miles. See map pg. May 30.
Considerably more counting all our fussing around.

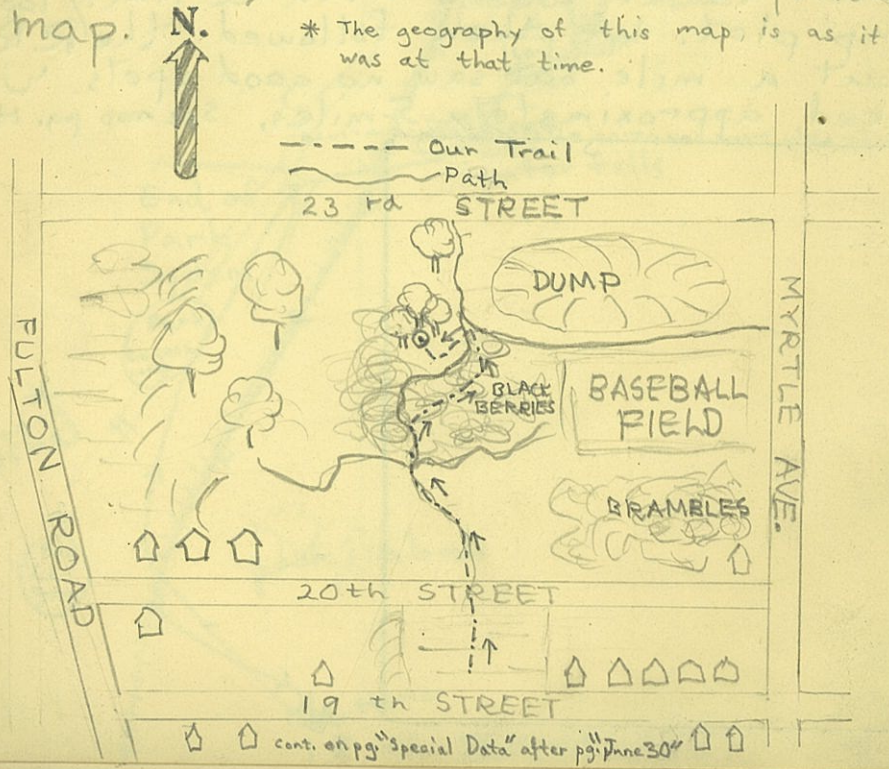
Continued from page "special data" before page "May 1"

Part Three

From the expansion to January 1st 1941 (1940)

It (1940) was sometime in May or June when the night arrived. We blindfolded the new members and tied a rope from the belt of one to the belt of the next, etc. We led them at a swift pace and thru a winding trail to the camp-fire. The route (as well as I can remember) is traced on the following map.

* The geography of this map is as it was at that time.



cont. on pg. "Special Data" after pg. "June 30"

152nd Day—213 days to follow

	Clear
	Cloudy
	Rain
	Snow

I went to Sunday School today. We have a new Sunday School teacher, Mr. Miles.

1941

Iraq revolt crushed

Monday, June 2, 1941

153rd Day—212 days to follow

	Clear
	Cloudy
	Rain
	Snow

Today begins the last week of actual school for me. I have two exams next Monday, though.

LIGHT

LECTURE I

I. Some properties of light
1. A wave motion (since similar waves can be made to interfere)
2. Reflection
3. Refraction
4. Diffraction
5. Interference
6. Polarization

II. Construction of rays and wave fronts

III. Sources of Light - incandescent solid, liquid, or gas
1. Standard sources
   a. One candlepower (Relative standard of amt. of light at the source)

Tuesday, June 3, 1941

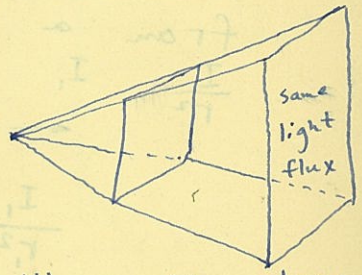
154th Day—211 days to follow

	Clear
	Cloudy
	Rain
	Snow

Today was the last HiY meeting of the school year. We were going to have a goldfish hunt in the "Y" pool but hunted for pennies instead!

IV. Distinguish luminous intensity of a source (in candle-power) and "illumination" (in foot-candles)
1. Illumination is at a point or on a surface at a distance from the source.

Candle power: luminous intensity of a standard candle
Foot candle: illumination at a distance of one foot from a one candlepower light.
Meter candle (similar)
One lumen: amount of light flux going through one sq. ft. at a dist. of 1 ft. from a 1 cp. light.



illumination less, though, on the larger surface

1 cp. light gives 4π lumens

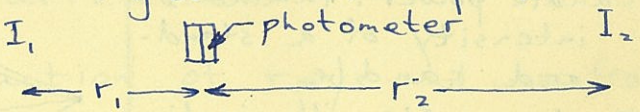
Wednesday, June 4, 1941

155th Day—210 days to follow

Clear
Cloudy
Rain
Snow

On page Special Data before June first is shone a map. When Little Beaver, Lightning Deer, and Sinopah were initiated into the re none of them recognized the place. It was at night of course. Now three new roads have been cut through and 21 new homes have been built. -- Times change.

V. The Photometer: a devise for measuring illumination. (The illumination at a distance "r" from a light whose cp = I is $\frac{I}{r^2}$



$$\frac{I_1}{r_1^2} = \frac{I_2}{r_2^2}$$

VI. The velocity of light

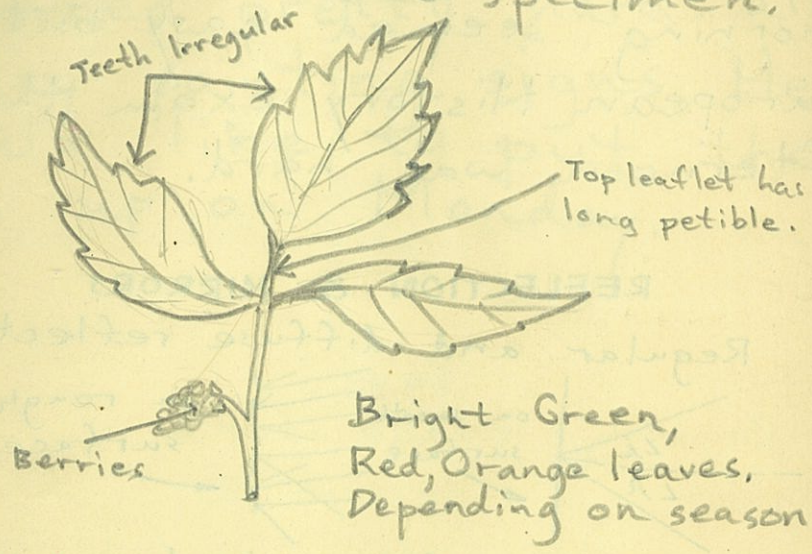
186,000 mi./sec. = 300,000 km/sec = 3×10^{10} cm./sec.

Thursday, June 5, 1941

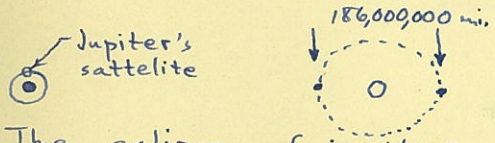
156th Day—209 days to follow

Clear
Cloudy
Rain
Snow

Everyone ought to know what Poison Ivy looks like. Below is a specimen.



speed discovered by Danish astronomer Ramer



The eclipse of jupiter occured 1000 sec. late when the earth was farthest away. Thus it took a longer time for the light to reach the earth.

Friday, June 6, 1941

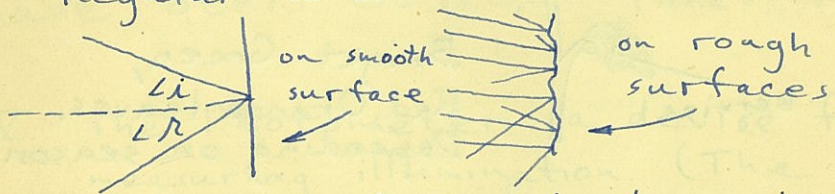
157th Day—208 days to follow

	Clear
	Cloudy
	Rain
	Snow

I started my exams today. The English exam this morning seemed easy but the European History exam this afternoon was hard.

REFLECTION & MIRRORS

I. Regular and diffuse reflection



II. Construction of images in plane mirror

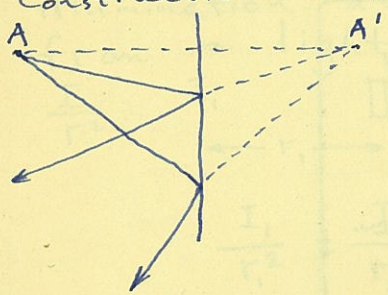
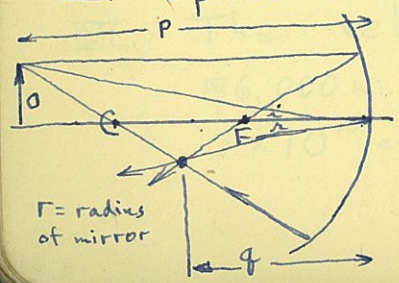


Image in a plane mirror

III. Spherical mirror



$$\frac{o}{I} = \frac{p-r}{r-q} \qquad \frac{2}{r} = \frac{1}{q} + \frac{1}{r}$$

$$\frac{o}{I} = \frac{p}{Q}$$

$$pq - rq = pr - pq$$

$$\frac{2pq}{pqr} = \frac{pr}{pqr} - \frac{pq}{pqr}$$

Saturday, June 7, 1941

158th Day—207 days to follow

	Clear
	Cloudy
	Rain
	Snow

Dad had an "ad" job at Huntington Grange. I worked pretty hard all today painting signs. He would like to put the ads up on Monday.

Sunday, June 8, 1941

159th Day—206 days to follow

	Clear
	Cloudy
	Rain
	Snow

After Sunday School I worked on more signs. I finally finished about 5:30 P.M. Roy and I were going to go on a hike but it was too late.

1941

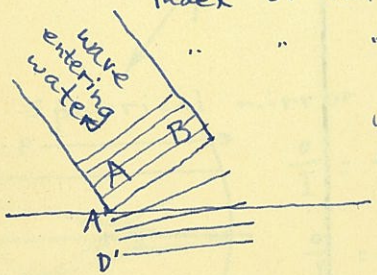
British invade Syria

LECTURE II

1. Term Refraction
   a. Refers to bending of light rays
   b. Index of refraction is the ratio of the Sin ∠ incidence to the Sin ∠ of refraction

Index of refraction $= \frac{\sin i}{\sin r}$

" " " $= \frac{\text{vel. of light in 1st medium}}{\text{vel. of light in 2nd medium}}$



water being denser retards side A and causes the wave to bend causing refraction.

Monday, June 9, 1941

160th Day—205 days to follow

	Clear
	Cloudy
	Rain
	Snow

Today I took my last two exams. The Latin exam was actually easier than I expected. I think I made 100% in the algebra test.

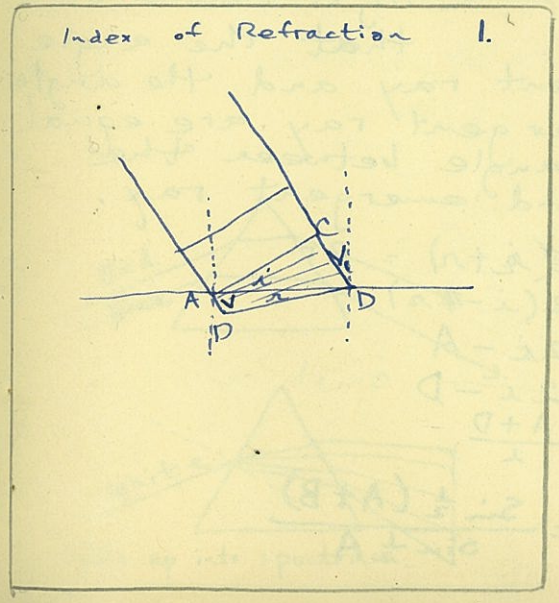
1941

Nazis break thru Stalin's line

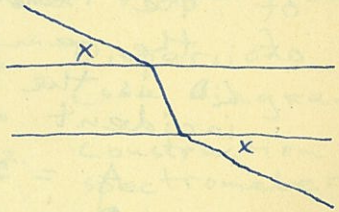
$$\frac{V_1}{V_2} = \frac{CB}{AD} = \frac{\frac{CB}{AB}}{\frac{AD}{AB}} = \frac{\sin i}{\sin r}$$

Thus the index of refraction μ is the ratio of the velocities or the sines.

for H_2O $\mu = \frac{4}{3}$ approx.



2. Parallel plates



enters and leaves medium at same angle.

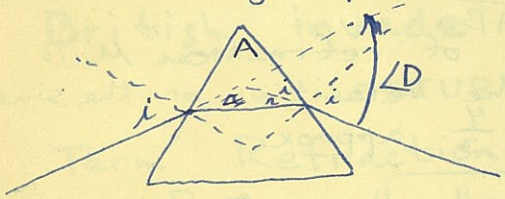
161st Day—204 days to follow

Clear
Cloudy
Rain
Snow

School is over for me but not work. I am making six big posters for a Sunday School Class at church.

1940
British withdraw from Norway

3. Through prism Deviation = "d"



Minimum deviation occurs when the light enters so that the angle of the incident ray and the angle of the emergent ray are equal. ∠D is the angle between the incident and emergent ray.

$A = 2(i+r) = 2r$

$D = 2(i-r)$

$D = 2i - A$

$\cancel{\therefore A = 2i - D}$ omit

$\therefore i = \frac{A+D}{2}$

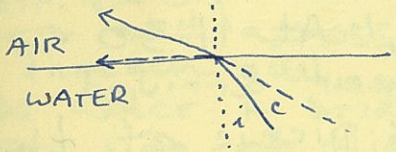
$$\mu = \frac{\sin i}{\sin r} = \frac{\sin \frac{1}{2}(A+B)}{\sin \frac{1}{2}A}$$

162nd Day—203 days to follow

Clear
Cloudy
Rain
Snow

Today I finished the posters and also worked on some plaques that I am making for the school.

4. Total Reflection

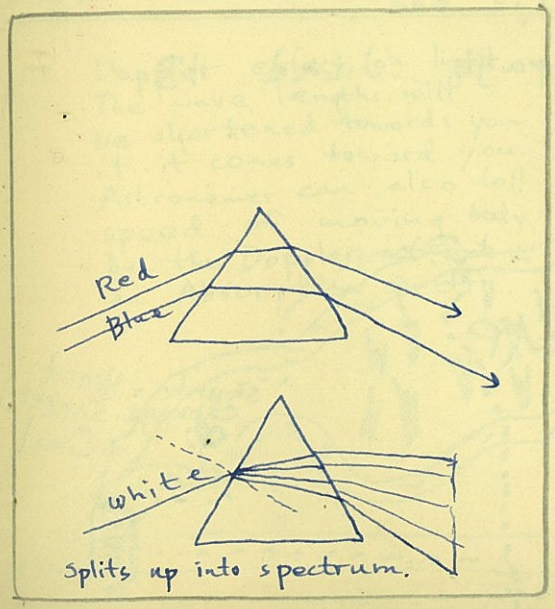


$$\frac{\sin i}{\sin c} = \mu$$

$$\frac{\sin 90^\circ}{\sin c} = \mu = \frac{1}{\sin c}$$

from less dense to more dense medium.

$\sin$ critical angle $= \frac{1}{\mu}$



Total Dispersion and Dispersion

1. Dispersion (see diagram
2. Construction of spectrometer

3. Emission spectra
   a. Continuous
   b. Bright line
4. Absorption spectrum (dark blue

163rd Day—202 days to follow

	Clear
	Cloudy
	Rain
	Snow

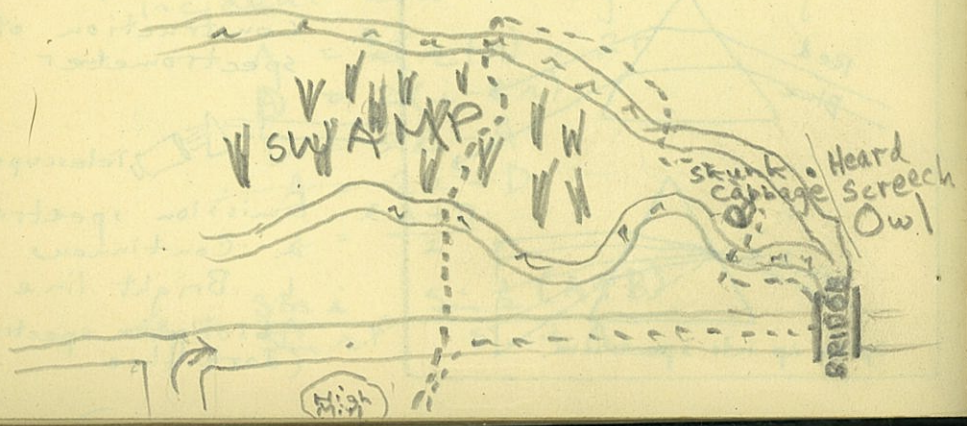
I worked on some plaques for Lehman today and did not do bills. They will have to be done tomorrow morning.

see page June 13

about several hundred yards from the east branch. At 11:30 tonight Lightning Deer arrived in camp from a class picnic at Lake 'O Springs. I slept soundly.

see page June 13

* see note on page June 13



164th Day—201 days to follow

	Clear
	Cloudy
X	Rain
	Snow

We got our report cards today, closing the end of the school year. At 2:30 P.M. dad drove several boys from our Scout Troop to High Mill Park for an overnite hike. Since it rained we slept in the barn. This afternoon we went on a hike (see map on next page) by the lakes. This evening we went on a hike North of the barn and across the road. We heard a shreech owl. NOTE!!! A creek which goes under a bridge on the east-north east side of High Mill divides slightly under the bridge. If one follows the east branch when he is on a north + south line with High Mill a swamp is between the branches and the west branch is —

See Pg. June 12

4. Doppler effect on light
The wave lengths will be shortened towards you if it comes toward you. Astronomer can also tell speed of moving body by the Doppler effect on Absorption spectra.

3. Continuous spectrum produced by incandescent solid, liquid, or gas.

1. Continuous
Any incandescent solid, liquid, or gas. merges into each other

2. Bright line spectrum
Given by gases or vapors of metals. Ex: Na gives bright yellow line right in middle of spectrum. Thus a metal in vapor can be determined by the bright line spectrum.

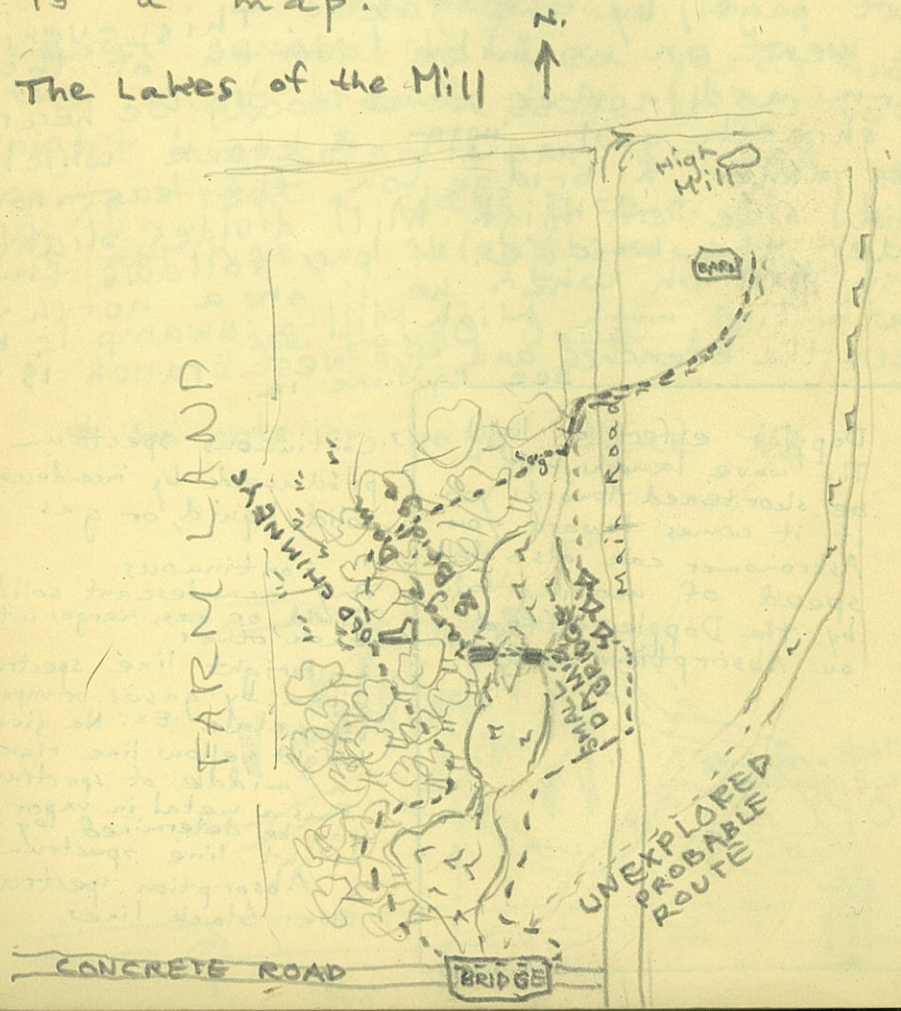
3. Absorption spectra
Gives black lines.

165th Day—200 days to follow

	Clear
X	Cloudy
	Rain
	Snow

Rheda and Robert came home from Ohio State today. Lightning Deer and I arrived about four o'clock. We rode home in our trailer. This morning the troop followed the trail we followed yesterday afternoon. Below is a map.

The Lakes of the Mill



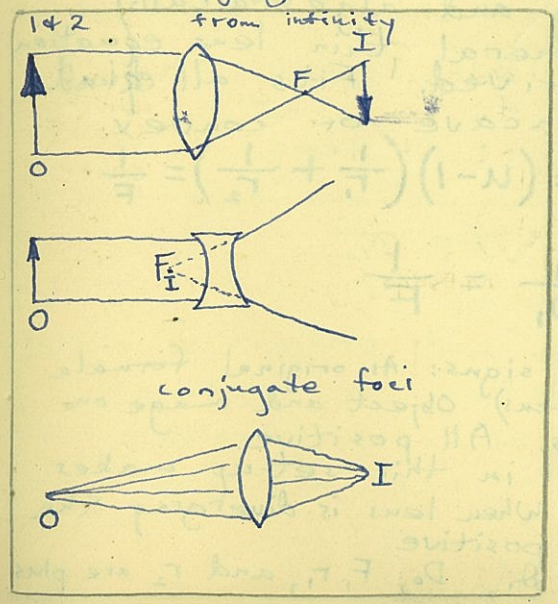
166th Day—199 days to follow

	Clear
	Cloudy
	Rain
	Snow

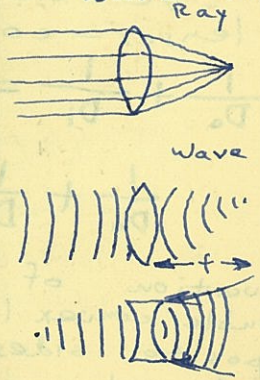
I worked on a poster to enter a state-wide contest. It must be in the hands of the people (in Columbus) tomorrow.

LECTURE III

1. Lenses
   Converging (convex)
   Diverging (concave)
2. Terms
   Principal axis
   Principal focus
   Focal length
   Conjugate distances



3. Ray concept and wave front

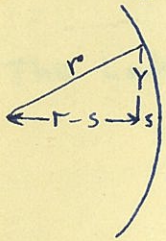


167th Day—198 days to follow

	Clear
	Cloudy
	Rain
	Snow

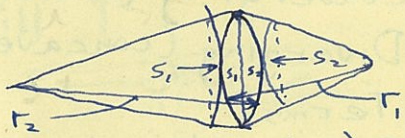
I finished the poster today and mailed it special delivery. At scout meeting tonite we practiced for the Camp-O-Ral. Mel was absent.

Deriving the thin lens equation:
(OMIT DERIVATION)



$$y^2 = 2rs$$

$$s = \frac{y^2}{2r}$$



$$AE + EB = u(MN)$$

$$S_1 + s_1 + S_2 + s_2 = u(s_1 + s_2)$$

$$S_1 + S_2 = (u-1)(s_1 + s_2)$$

By substituting and algebraically working the general thin lens equation can be derived. Fits all kinds of lenses — concave or convex.

$$\frac{1}{D_o} + \frac{1}{D_i} = (u-1)\left(\frac{1}{r_1} + \frac{1}{r_2}\right) = \frac{1}{F}$$

$$\frac{1}{D_o} + \frac{1}{D_1} = \frac{1}{F}$$

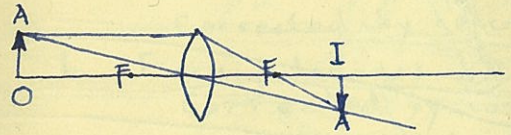
4. Convention of signs: As original formula (double convex lens) Object and image on opposite sides. All positive.
∴ Any change in this set-up makes it negative. When lens is diverging the focal length is positive.

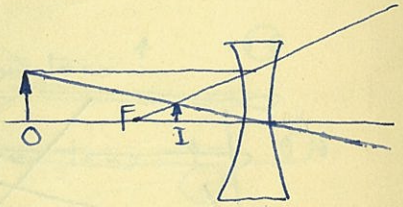
+  D_i, D_o, F, r_1, and r_2 are plus

168th Day—197 days to follow

	Clear
	Cloudy
	Rain
	Snow

I noticed on page June 14 a map showing the land around the "Lakes of the Mill." If you have ever been there once you'll want to go back. It would be a swell place for a bicycle hike with the re.

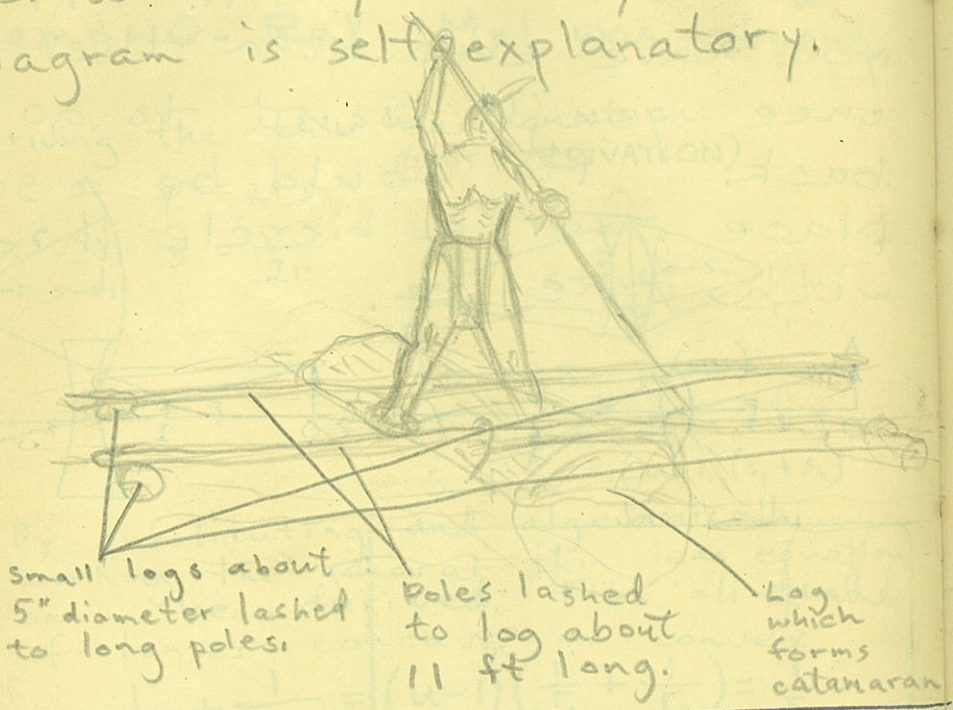




169th Day—196 days to follow

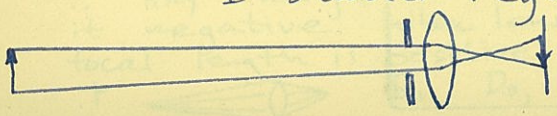
	Clear
	Cloudy
	Rain
	Snow

I noticed in a copy of "The Boy's Life" the plans to make a catamaran for poling across rivers, streams, etc. The diagram is self explanatory.



LECTURE IV

I. Optical Instruments
1. The camera and projection lantern
   a. Accomodation for distance
   b. Size of aperature for relative brightness
      I Shutter regulates light

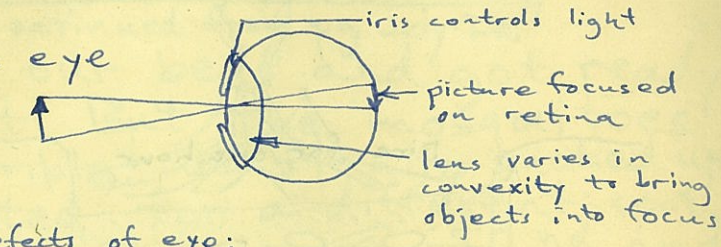


170th Day—195 days to follow

	Clear
	Cloudy
	Rain
	Snow

I hope that this summer there can have some real meetings! It's about time for Lightning Deer to become a tef. He still has his hut to make.

2. The eye



Defects of eye:

a. Nearsightedness
   Corrected by concave lens

b. Farsightedness
   Corrected by convex lens

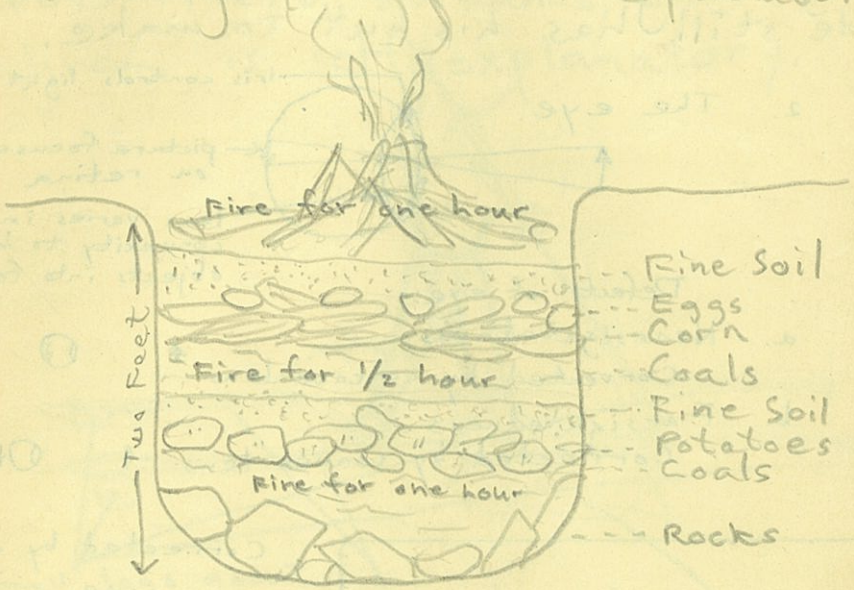
Corrected by glasses

Friday, June 20, 1941

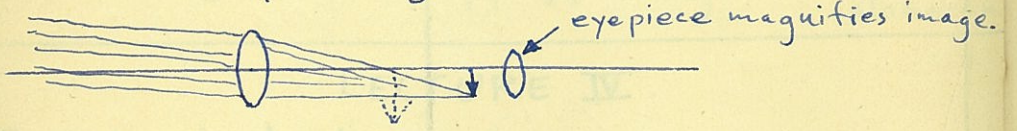
171st Day—194 days to follow

	Clear
	Cloudy
	Rain
	Snow

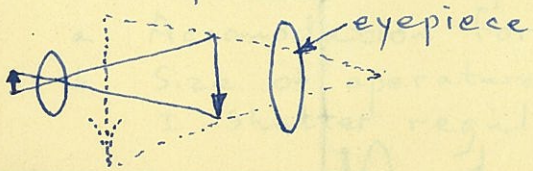
I found what I think a simple and practical way to cook a dinner for a group. The diagram is self explanatory.



3. Telescope (long focus)



4. Microscope (short focus)



Saturday, June 21, 1941

172nd Day—193 days to follow

	Clear
	Cloudy
	Rain
	Snow

Little Beaver has been begging for a overnight hike. I promised to have one soon.

//continued from pg. July 22.//

We made our beds and got ready for night. But the mosquitoes were terrible! We finally packed up and started for a different spot. At a new house on 22nd and Walden N.W. We made our beds on the upstairs floor and slept thru the nite. Pitamaken, Little Beaver, Lightning Deer, and Sinopah were present.

5. Linear magnification
(a) if two lenses magnify
$M = \frac{D_i}{D_o}$ (for each)
then final magnif.
$M_f = M_1 \cdot M_2$
(b) Magnifying power is the ratio of the apparent angle subtended by the image to the angle subtended by the object if the instrument were not used.

1941-June 22 Nazis invade Russia

1941-June 22 Finland invades Russia

Sunday, June 22, 1941

173rd Day—192 days to follow

	Clear
X	Cloudy
	Rain
	Snow

Tonite the re started on an overnite hike north. Little Beaver and Pitamaker left our house at about 6:30 P.M. and went to the "Land of the Beeches" and looked for a suitable camping spot. We finally found a likely looking spot in the north end of the valley between the twin hills. We pitched the tent and waited for Lightning Deer and Sinopah who were supposed to come. Before they arrived I left for home and bought some pop and candy. When I came back to camp again the rill and tee were there.

continued on pg. July 21.

Monday, June 23, 1941

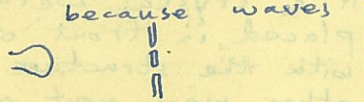
174th Day—191 days to follow

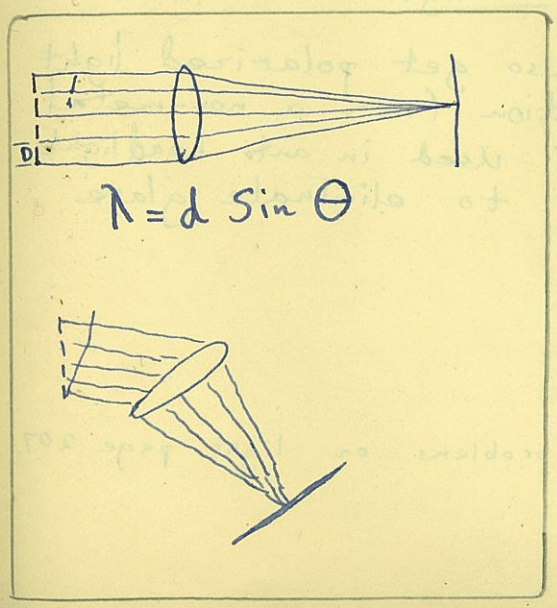
	Clear
	Cloudy
	Rain
	Snow

Tonite at Scout meeting we practically finished the trailer. The silverware and kitchenware was all washed and put away. Summer School started today. I am taking typewriting.

II. Interference phenomena

1. 2 slits 1 or 2 mm or less with light going thru them cause a series of light and dark bands on a screens because waves are out of phase





175th Day—190 days to follow

	Clear
	Cloudy
	Rain
	Snow

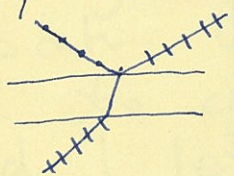
Summer School is a lot of bother but I will be glad I took it once I learn how to type.

III. Polarized light

1. Plane polarized light
(Some crystals have a string like structure and when the light goes thru all the light is vibrating in the same plane)

If a crystal were placed in front of this with the structure the other way most of the light would be cut off.

2. You can also get polarized light by reflection from a non-metal



used in auto headlights to eliminate glare

problems on light page 207.

176th Day—189 days to follow

	Clear
	Cloudy
	Rain
	Snow

Camp-o-ral is just around the corner. This year it is at the Canton Fair Grounds. Last year it was at Wooster and the year before at Alliance.

Thursday, June 26, 1941

177th Day—188 days to follow

	Clear
	Cloudy
	Rain
	Snow

After supper tonite we actually finished the trailer. Thisafternoon the Camp-o-ral Patrol had its last practice. Tomorrow just after lunch we start.

Friday, June 27, 1941

178th Day—187 days to follow

X	Clear
	Cloudy
	Rain
	Snow

I delivered bills, went to summer school, packed the trailer and my bedding this morning. After lunch we started for the fair grounds. We put up camp in the blazing sun. After this I cooked the supper. At a Court of Honor this evening I received my first Class badge.

Saturday, June 28, 1941

179th Day—186 days to follow

	Clear
	Cloudy
X	Rain
	Snow

Camporal: Today was our busy day. We were under inspection practically all day. This afternoon the fieldmeet was held. We came out fairly well. Midget Auto Races were scheduled for tonight but were called off on account of rain. It poured right when we were ready for bed. We ditched the tents and we changed the bunks around. Raymond slept in the trailer and Balcom and I slept in our tent on the ground. We managed to keep our bedding and clothing dry and still have a pretty good sleep. The day was cooler than yesterday.

Sunday, June 29, 1941

180th Day—185 days to follow

	Clear
	Cloudy
	Rain
	Snow

Today is the last day of the Camp-o-ral: A Lutheran minister had the service at the grounds. I didn't quite catch on to what he was talking about. Some expert campers gave a demonstration this morning. I tried a tump line out. (a strap which fits over the forehead to carry heavy packs)... Camp-o-ral is over.

181st Day—184 days to follow

	Clear
	Cloudy
	Rain
	Snow

Back to the old routine today. Summer school this morning and scout meeting this evening. We more or less "just cleaned up" at scout meeting. I'm taking typing. I hate to spend the time but it might be worth it some day.

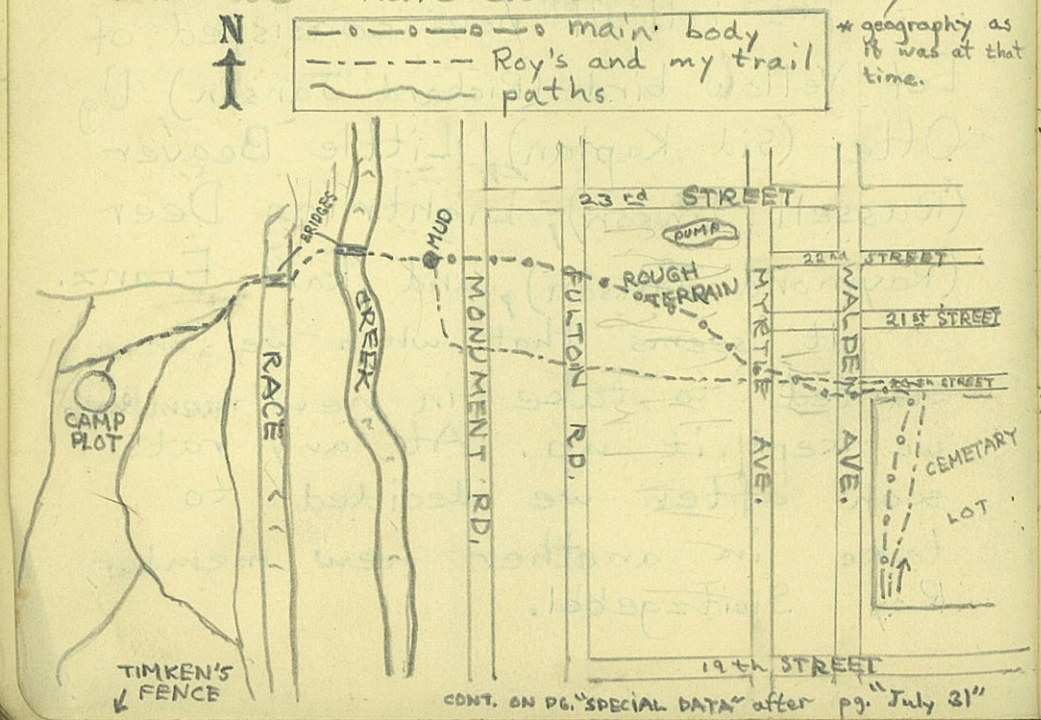
Continued from page "Special Data" before page "June 1"

Upon arriving at the camp plot the ug immediately began to la mar. Little Beaver was given the special privilege of helping the ug gather firewood. The others were still blindfolded. The fire was lighted and a short ceremony ensued. They all agreed to join and the first meeting after the re-organization came to a close.

The rollcall now consisted of Eef Yellow bird (Richard Janson), Ug Otter (Sid Kaplan), Little Beaver (Russell Janson), Lightning Deer (Raymond Janson), and Earl Franz.

It seems that when we once started to take in new members we kept it up. At any rate soon after we decided to take in another new member, Roy Switzgebel.

The trail, as I remember it, is traced on the following map. Otter was sent ahead with the main body to set up camp. While on the trail he accidently led them into a mire of mud. Lightning Deer and Earl Franz refused to march any farther. Roy had a strained ankle and when we reached the main body he was permitted to take his blindfold off. Everything was settled peaceably and we marched on—in a body.

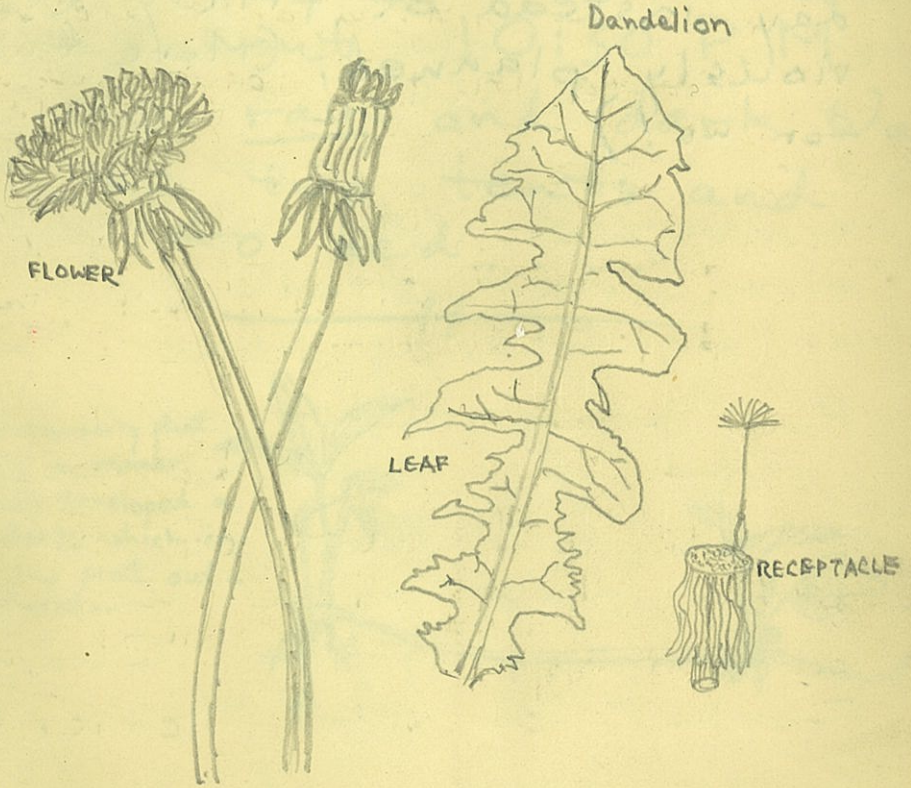


CONT. ON PG. "SPECIAL DATA" after pg. "July 31"

182nd Day—183 days to follow

	Clear
	Cloudy
	Rain
	Snow

This week end our Sunday School Class, under Mr. Miles is going on a camping trip. Lightning Deer and I are both in this class.



Wednesday, July 2, 1941

183rd Day—182 days to follow

	Clear
	Cloudy
	Rain
	Snow

Because July 4 falls on Friday we delivered bills today. Since 2 boys whomwe had planned would go couldn't Mr. Miles, Raymond, and I decided to go on Thursday instead of Friday as previously planned. (More fun for us!)

Thursday, July 3, 1941

I saw a Ruby-throated Hummingbird today.

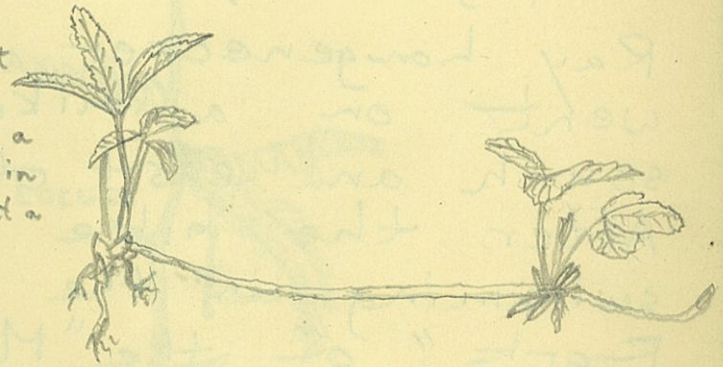
184th Day—181 days to follow

At Mr. Miles' house.

	Clear
	Cloudy
✓	Rain
	Snow

Immediately following supper Raymond and I went on an overnite hike with our Sunday School Class under Mr. Miles. We arrived at Mohican State Forest about 10:30 P.M. in the rain and dark. We set up two tents and went to bed....

A strawberry plant showing a runner that has developed a new plant, which in turn has sent out a new runner.



Friday, July 4, 1941

185th Day—180 days to follow

	Clear
X	Cloudy
	Rain
	Snow

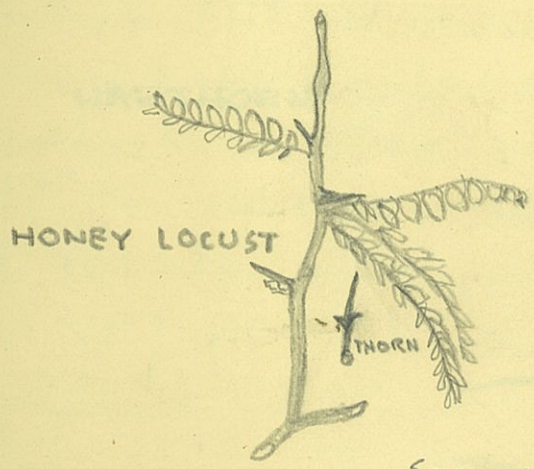
Yesterday Mr. Miles, Raymond, and I went ahead of the main bunch and so this morning when the rest arrived, about 10:30 camp was entirely set up. We went on a tree hike as soon as everyone was well organized. (A list of the trees identified will be found on page Oct. 27.) After lunch Ray Longenecker and I went on a hike to the south and east of our camp. After the hike we went swimming in the "Clear Fork" of the "Mohican" River. We had a camp-fire tonight with candy bars graham crackers and marshmallows

Saturday, July 5, 1941

186th Day—179 days to follow

X	Clear
	Cloudy
	Rain
	Snow

After breakfast we went swimming. We played around on the cable bridge over the river. (Last night we visited the fire tower.) While waiting for Dad to take us home Ray L. and I climbed down almost vertical rocks to the river below. The gorge, my guess, is about 500 feet deep....



See page March 19.

Sunday, July 6, 1941

187th Day—178 days to follow

	Clear
X	Cloudy
	Rain
	Snow

After Sunday School and dinner Russell, Dad, and I went to Huff Run. Russell did a little fishing. Later we went to Cousin Vic's apple orchard.

Monday, July 7, 1941

188th Day—177 days to follow

	Clear
	Cloudy
X	Rain
	Snow

I went to Summer School again today. After school I was thinking about making a tree hut in the orchard. We were going to go swimming at scout meeting but Mel could not get there so it was called off.

HAWTHORN

189th Day—176 days to follow

	Clear
	Cloudy
	Rain
	Snow

More summer school today. It's boring but I actually am learning to type. I am making a flower note book and am typing it.

THURSDAY, JULY 3, 1941
(written July 4)

We arrived in camp last night at eleven P.M. in a steady downpour of rain that began about 10:30. The night was unusually black; neither the moon nor a single star broke the vastness of the dismal sky. The steady pounding of a driving rain against our naked backs and the sighing of the wind in the branches of the forest

190th Day—175 days to follow

	Clear
	Cloudy
	Rain
	Snow

I am thinking about making a hut again this year. A few days after our other hut was torn down I salvaged a door and hid it at the ballfield. It's gone now! Where? How?

giants towering seventy feet above us lent a touch of sarcasm to this wildly beautiful scene.

Twice was this deafening routine of the night broken—once by a crack of thunder and a flash of lightning that seemed to open the heavens to our startled gaze, and once by a spine-

Thursday, July 10, 1941

191st Day—174 days to follow

	Clear
	Cloudy
	Rain
	Snow

A few types of huts suggested are: Underground hut, Tile and Bricks, Thatched, Teepee hut, Tree Shack. I personally think the tree shack is the most practical.

chilling cry of some nocturnal bird in distress.

* * *

Hurriedly we finished pitching the tent and lay down to a troubled sleep.

Friday, July 11, 1941

192nd Day—173 days to follow

	Clear
	Cloudy
X	Rain
	Snow

I delivered bills ~~today~~ before summer school. Lightning Peer carried with me.

"....Continued from pg. July 12."

and so Dad and I decided to sleep in it. Russell and Raymond were going to sleep in the car. A little outside of Jackson, Mich. we found a suitable spot in a field with no mosquitoes! Since it was a clear night we, dad + I, slept on the tent under the stars. Incidentally, grass, hay, etc. get hard after a while.

Trip continued on pg. July 13.

Saturday, July 12, 1941

193rd Day—172 days to follow

	Clear
	Cloudy
	Rain
	Snow

At 5:00 P.M. thisafternoon Dad, Mother, Rheda, Raymond, Russell and I got into the car and started for Camp Custer, Michigan where Robert is located with the R.O.T.C. We planned to travel almost there and then stop somewhere nearby for the night. We ate supper at a Roadside park near Wellington, Ohio, I think. When we reached Toledo the trip was half over. We had planned on staying over nite at Adrian, Mich. but all the cabins, etc. seemed to be filled. At Jackson we found a tourist home with one room left. Rheda and mother stayed overnite here. We had taken the tent with us

continued on pg. July 11.

Sunday, July 13, 1941

194th Day—171 days to follow

1941 Syria capitulates

	Clear
	Cloudy
	Rain
	Snow

I forgot to mention yesterday that in Adrian, Mich. dad broke a front spring in the car. So when we reached Albion today we stopped and had the car prepared (three hours of waiting) while we ate dinner in a city park. Thisafternoon we finally reached Camp Custer, located between Battle Creek and Kalamazoo. 20,000 men are encamped here. The barracks are double-decked, a fact which surprised me. The drafted men live in the barracks while the R.O.T.C., which includes Robert live in cement-floored tents. The camp covers quite an area and there is a swimming pool for the men.

continued on July 14.

195th Day—170 days to follow

	Clear
	Cloudy
	Rain
	Snow

This morning while I was at Summer School Paul Siple came to our house and asked mother if I was still interested in a paper route. She said "yes" and I got the 19th street route. Our base-ball team played the 'Pirates' after supper. We beat them by a score of 7 to 3, I think.

continued from pg. July 13.

Later, we visited Battle Creek, "The Best Known City of Its Size in the World." We started home about 5:30 P.M. and ate supper as we traveled. We reached home at about 2:30 A.M. Tuesday morning..... Incidentally we went thru Toledo. (On the way home).

196th Day—169 days to follow

V	Clear
	Cloudy
	Rain
	Snow

This evening after supper Roy Schwitzgebel, Lightning Deer, Little Bearer and I played hide + seek in the dark in the orchard. The person "it" used a flashlite. Dick and Bill Falhauber were present.

Derived formulas on light

INTENSITY & ILLUMINATION

$$\text{foot-candles} = \frac{cp \cdot \cos i}{s^2}$$

$$\text{Lumens} = 4\pi \cdot cp.$$

$$\text{foot-candles} = \frac{cp}{s^2}$$

$$\frac{cp_1}{cp_2} = \frac{s_1^2}{s_2^2}$$

MIRRORS & LENSES

$$\frac{1}{F} = \frac{1}{D_o} + \frac{1}{D_i}$$

$$\frac{1}{F} = (\mu - 1)\left(\frac{1}{r_1} + \frac{1}{r_2}\right)$$

$$M = \frac{D_i}{D_o}$$

["f" in mirrors equals $\frac{1}{2}$ the radius of curvature.]

197th Day—168 days to follow

	Clear
	Cloudy
X	Rain
	Snow

After papers I went to the orchard to make a hazard race. After I had partially finished it rained so I had to forget it.

REFLECTION & REFRACTION

$\angle$ incidence = $\angle$ reflection

$$\mu = \frac{\sin i}{\sin r} \quad \text{(light from air)}$$

$$\frac{\sin i}{\sin r} = \frac{\mu_2}{\mu_1}$$

$$\mu = \frac{\sin \frac{1}{2}(A + D_m)}{\sin \frac{1}{2} A}$$

$$\mu = \frac{1}{\sin C}$$

submerged objects: $\mu = \frac{\text{true depth}}{\text{apparent depth}}$

$D_m = a + a'$

$$D_m = A(\mu - 1)$$

$$\text{Dispersive power} = \frac{\mu_V - \mu_R}{\mu_Y - 1} \quad \text{(a ratio)}$$

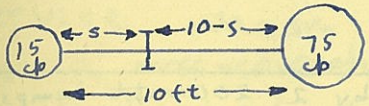
198th Day—167 days to follow

	Clear
	Cloudy
X	Rain
	Snow

This evening after supper Sid Kaplan and I played "Easy Money" at Sid's. We played according to correct rules. No money involved.

SOURCES OF LIGHT

1. Where must a photometer be placed (to have equal illumination on either side) between two light sources of 15 & 75 cp, 10 feet apart?



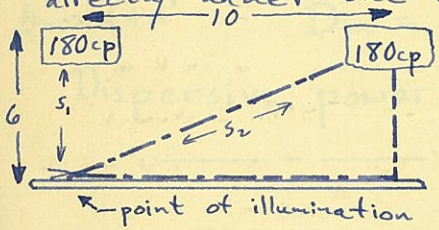
Friday, July 18, 1941

199th Day—166 days to follow

	Clear
	Cloudy
X	Rain
	Snow

Practically every day this week we have had rain showers. After supper tonite it poured down rain. I watched the clouds (cumulus and nimbus) form until the whole sky seemed to be a blanket of dark clouds. After the shower was over I watched a rainbow in the eastern sky.

2. A workbench is illuminated by 2 200watt lamps of 180 cp. each. The lamps are 10 ft. apart and 6 ft. above the bench. What is the illumination in ft-candles directly under one of the lamps?



$$\text{ft-candles}_1 = \frac{cp_1}{s_1^2} = \frac{180}{36} = \underline{\underline{5}}$$

$$s_2 = \sqrt{36+100}$$

$$\text{ft-candles}_2 = \frac{cp_2}{s_2^2} = \frac{180}{136} = 1.32$$

Illumination at point is 6.32 ft-candles.

Saturday, July 19, 1941

200th Day—165 days to follow

	Clear
	Cloudy
X	Rain
	Snow

After supper tonite I went to the orchard and fooled around. Later, I went down to the park and waited until it got dark. After this I took the diagonal trail leading up the hill to Timken's fence. I went on uphill about 30 paces then turned to the left and climbed over the fence. I went almost due south cutting a little bit to the east until I hit an old service wagon road. (I was heading for a moss-covered walk thru the woods, which I had spotted sometime ago, I must have been too far west to hit it.) I followed this a little ways until I heard the sound of running water. I cut southeast to a deep ravine, then cut southwest to a lily pool, where the water came from. I crossed the little creek on some stones on the lower edge of the pool. From here I cut southeast until I came to the edge of the woods.

Over—

201st Day—164 days to follow

	Clear
X	Cloudy
	Rain
	Snow

I visited the camp of the "Mingoes" (Timken Estate) again today. The purpose of the trip today was to become better aquainted with it and to make a map.

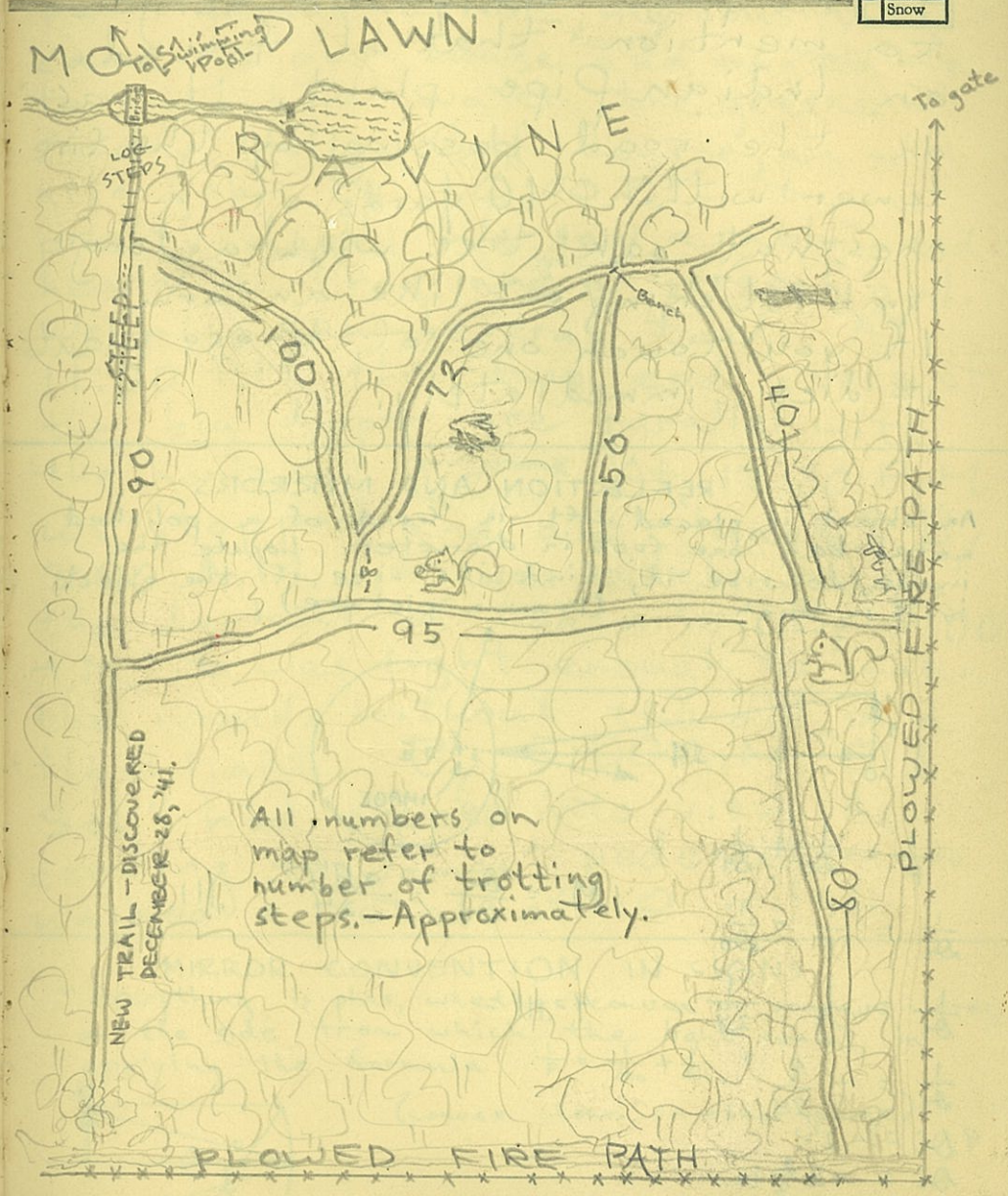
CONTINUED FROM PG. JULY 19.

Out in the center of a mowed field was a swimming pool with a diving board and a tower. I climbed the tower and went out on the board. Next I went south towards the mansion. When I was about 30 or 40 yards from it a man on the porch which previously I could not see stood up and I "melted into the night." I turned north a few yards and recrossed a black macedam road. Changing my mind I followed it towards the southwest entrance gate. I heard a dog bark <u>once</u> and with the "quick and tireless pace of Lew Wetzel" started for home. The entrance was open but a car was parked nearby so I climbed the fence a few yards to the north of the gate. I came thru the woods in the <u>rain</u> towards home....

202nd Day—163 days to follow

X	Clear
	Cloudy
	Rain
	Snow

At Scout meeting tonite we had a swimming party at Lake Cable.



...The Land of Mingoes...

Tuesday, July 22, 1941

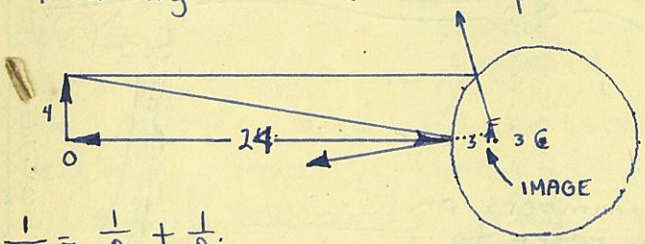
203rd Day—162 days to follow

	Clear
	Cloudy
	Rain
	Snow

I happened to notice that on page July 5 I forgot to mention that I found an Indian Pipe plant. It was on the road passing by the fire tower within 10 yards of a chestnut oak tree with a long limb sticking out like an arm. If you touch one of these plants it dies immediately.

REFLECTION AND MIRRORS

An object is placed 2 ft. in front of a polished metal ball one foot in diameter. Locate the image, describe it, find its size if the object is 4 in. high. (Draw a picture)



$$\frac{1}{F} = \frac{1}{D_o} + \frac{1}{D_i}$$

$$\frac{1}{D_i} = \frac{1}{F} - \frac{1}{D_o}$$

$$\frac{1}{D_i} = \frac{1}{-3} - \frac{1}{24}$$

$$\frac{1}{D_i} = -\frac{9}{24}$$

$$9D_i = -24$$

$$D_i = -2\tfrac{2}{3} \text{ in.}$$

$$M = \frac{D_i}{D_o} = \frac{2.67}{24} = .111$$

$$4 \cdot .111 =$$

Wednesday, July 23, 1941

204th Day—161 days to follow

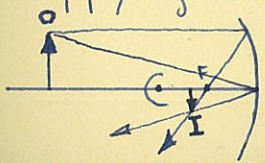
	Clear
	Cloudy
	Rain
	Snow

This evening right after supper James Elliott, my cousin, came to our house and wanted me to help him water the greens at Shaddy Hollow Golf Course, an all nite job. By 10:00 P.M. it was pretty dark. We saw a rabbit and heard a frog and a screech owl. We also saw several toads. At 11:00 P.M. the two end stars of the big dipper are parallel with the horizon. At 12:30 P.M. we stopped and ate "lunch." By 3:00 A.M. it was pitch black, the darkest of the nite. By 4:00 A.M. it was light enough to make the rounds without the aid of a flashlight. By 5:00 A.M. "Old Sol" had popped into view. According to James' pedometer we walked a total of 10 miles.

MIRROR CONVENTION IN SIGNS

"Everything is plus, whether convex or concave mirror, on the side from which the light comes, in applying the formula $\frac{1}{F} = \frac{1}{D_o} + \frac{1}{D_i}$."

(convex shown on other page)



CONCAVE MIRROR

Thursday, July 24, 1941

205th Day—160 days to follow

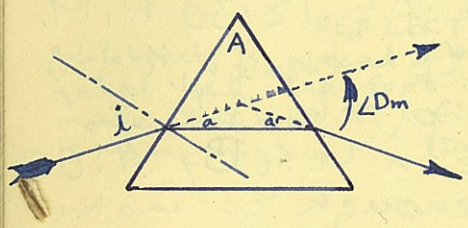
X	Clear
	Cloudy
	Rain
	Snow

After supper tonite our baseball team played the Pirates. We lost but I made two runs.

1941

Vichy surrenders Indo-China to Japan

REFRACTION



Terms in prism with light entering symmetrically.

Friday, July 25, 1941

206th Day—159 days to follow

X	Clear
	Cloudy
	Rain
	Snow

The thermometer reached 91° today, with the humidity high! There is just one more week of summer school...

Saturday, July 26, 1941

207th Day—158 days to follow

X	Clear
	Cloudy
	Rain
	Snow

It took me all morning to collect. I planned on going on a hike but didn't get around to it.

Sunday, July 27, 1941

208th Day—157 days to follow.

X	Clear
	Cloudy
	Rain
	Snow

I went to Sunday School this morning. I have a little touch of sore throat, tonsilitis. Raymond is going to Camp with our Scout Troop but I am going later.

Monday, July 28, 1941

209th Day—156 days to follow

	Clear
	Cloudy
X	Rain
	Snow

I went to Scout meeting tonite. Lightning Deer leaves for Scout Camp on Sunday! I will go later.

Tuesday, July 29, 1941

210th Day—155 days to follow

	Clear
	Cloudy
X	Rain
	Snow

Tonite I went to the Golf Course with James. I walked 10 miles and we finished at 4 o'clock Wednesday morning!

Wednesday, July 30, 1941

211th Day—154 days to follow

X	Clear
	Cloudy
	Rain
	Snow

This is the last week of summer school. I worked a good bit today on the Re's guide book. (In this book)

Thursday, July 31, 1941

212th Day—153 days to follow

	Clear
	Cloudy
	Rain
	Snow

Otter has a cousin from Cleveland visiting him. He and Sid, and Little Beaver and I are going on an overnite bicycle hike sometime next week.

1941

British troops join Russians in Iran

continued from page "Special Data" before page "July 1"

After reaching the clee Roy was again blindfolded. His dog "Frisky" was given to him to keep quiet. (We thought he might be of value in warning us of strangers) Lightning Deer was immediately sent out as scout and Little Beaver helped the ug la mar. Earl Franz and I pitched the teepee. Several poles were tied together at the top and spread to form a wide circle at the base. A heavy cloth was then wrapped around it. The stage was set and one more person joined our re. ——

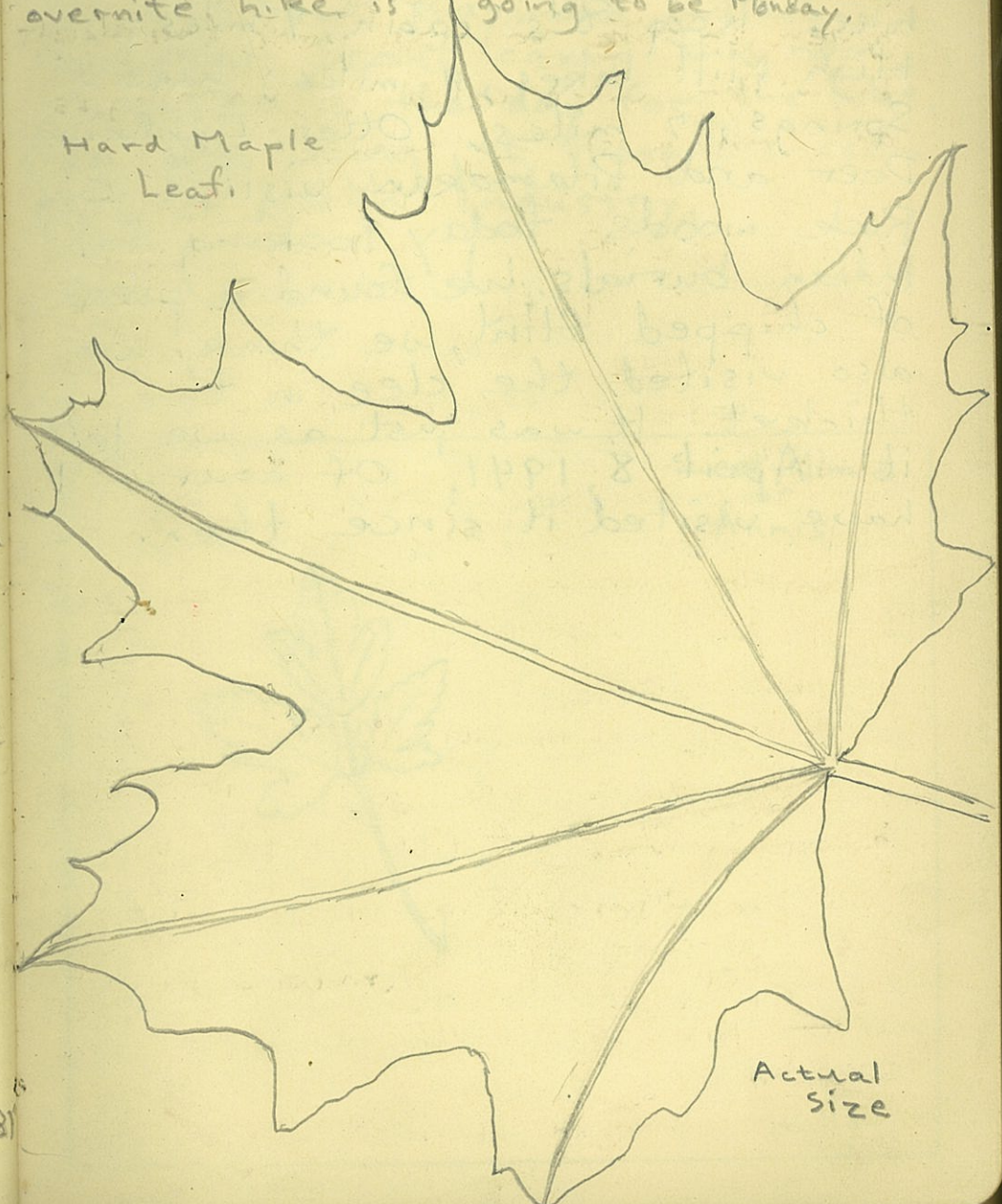
There remains but three more people to mention whow joined in this period. Our tribe now had six members. The first group accepted were Raymond Wilkof and Bob Weinland.

Continued on page "Special Data" after page "August 31"

213th Day—152 days to follow

	Clear
	Cloudy
	Rain
	Snow

This is the last day of summer school for me, thank goodness. Our overnite hike is going to be Monday.



Saturday, August 2, 1941

214th Day—151 days to follow

	Clear
	Cloudy
	Rain
	Snow

There are several places where we might go on our hike: Troop 8's cabin, 7 miles; High Mill lakes, 9 miles; Lake o' Springs, 7 miles. Otter, Lightning Deer and Pitamakan visited Big Rock woods today looking for Indian burials. We found a piece of chipped flint, we think. We also visited the clee in the thicket. It was just as we left it April 8, 1941. Of course I have visited it since then.

Sunday, August 3, 1941

215th Day—150 days to follow

	Clear
	Cloudy
	Rain
	Snow

I went to Sunday School this morning. Raymond Janson and Raymond Wilkof left for Scout camp this noon. Tomorrow is the day for the hike. We are going to Troop 8's cabin east of North Industry.

Sweet Mimic
or
Annis

Monday, August 4, 1941

216th Day—149 days to follow

X	Clear
	Cloudy
	Rain
	Snow

The tefs of the re (except Raymond Wilkof who is in Scout Camp) which include Little Beaver, Otter, and Pitamaken (also Sid's cousin who is not a member of the re) went on an overnite bicycle hike to a place ENE of North Industry. We were going to a cabin which Bevier Bell had said belonged to Troop 8. When we arrived some people nearby said the cabin was theirs but that there was another cabin about a mile back. We portaged back in two trips. Little Beaver and I picked berries and had berry stew for dinner. (we brought sugar.) I left for home since I had papers to do. The others were to find a spring and to find where the little stream at the front of the cabin met the road so when I came back I wouldn't have the round-about trip. When I did came back the Seneca Indian dinner was ready

(Total of 23 miles.)

Continued on Aug. 5.

Tuesday, August 5, 1941

217th Day—148 days to follow

August 4, 1941

X	Clear
	Cloudy
	Rain
	Snow

to be served. This was our supper. The gorge which the stream cut was 100 feet deep in some places. After supper, Sid's cousin, and Otter, and I went on an exploration hike. I made a cot from two poles and a blanket. The others slept on the floor.

August 5, 1941

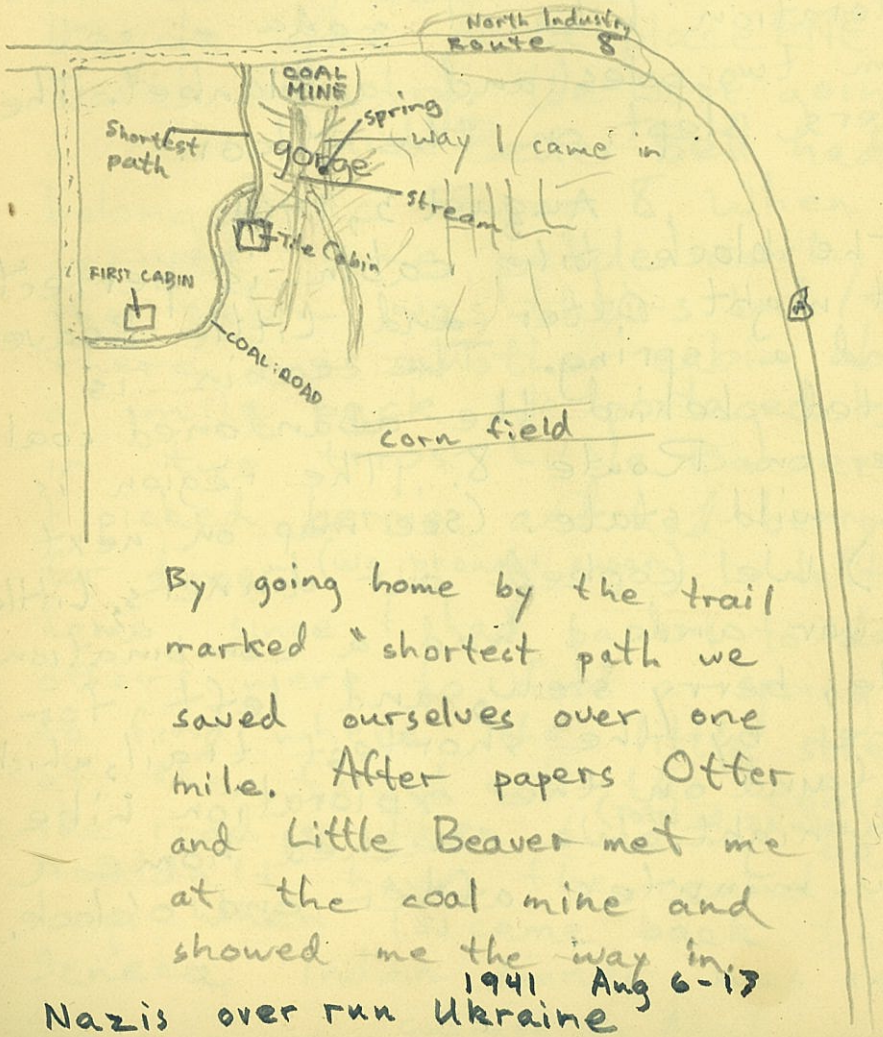
The block tile cabin is perfect. Last night Otter and Little Beaver found a spring. The cabin is located behind the abandoned coal mine on Route 8. The region is in a wild state. (see map on next page) We cooked our dinners, Little Beaver and I had a combination apple, berry stew, and left for home by the shortest trail, which we found on the exploration hike last night. We reached home a few minutes after one o'clock.

Wednesday, August 6, 1941

218th Day—147 days to follow

	Clear
	Cloudy
	Rain
	Snow

Our bicycle hike was a success. We hope to go on some others this summer.



By going home by the trail marked "shortest path we saved ourselves over one mile. After papers Otter and Little Beaver met me at the coal mine and showed me the way in.

1941 Aug 6-17
Nazis over run Ukraine

Thursday, August 7, 1941

219th Day—146 days to follow

	Clear
	Cloudy
	Rain
	Snow

While Lightning Deer is in Scout Camp I have been carrying papers by myself. I'm going to camp next week.

* * *

August 4, 1941

We arrived in camp about 10:30 A.M., tired, disgusted, and exceedingly hot. We didn't mind the nine miles over good roads, but dragging heavy bicycles and seemingly heavier packs cross country - over hills, through the thickets, and finally across a stream - takes something out of a person.

The yellow block tile cabin is situated right in the heart of a quaking aspen grove, and no one regrets our last back-breaking mile. To the front of the cabin and down a

→

220th Day—145 days to follow

	Clear
	Cloudy
	Rain
	Snow

Russell and I made $1.00 delivering bills for Wilkofs today since the two Raymond's are at Scout Camp. Today is Mother's birthday. I gave her silk hose.

* * * *

sloping bank a tiny stream rushes unconcernedly through its rocky bed. Small birds are adding their twitters and snatches of song to the gentle murmer of the aspens and the splashing noises of the brook. On one side of the cabin an outdoor fireplace — just suited for roasting potatoes, corn, and eggs — is located. Behind the cabin are woods, hills, and thickets, more woods, more hills, and many more thickets.

Following our lunch, which consisted of blackberries collected in the

→

221st Day—144 days to follow

	Clear
	Cloudy
	Rain
	Snow

Lightning Deer came back from Scout Camp. He passed the Metal Craft Merit Badge. This was his second year.

* * * *

vicinity, we started on an exploration hike to aquaint ourselves with the immediate neighborhood. By following the stream bed we are greeted with a sight we shall never forget. The little stream has managed to cut solid rock and the sheer walls of the cliff frown down on us from a hundred feet and more.

Sunday, August 10, 1941

222nd Day—143 days to follow

	Clear
	Cloudy
	Rain
	Snow

Bevier and I left for camp today. We are with Troop 17 because our troops went on different periods. Tonight we went on a hike to Pioneer Point and Starvation Point.

Monday, August 11, 1941

223rd Day—142 days to follow

	Clear
	Cloudy
	Rain
	Snow

Bevier and I are going to try for the Pioneering and Camping merit badges. We started our bridge for Pioneering. I am sleeping in the Johnny Appleseed Adirondack in the Pioneer Unit. We went on a hike past Buzzard's Roost tonight.

Tuesday, August 12, 1941

224th Day—141 days to follow

	Clear
	Cloudy
	Rain
	Snow

We worked all day on the bridge. Our food is good. The bridge is located below the old Wolf village. We are dragging the timber, quaking aspens, from a grove near Pettits new house! (over half a mile.) We hope to finish the bridge tomorrow. I saw dad today. He was on his way to the southern part of the state for a few days.

Wednesday, August 13, 1941

225th Day—140 days to follow

	Clear
	Cloudy
	Rain
	Snow

We finally finished the bridge today. We gave up the idea of trying to pass the Camping Merit Badge. Tonight was visitors night. Of course I had no visiters.

Thursday, August 14, 1941

226th Day—139 days to follow

	Clear
	Cloudy
	Rain
	Snow

Bevier and I are going to pass First Aid to Animals instead of Camping. We had a manhunt tonight for a lost boy. The entire camp spread out in a long line. Of course it was a fake. Cecil Morehead told the story of the Catacombs of Rome tonight!

Friday, August 15, 1941

227th Day—138 days to follow

	Clear
	Cloudy
X	Rain
	Snow

We passed requirements 1, 3, and 4 of the Pioneering Merit Badge and we passed First Aid to Animals. It rained most of the day. Tonight I received my third year camp honors. It is made from real Indian pipestone.

1½ times actual size

Saturday, August 16, 1941

228th Day—137 days to follow

	Clear
	Cloudy
	Rain
	Snow

I reached home at 2:30 P.M. this after noon. My bike has had its face lifted. Raymond painted and re-modeled it while I was gone.

Sunday, August 17, 1941

229th Day—136 days to follow

	Clear
	Cloudy
	Rain
	Snow

I went to Sunday School this morning. Raymond and I carried papers early this morning.

Monday, August 18, 1941

230th Day—135 days to follow

	Clear
	Cloudy
	Rain
	Snow

Tonite was the night for Scout meeting but I forgot about it. I worked on the Re's Guide Book today which goes into effect next Monday.

Tuesday, August 19, 1941

231st Day—134 days to follow

	Clear
	Cloudy
	Rain
	Snow

Tonite four members of the re, Raymond Wilkof, Pitamakeen, Ug Otter, and Lightning Deer, went on a weiner and marshmallow roast. We had planned on having it at the Clee in the thicket but someone has been there and has fixed the fireplace, has put a high fence around it, and has brought two long poles there.

Actually they have fixed it up but it irks us that someone has finally found our favorite hidden clee which I found on April 6 1941 (I think this is the correct date) while chasing a towhee in a dense thicket. (see also pages April 8. and August 2, 1941)

We finally had our roast on the western hill of the "Twin Hills."

Wednesday, August 20, 1941

232nd Day—133 days to follow

X	Clear
	Cloudy
	Rain
	Snow

Today Lightning Deer started his leanto to finish his requirements for tef. He will be the last rill to become a tef under the old requirements. Pitamaken and Otter are helping to make the leanto because it is going to be more or less permanent for winter. We finished a lot of the framework. Our two main poles we aquired at the Clee in the Thicket. We saw them yesterday. The eef + ug, and Lightning Deer slept out.

Sinopah has passed several tests today for a rill. Little Beaver is acting as examiner. Tonite those mentioned had a marshmallow roast.

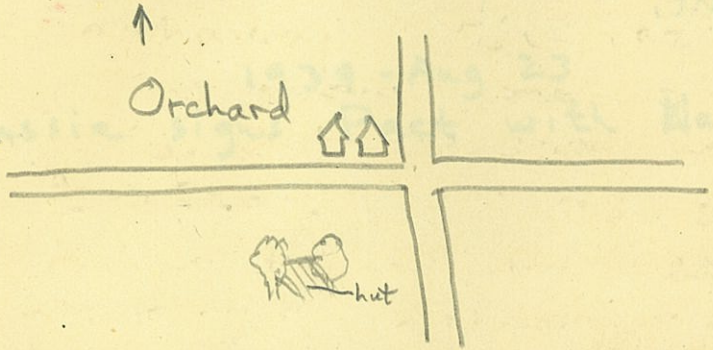
Carpet will cover the framework. Sod will be placed on top.

Thursday, August 21, 1941

233rd Day—132 days to follow

	Clear
X	Cloudy
	Rain
	Snow

The framework of the hut was finished today. It is located on a field on the corner of 18th + Myrtal across from the orchard.



Sinopah and Little Beaver and Pitamaken are making an identical hut facing the other one leaving a space for a small fireplace between.

We secured poles today but started no construction.

Otter, Lightning Deer, Little Beaver, Sinopah and Pitamaken had a marshmallow roast.

Sinopah and Little Beaver slept in the hut tonite as we did yesterday.

Friday, August 22, 1941

234th Day—131 days to follow

	Clear
X	Cloudy
	Rain
	Snow

I delivered bills this morning. We could not work on the hut today as we all had too much work. Raymond's tef ceremony will be held Monday night.

Saturday, August 23, 1941

235th Day—130 days to follow

	Clear
	Cloudy
	Rain
	Snow

I collected on the paper route this morning. Nothing more has been done on the second hut yet.

1939 - Aug 23
Russia signs Pact with Nazis

Sunday, August 24, 1941

236th Day—129 days to follow

	Clear
	Cloudy
	Rain
	Snow

I went to Sunday School this morning. Otter and I are planning the tef ceremony, which will be held tomorrow night.

Monday, August 25, 1941

237th Day—128 days to follow

	Clear
	Cloudy
X	Rain
	Snow

Tonite Lightning Deer and I didn't go to Scout meeting. Instead Lightning Deer became a tef. The ceremony was held in full costume at the Clee in the Thicket. Those tefs present were Little Beaver, Otter and Pitamaken. Lightning Deer wore the headdress back. After the ceremony, which lasted untill 11:20 P.M., Otter, Lightning Deer, and Pitamaken slept out at the hut, which we built.

1941

Russians invade Iran

British invade Iran

Tuesday, August 26, 1941

238th Day—127 days to follow

	Clear
	Cloudy
	Rain
	Snow

This summer I took a walk in the orchard. Below are a list of the plants I saw.

PLANTS

Joe-pye-weed
Meadow grass
Milk weed
Broad leaf plantain
English plantain
Cinquefoil
Yarrow
Wild strawberry
Timothy
Hollyhock
Black berry
Black raspberry
Ragweed
Butter and Eggs
Queen Ann's Lace
Wild grape
Clover
Bed straw

TREES

Red oak
Sumac
Peach
Apple
Quince
Cherry
Black wild cherry
Pear

I also saw a catbird.

Wednesday, August 27, 1941

239th Day—126 days to follow

	Clear
	Cloudy
	Rain
	Snow

One week from today school starts. I think I dread going back more this year than any year yet.

Thursday, August 28, 1941

240th Day—125 days to follow

	Clear
	Cloudy
	Rain
	Snow

I came across a list of plants and trees I passed at Scout Camp.

R = roadside
W = woods
Me = meadow
M = marsh

Baby Bed Straw	R
Giant Bed Straw	R
Wild Ginger	W
Violet	W
Joe-pye-weed	M
Jewel weed	M
Meadow Grass	Mead
Milk weed	Mead
Bluets	W
Skunk cabbage	M
Spearmint	W
Peppermint	W
Rhubarb	Me
Clover	Me
Golden rod	Me
Daisy fleabane	Me
Oxeye Daisy	Me
Cinquefoil	Me
Dandelion	R
English plantain	R
Broad Leaf plantain	R
True Solomon's Seal	W
False Solomon's Seal	W
Meadow Rue	Me
Wild Grape	W
Queen Ann's Lace	Me
10 petal sunflower	Me
Blackberry	Me
Blueberry	Me
Service Berry	Me
Indian pipe	W
Poison Ivy	W
Maiden's Hair Fern	W
May apple	W
Jack-in-the pulpit	W
Wild Strawberry	Me

TREES

Lombardi poplar
Tulip poplar
Flowering Dogwood
Quaking Aspen
Sumac
Silver Maple
Hard Maple

Friday, August 29, 1941

241st Day—124 days to follow

	Clear
	Cloudy
	Rain
	Snow

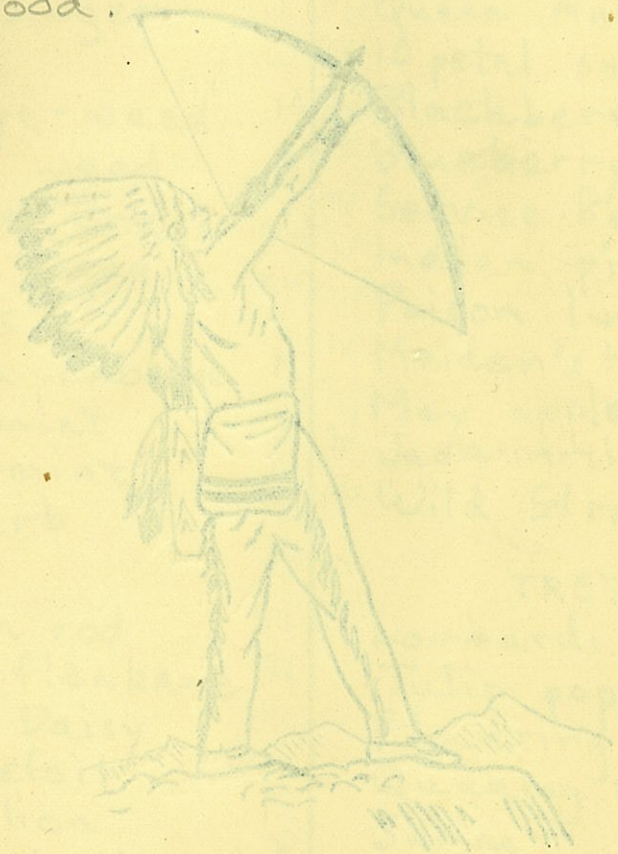
Summer is about over. There must now turn to winter activities.

Saturday, August 30, 1941

242nd Day—123 days to follow

	Clear
	Cloudy
	Rain
	Snow

Today I collected as usual on the paper route. Today being the last week in the month, collections weren't so good.



Sunday, August 31, 1941

243rd Day—122 days to follow

	Clear
	Cloudy
	Rain
	Snow

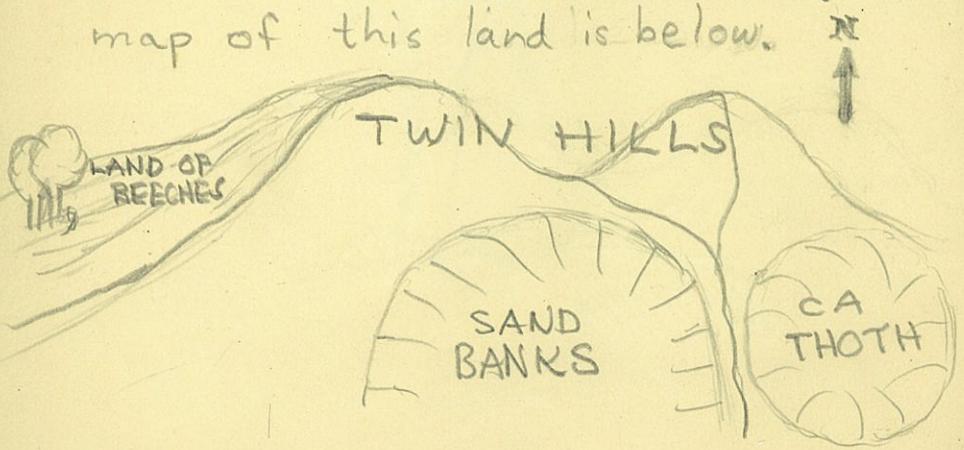
I carried papers and went to Sunday School this morning. Sinopah, Little Beaver, Lightning Deer, and Pitamaken went on a hike to Big Rock Woods. Sinopah passed tests for Rill. He has only Indian Lore, Indian Sign Language, and Handicraft to pass for a rill.

Continued from pg. "Special Data" before pg. "Aug. 1"

Naturally enough this was the most ceremonious meeting up until now. It was held in the Ca Thoth. I led them to the place while the rest were getting it in order. The ceremony was much the same as the one preceding it. Our re nown had eight members.

* * * * * *

We now had several meetings, unimportant compared to these. On one of these hikes we discovered the "Land of the Beeches". A map of this land is below.



Continued on pg. "Special Data" after pg. "Sept 30"

244th Day—121 days to follow

	Clear
	Cloudy
	Rain
	Snow

Today is Labor Day. The County Fair had a record crowd according to the paper. I don't know whether I'll go tomorrow or not.

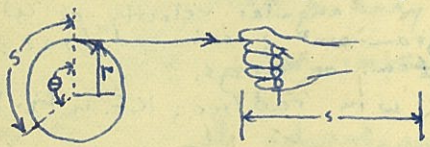
Sept. 1941
Canadians raid Spitzbergen Is. 750 miles north Narvic, Norway.

PHYSICS Work and Energy

X. Energy is the ability to do work. Work is the product of force times distance.

When the force is in the same direction that the body moves: $W = Fs$.

When it is an oblique force: $W = Fs\cos\theta$



$W = T\theta$
$(T = Fr)$

The amount of energy which a body possesses is equal to the amount of work that it can do.

Tuesday, September 2, 1941

245th Day—120 days to follow

	Clear
	Cloudy
	Rain
	Snow

Roy Schwitzgebel went to the fair. There were no races and I didn't like it very well. We went in the morning.

Potential energy is energy of position.
Kinetic energy is energy of motion.

Energy can neither be created nor destroyed.

When mech. work is done it can be accounted for by an increase in either kind of energy or the production of heat as result of friction.

$$K.E. = \frac{1}{2}\frac{MV^2}{g} \quad \text{(gravitational units)}$$

[$K.E. = \frac{1}{2}MV^2$ if M in grams; v in cm/sec; K.E. in ergs]

[10^7 ergs = 1 joule]

$$K.E. = \frac{I\omega^2}{2}$$

K.E. of rotating body having moment of inertia I & an angular velocity of ω

when I is in gram-cm²; ω in rad./sec.: K.E. is in dyne-cm. or ergs.

when I is in lb-ft², ω in rad/sec.; K.E. in ft-lb.

Potential energy is the product of the vertical distance raised times the weight of the body.

$$P.E. = W\,h$$

ft-lb lb. • ft

Wednesday, September 3, 1941

246th Day—119 days to follow

	Clear
	Cloudy
	Rain
	Snow

School started today! This year (10th) I am taking Art II, Plane Geometry, Biology, English II, Latin II, Band, and Gym.

The energy used to oppose friction is: $E = Rs$
E = energy; R = resisting force; s = distance

The time rate of doing work is power.

When 1 joule of work is done per sec. the power = 1 watt.

$$P = \frac{W}{t}$$ P = power; w = work; t = time

1 horse power (hp.) = 550 ft lb./sec.

The efficiency of a machine is the ratio of its output to its input.

$$\%\ \text{efficiency} = \frac{\text{energy output}}{\text{energy input}} \times 100 \quad \text{OR}$$

$$\%\ \text{efficiency} = \frac{\text{power output}}{\text{power input}} \times 100.$$

when a body in moving at constant linear velocity:

$P = Fv$ or rotating at constant angular speed $P = T\omega$

Mechanical advantage varies with the machine.

$$A.M.A. = \frac{\text{work}}{\text{force}}$$

Inclined plane: $T.M.A. = \frac{\text{slope}}{\text{vert. hgt.}}$

pulley: T.M.A = no. strands sup. weight.

Thursday, September 4, 1941

247th Day—118 days to follow

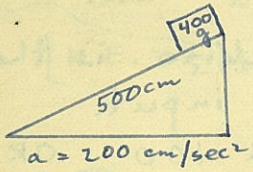
	Clear
	Cloudy
	Rain
	Snow

Of all my subjects this year Biology is the only one that is going to interest me, although Plane Geometry is going to be a cinch, I think.

1. A mass of 400 grams is sliding down a slope of 500 cm. with an acceleration of 200 cm/sec². What is its kinetic energy at the bottom.

$$K.E. = \frac{1}{2} m v^2$$

dyne-cm. $= \frac{1}{2}$ gm. · cm/sec.



$$V^2 = 2as$$
$$V^2 = 400 \cdot 500$$
$$V^2 = 2^5$$
$$K.E. = \frac{1}{\cancel{2}} \cdot \overset{200}{\cancel{400}} \cdot 2^5$$
$$K.E. = 4^7 \text{ dyne-cm. (ergs)}$$

$4^7 \div 10^7 =$ .4 joules (1 joule $= 10^7$ ergs)

Friday, September 5, 1941

248th Day—117 days to follow

	Clear
	Cloudy
	Rain
	Snow

Tonight after supper Raymond took Sid Kaplan, Yale Hills, Art Hendricks and I to see Cab Calloway at the Palace. They played the Conga + Rhumba, etc. I'm not much interested.

Saturday, September 6, 1941

249th Day—116 days to follow

	Clear
X	Cloudy
	Rain
	Snow

I collected on the paper route right after I got up. Then I went to Band Practice at Lehman.

PHYSICS Moduli of elasticity

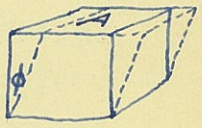
XI. Stress is directly proportional to strain.

Stress = k Strain $\therefore k = \frac{\text{stress}}{\text{strain}}$

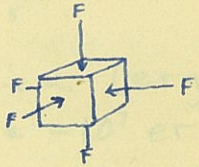
k is the modulus of elasticity.

Y = Young's modulus $= \frac{F/A}{\Delta l / l}$

G = Shear modulus $= \frac{F/A}{\phi}$



B = Bulk modulus $= \frac{P}{\Delta V / V}$



(Δ stands for "change in")

F = force ; A = area resisting the force;

P = hydrostatic pressure ; l = length;

V = volume.

Sunday, September 7, 1941

250th Day—115 days to follow

	Clear
	Cloudy
	Rain
	Snow

I went to Sunday School this morning after I carried papers. I rather like getting up early on Sunday morning to carry papers. It's always nice and cool, etc.

Monday, September 8, 1941

251st Day—114 days to follow

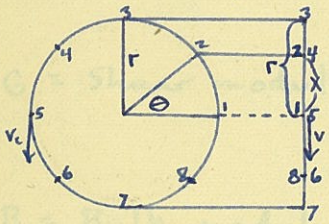
	Clear
	Cloudy
	Rain
	Snow

Melvin Moneriet, scout-master, was not at the meeting tonight. We talked about this and that.

PHYSICS Harmonic Motion

XII. Harmonic motion is the type produced when an elastic body is displaced and released.

Harmonic motion is the PROJECTION of uniform circular motion on a line in the plane of the circle.



(The H.M. is projected into a reference circle, when solving problems

Frequency = rev./sec. } reciprocals
Period = sec./rev. }

IN THE LINE

amplitude = r
displacement = x (from zero)
velocity = V
acceleration = a

IN THE CIRCLE

radius of circle = r
angle = $\theta = \omega t = \theta$
velocity = V_c
acceleration = A_c

T = period
t = time to sweep thru $\angle\theta$

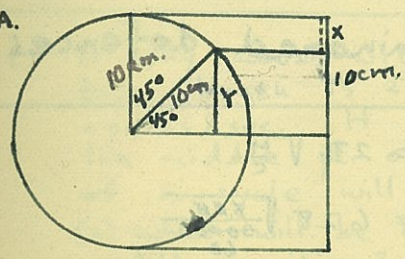
Tuesday, September 9, 1941

252nd Day—113 days to follow

	Clear
	Cloudy
	Rain
	Snow

The small pictures on the next following pages were taken from a sketch which I had. The one above is one of the earliest types.

A.



A particle moves with harmonic motion in a vertical line between two points 20 cm. apart. How far does it move during the first 1/8 period after passing through the top point of its path?

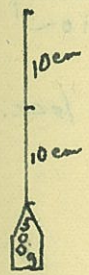
$\sin 45° = \frac{Y}{10}$

$.707 = Y/10$

$Y = 7.07$

10.00
7.07
2.93 cm.

B.



What is the maximum value of the velocity of a spring vibrating in S.H.M. with a 500-gram mass attached, when the force constant of the spring is 30,000 dynes/cm. and the amplitude 10 cm? What is the value at equilibrium position?

Force constant equals 30,000 dynes/cm.

$c = \frac{\text{force in dynes}}{\text{displacement in cm.}}$

$T = 2\pi\sqrt{\frac{m}{c}}$ $\quad n = \frac{1}{T}$

$V = 2\pi n\sqrt{r^2 - x^2}$

$a = 4\pi^2 n^2 x$

T = time in sec.
m = mass in grams
c = dynes/cm.

n is in sec; V in cm/sec; r in cm; x in cm; a in cm/s²

253rd Day—112 days to follow

	Clear
	Cloudy
	Rain
	Snow

Savage tribes today fasten handles to their stone axes in the ways shown here.

1941

Nazis reach Leningrad defences

$c = 30{,}000$ dynes/cm.

$c = 30{,}000$

$T = 2\pi\sqrt{\frac{M}{c}}$

$T = 6.28\sqrt{\frac{500}{\cancel{30000}\,60}}$

$T = 6.28 \cdot \frac{1}{7.746}$

$T = .811$ sec.

$n = \frac{1}{.811}$

$V = 2\pi n\sqrt{r^2 - x^2}$

$V = 6.28 \cdot \frac{1}{.811}\sqrt{100}$

$V = 7.74 \cdot 10$

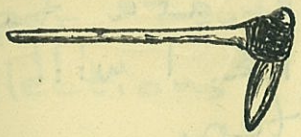
$V = 77.47$ cm/sec.

The maximum velocity is at the position of equilibrium.

$V = 77.47$ cm/sec.

254th Day—111 days to follow

	Clear
	Cloudy
	Rain
	Snow



I believe the one pictured here is commonly called an adz, a tool the Indians employed in making their dugout canoes.

c. A body moves with S.H.M. over a path whose total length is 20 cm making 15 complete cycles/sec. If one starts to count time from the middle pt. of its path (1) what fraction of a cycle will it have completed in $\frac{1}{90}$ sec? (2) what will be its displacement from the middle position? (3) what is its velocity? (4) what is its acceleration?

Friday, September 12, 1941

255th Day—110 days to follow

	Clear
	Cloudy
	Rain
	Snow

Those little sketches that I made are fairly easy to do. I think I will use the idea more often.

PHYSICS Momentum

XIII. A ball weighing 20 kg., moving with a velocity of 500 cm/sec, strikes a second ball weighing 100 kg. which is at rest. If the first ball rebounds with a velocity of 100 cm/sec, what will be the velocity of the second? What is the impulse given by the first ball? If a piece of wax is placed between the balls to make the impact inelastic, what will be the final velocity?

Saturday, September 13, 1941

256th Day—109 days to follow

	Clear
	Cloudy
	Rain
	Snow

I collected on the paper route today. The collections weren't so bad.

Sunday, September 14, 1941

257th Day—108 days to follow

	Clear
	Cloudy
	Rain
	Snow

I went to Sunday School this morning. When I was carrying papers this morning on the western side of the mesa I saw several flickers.

PHYSICS Gyroscope

XIV

Monday, September 15, 1941

258th Day—107 days to follow

	Clear
	Cloudy
	Rain
	Snow

At Scout meeting tonite there was quite a riot. It all started because I had a paper someone wanted. Three guys hid my shoes but in the end, I had one of Bill Barkers shoes, one of Ted Davidson's shoes, and Ray Longenecker's bike... I got my shoes back.

259th Day—106 days to follow

	Clear
	Cloudy
	Rain
	Snow

The band marched in a Savings Stamps & Bonds parade tonite. I think it was the largest parade ever held in Canton.

PHYSICS Liquids at Rest

XV A concrete dam is 100 ft. long and 60 ft. high, and its cross-section is a right triangle of base 48 ft. If the water fills the dam to the top and the density of water is 62.4 lb/ft³ and the density of concrete is 150 lb/ft³ find the following:

(1) The water pressure at the center of area in lbs/ft²

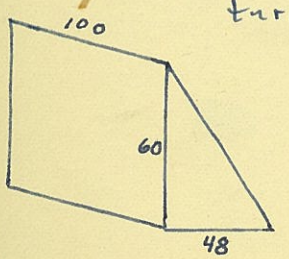
(2) The total force of the water on the dam in pounds

(3) The weight of the dam in pounds

(4) The torque due to the wght. of the dam in keeping it from being overturned.

(5) The torque due to the force of the water tending to overturn it.

(6) The factor of safety against overturning the dam.



260th Day—105 days to follow

	Clear
	Cloudy
	Rain
	Snow

Today is Constitution Day. A speaker spoke at Lehman but I didn't think he was very interesting.

Thursday, September 18, 1941

261st Day—104 days to follow

Northern Lights

	Clear
	Cloudy
	Rain
	Snow

I guess Sunday is the first day of spring. It's been pretty dry for the last ten days although it has been fairly cool. Tonite the greatest display of Northern Lights ever reported to have been seen in this section of the country, produced a spectacle that I will never forget. The lights were silver mostly, although in some places turning to green and in others to a red. The lights were jagged changing slowly and sometimes with speed into various forms. It seemed to be the clearest almost directly overhead, changing gradually and merging into the background. The show lasted from about 7:30 to 9:30. I stood and watched it for almost one hour.

Friday, September 19, 1941

262nd Day—103 days to follow

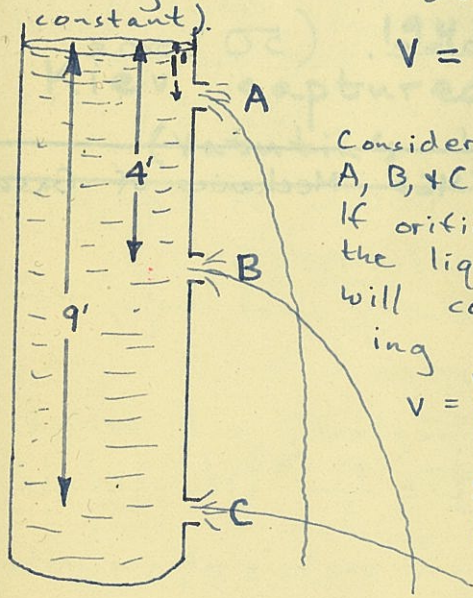
	Clear
	Cloudy
	Rain
	Snow

No marching tonite. I carried papers instead. The band marched at the McKinley, Timken game. Timken was lousy!

PHYSICS Liquids In Motion

XVI. The velocity of an issuing stream of water is dependent only upon the height of the liquid above the orifice. (Taking the accel. due to gravity as a constant).

$$V = \sqrt{2gh}$$



Consider a tank with 3 orifices A, B, & C at different elevations. If orifice A is one foot below the liquid surface, the liquid will come through the opening with a velocity of

$$V = \sqrt{2 \times 32 \frac{ft}{sec^2} \times 1 ft} = 8 ft/sec.$$

Similarly at orifice B, 4 ft. below the surface, the velocity of efflux will be 16 ft./sec.; again at C, 9 feet below the surface, the velocity will be 24 ft/sec.

Gravity causes the streams to take the path shown in the diagram.

Saturday, September 20, 1941

263rd Day—102 days to follow

X	Clear
	Cloudy
	Rain
	Snow

I collected four dollars over my paper bill today. Dad brought the copy for more signs home. I marched at the Lehman football game tonite. Lightning Deer and Sinopah went on a bike hike to Turkeyfoot Lake. (50 some miles!)

XVII PHYSICS Mechanics of Gases

Sunday, September 21, 1941

264th Day—101 days to follow

X	Clear
	Cloudy
	Rain
	Snow

I carried papers this morning and made signs most of the rest of the day. Robert left for Ohio State. Rheda will leave Tuesday. I saw the flickers (Sept. 14) again this morning.

1941
Kiev captured by Nazis
(Vatutin's home)

Monday, September 22, 1941

265th Day—100 days to follow

X	Clear
	Cloudy
	Rain
	Snow

At Scout meeting tonite I played football. Mel was not there. There are rumors that he is going to resign.

SOUND

WAVE MOTION

In wave motion the velocity of the wave in the medium is constant but the velocity of the particles of the medium, in which the wave is moving, vary in Simple Harmonic Motion about a point of equilibrium.

Equations:

Relation between velocity, wave length, frequency:

$$V = nl$$

Relation between frequency and period:

$$\frac{1}{n} = \frac{P}{1} \; ; \; \frac{1}{P} = \frac{n}{1} \quad \text{(reciprocals)}$$

Displacement of any particle at any instant:

$$y = r \sin 2\pi nt \quad \text{or}$$

$$y = r \sin \omega t$$

Tuesday, September 23, 1941

266th Day—99 days to follow

X	Clear
	Cloudy
	Rain
	Snow

I marched tonight after school. Rheda left for Ohio State this morning with Dad.

Velocity of distortional wave along a rope:

$$V = \sqrt{\frac{T}{m_1}}$$

V in cm./sec.
T in dynes
m_1 in grams/cm.

or

$$V = \sqrt{\frac{Tg}{w_1}}$$

V in ft/sec; T in lb.; accel to gravity; w_1 in lb/ft.

$T = M_1 V^2$

$f = \frac{1}{2l'}\sqrt{\frac{Tg}{m_1}}$

l' = segment

Mult. by 980 or 32 if T given in grams

Velocity of a compressional wave motion in any suitable elastic medium:

$$V = \sqrt{\frac{M}{\rho}}$$

M is Modulus of elasticity
ρ is density of medium
M in dynes/cm^2 ; ρ in gram/cm^3
V in cm/sec.

Velocity of sound in Gases

$$V = \sqrt{\frac{S\,\text{Pressure}}{\rho}}$$

V in M/sec
S is specific heat ratio
P is absolute pressure in dynes
ρ is density in gm/cm^3

DOPPLER'S PRINCIPLE

Source moving

$$f' = f\left(\frac{V}{V \pm S}\right)$$

Observer moving

$$f' = f\left(\frac{V \pm O}{V}\right)$$

Source and Observer moving

$$f' = f\left(\frac{V \pm O}{V \mp S}\right)$$

V = vel. of wave prop.
S = vel. of source
O = vel. of observer
f = frequency of source
f' = observed frequency

Wednesday, September 24, 1941

267th Day—98 days to follow

X	Clear
	Cloudy
	Rain
	Snow

More marching. Russell, Raymond, Earl Franz, David Graves, Bill Falauber, and the two Consuls are building an underground hut in Consuls backyard.

A. What is the distance in feet of a vessel from a lighthouse when 20 sec. elapse between the reception of signals sent simultaneously through air and water? V in H_2O = 4800 ft. sec.; T. H_2O = 10°C.

*** The speed of sound in dry air at zero degrees C. is 331.6 m/sec. or 1087 feet/sec. The speed increases 60 cm./sec. or 2 ft./sec. for every degree C. rise in temp.

$$V = 1087 \pm 2\Delta t$$

Speed of sound in water is approx. 4720 feet/sec.

$$V = 4720 + 12\Delta t \text{ ft./sec.}$$

let t = time to travel in H_2O

$$S = Vt$$
$$S = 1107(t+20)$$
$$4800t = 1107t + 20 \cdot 1107$$
$$3693t = 22140$$
$$t = 6.15 \text{ sec.}$$
$$S = 4800 \cdot 6.15$$
$$S = 29{,}500 \text{ ft.}$$

Thursday, September 25, 1941

268th Day—97 days to follow

	Clear
X	Cloudy
	Rain
	Snow

All morning and most of the afternoon we had a wind storm. Not rain, just wind. It blew down several big limbs nearby and a cherry tree in the orchard.

B. What is the speed of sound in hydrogen at 20°C the density of which at 0°C and 76 cm. is 0.0896 gm./liter, when s = 1.403?

$$V = \sqrt{\frac{s\,P}{\rho}} \qquad \frac{T_1}{T_2} = \frac{\rho_2}{\rho_1} \qquad \rho_2 = \frac{273 \cdot .0000896}{293}$$

$$\frac{T_1}{T_2} = \frac{P_1}{P_2} \qquad P_2 = \frac{293 \cdot 76 \cdot 13.6 \cdot 980}{273}$$

$$V = \sqrt{\frac{1.403 \cdot 293 \cdot 76 \cdot 13.6 \cdot 980 \cdot 293}{293 \cdot 273 \cdot .0000896}} = \underline{1300 \text{ m/sec.}}$$

C. What is the tension in pounds on a piano wire of mass 0.4 oz./ft. when a segment 8 in. long, vibrates with a frequency of 256? What are the frequencies of the 1st two overtones?

$$f = \frac{1}{2l}\sqrt{\frac{T}{m_1}} \quad \text{or} \quad f^2 = \frac{1}{4l^2} \cdot \frac{T}{M_1}$$

$$256 = \frac{9}{4}\sqrt{\frac{T}{\frac{4}{10} \cdot \frac{1}{16}}}$$

512 vib/sec. (1st overtone.

768 vib/sec. (2nd over.

$$256^2 = \frac{9}{16} \cdot \frac{T \cdot 32}{.025}$$
$$256^2 = \frac{288T}{.4}$$
$$\frac{.4 \cdot 256^2}{288} = T$$
$$T = \underline{90.4 \text{ lb.}}$$

Friday, September 26, 1941

269th Day—96 days to follow

	Clear
	Cloudy
	Rain
	Snow

Right after school, I went to the dentist. In three years, since I had been there last, I needed just two small fillings.

4. A steel wire 50 cm. long, having a total mass of 0.1 gm. is stretched with a force of 12,000,000 dynes. The wire is struck a sudden blow near one end. Compute the velocity of the resulting transverse wave in the wire.

Speed of sound in solids:

(CM) $V = \sqrt{\frac{Y}{\rho}}$ (dynes/cm²) (grams/cm³)

Saturday, September 27, 1941

270th Day—95 days to follow

	Clear
X	Cloudy
	Rain
	Snow

Lehman played Akron Buchtel tonite. We beat them 51 to 0. The band looked pretty classy. We did the Conga. I inspected the underground hut (Sept. 24). It is well made but it is much to small for me to get in or out easily.

Sunday, September 28, 1941

271st Day—94 days to follow

	Clear
X	Cloudy
	Rain
	Snow

I carried papers early this morning. Then went to Sunday School. I made three small signs this afternoon.

Monday, September 29, 1941

272nd Day—93 days to follow

	Clear
	Cloudy
	Rain
	Snow

We have a new scoutmaster, Mr. Cell. Mel resigned after he got married. I don't know if I'm going to like him or not.

Tuesday, September 30, 1941

273rd Day—92 days to follow

	Clear
X	Cloudy
	Rain
	Snow

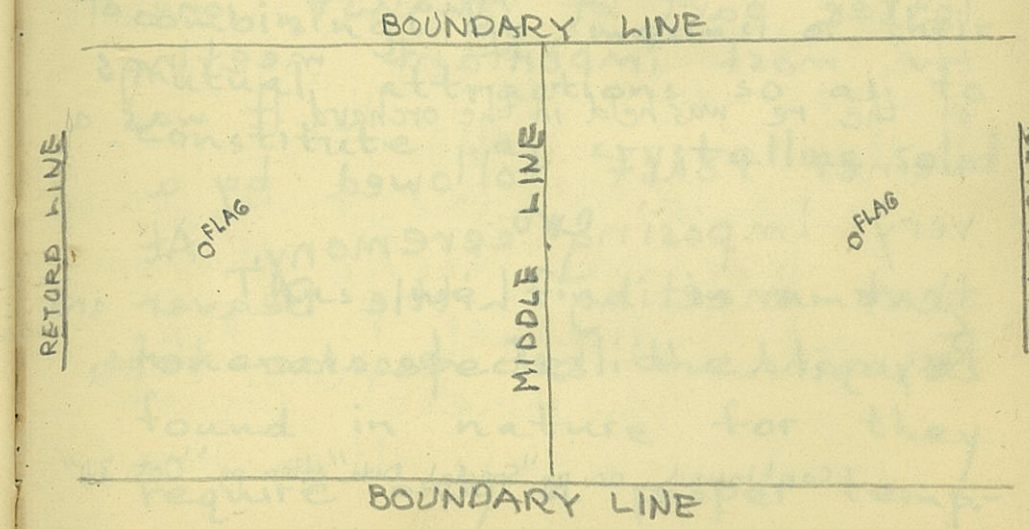
We started the study and use of the microscope today in biology. I played football after Band Practice.

Special Data

Continued from pg. "Special Data" before pg. "Sept. 1"

At this time we invented a game. It was composed of two sides. The idea was to capture the other team's flag.* Small cushions filled with cloth were given to each side. If you were hit with one of these when you were past your half of the field, you must immediately drop all the cushions you are carrying. You are automatically out of the game until you run back to a line 10 yards behind your flag. A diagram of a playing field is shown below.

*About 12 cushions were used.



It was approximately August 1, 1940. Little Beaver determined to become a tef. He and I decided to build a hut so that he could pass the leanto test for tef. We found a suitable location in the orchard. It was made almost entirely from trees. A frame work of poles was first made. It was then thatched with green branches and old tins were spread on the top for a roof. It was a good job when completed.

A few weeks later, the latter part of August, one of the most important meetings of the re was held in the orchard. It was a weiner roast followed by a very imposing ceremony. At that meeting Little Beaver and Raymond Wilkof became tefs.

continued on pg. "Special Data" after pg "Oct. 31."

274th Day—91 days to follow

X	Clear
	Cloudy
	Rain
	Snow

This evening about 8:30 Roy, Russ, Rich Spilker, and Hunter, and I went rat hunting at the Fulton Tavern. We saw about three. I got a stab at one but didn't hurt him much.

A mineral species is any natural substance (inorganic) composed of particles capable in favorable circumstances of combining by means of their mutual attractions so as to constitute a crystalline solid.

Thus we find in among mineral species the liquids found in nature for they require only a proper temp.-

→

275th Day—90 days to follow

Clear
Cloudy
Rain
Snow

It actually rained a little bit today. I worked in this diary but that's about all I did.

erature or favorable circumstances of pressure and a freedom from disturbances to enable them to assume a regular crystalline form.

Inorganic forms differ from organic forms in that "monsters" or "sports" are rare in organic species and a tendency to perfect individuals is the rule, while in inorganic forms the perfect individual is rare.

The mineral department includes all natural

276th Day—89 days to follow

Clear
Cloudy
Rain
Snow

More rain today. Our Sunday School Class is going on a hike tomorrow. The destination is supposed to be a surprise.

inorganic substances in which a tendency to crystallization can be detected.

Thus the term "Mineral Kingdom" is erroneous, strictly speaking. Inorganic Kingdom would be a better classification since minerals constitute only a small part of the third kingdom.

Some minerals are only results of decay or alteration of others minerals.

Saturday, October 4, 1941

277th Day—88 days to follow

	Clear
	Cloudy
X	Rain
	Snow

Today Lightning Deer and I went to "Twin Hickories," Troop 6's campsite near Zoar. We went with our Sunday School Class, (Mr. Miles) We went on a lumber truck. It rained much of the day but no one cared particularly. We hiked a bit going into a mine shaft on a small gauge R. R. track. The woods are nice but not real large. We arrived back home about 9:30.

Every species has its perfect state but natural conditions (like disease) result in modifications of the general type.

Sunday, October 5, 1941

278th Day—87 days to follow

	Clear
	Cloudy
X	Rain
	Snow

I went to Sunday School this morning. This was my last day in Mr. Miles' Class. I am now in Mr. Spitzer's Class.

Monday, October 6, 1941

279th Day—86 days to follow

	Clear
	Cloudy
X	Rain
	Snow

Mr. Cell, our new Scoutmaster, has resigned. Something has turned up in respect to his business which makes him unable to attend meetings on Monday.

Tuesday, October 7, 1941

280th Day—85 days to follow

	Clear
	Cloudy
X	Rain
	Snow

Many of the next pages will be spent summarizing an interesting book, "Walks and Talks in the Geological Field," written by Alexander Winchell, LL.D., and published in 1894. These pages will be marked by an asterisk (*) placed in the margin opposite the weather report.

281st Day—84 days to follow

Clear
Cloudy
Rain
Snow

* 1

I. The loose materials covering the surface of the northern states is called "Drift." Bowlders are a part of this drift. These loose sands and gravels are arranged in regular courses, although the semblance is greatly interrupted; thinning out in one direction, losing its upper and lower boundaries, merging into a general bed of sand, a layer of gravel on a different inclination from the last. These layers or beds are called "Strata." The semi-stratified Drift passes down into a sheet of drift quite unstratified consisting of blue clay and a large quantity of imbedded bowlders rounded like those at the surface — made, apparently by the same agency and trans-

282nd Day—83 days to follow

Clear
Cloudy
Rain
Snow

* 2

ported in the same company. This is known as the "Bowlder Clay or Till." In some cases, however the semi-stratified Drift rests directly on the bed-rock. Perhaps the Bowlder Clay was washed off before the semi-stratified Drift was laid down. In the semi-stratified Drift, water by some kind of torrential action may have been the chief agent but in the Bowlder Clay water was not. The Drift is a northern phenomenon! The southward distribution of bowlders was greater along mountain elevations. The factor which exists in altitude identically as in latitude is Temperature. When a glacier expands gravity pulls downward causing innumerable little cracks which fill with water which soon freezes. When the glacier

*3 Clear / Cloudy / Rain / Snow

next contracts it takes a slide down the mountain. So, if a whole state was covered by a glacier the ice-sheet would have a motion from higher to lower, and colder to warmer since that which was most frozen to the ground would not contract so readily. Therefore, the glacier could have moved the Bowlder Clay into place and its quick melting could have formed the semi-stratified Drift. The rounded edges of the bowlders show that some sort of friction was necessary. Could not the movement of a huge glacier explain all this? The "Ridge Road" is a sort of terrace running parallel with the waters of the Great Lakes sometimes 200 feet above the lakes or even more. These

Clear / Cloudy / Rain / Snow *4

are high water marks of the great lakes. On the south of the Great Lakes are found in the prairies of the state of Illinois deposits indicating a lake bottom, even down to shells. The water was probably hemmed in by a prolongation of the Ozark range. This huge inland lake was formed by the melting of this ice sheet and was gradually drained by "The Fathers of Waters," the Mississippi.

285th Day—80 days to follow

X	Clear
	Cloudy
	Rain
	Snow

Otter and Pitamaken went on a hike to the tree hut (see page May 30.) where we were met by Lightning Deer. While on the way we stopped at the "Land of Swinging Vines." The large grape vine which we had used to swing over a ravine was down. We named the tree hut, "Fort Standoff." We saw several little chipmunks.

286th Day—79 days to follow

	Clear
	Cloudy
	Rain
	Snow

Leader's Club met tonite at 7:30. I did not go to Scout meeting. As far as I know, we still do not have a Scout master.

Clear
Cloudy
Rain
Snow

*5

II. When rain falls on earth it seeps through the semi-stratified Drift until it comes to the impervious Bowlder Clay. Here it gradually flows lower until it comes to the surface in a form of a spring. A well is an artificial spring. The water flows on into a brooklet, to a stream, to a river, and finally to the ocean carrying with it matter. The slackened motion of the water allows the fine sediment to subside at the mouths of rivers forming a "*Delta*."

Now if all the strata which underlie the land are formed from marine sediments, the time required for their accumulation must have been enormous. Thus, the first series of sediments form the

Clear
Cloudy
Rain
Snow

*6

strata which lie deepest of all. They are called Aeozoic and the period is called the Eaozoic Aeon.

There is no watery action known sufficiently widespread except the action of the ocean to form our ordinary rock-strata. In the ocean, sediments are now settling down in sheets a thousand miles broad. The conclusion implies that wherever rocky strata exist, there the ocean's waters have stood. Rocky strata are found hundreds of feet above the level of the ocean. If the underlying strata were deposited by the ocean, then either the ocean has greatly subsided in later times, or regions which were once sea-bottom have been extensively uplifted.

289th Day—76 days to follow

	Clear
	Cloudy
	Rain
	Snow

* 7 The sediments which muddy the rivers and fill the lakelets, and make even the oceans shallower must all come from a source where they existed as a solid; massive constituents of our planet. The sediments have been brought by moving waters; we must therefore trace the waters to their source. Every river, in its search for a resting place cuts a way through the inequalities of the land carrying with it particles of mud. This is sedimentation. A river which cuts a deep gorge, forms a canyon.

Here and there the bedrocks appear on the surface. These are known as "outcrops." We perceive that one stratum passes under another and then appears on the surface at some distance away.

290th Day—75 days to follow

	Clear
	Cloudy
X	Rain
	Snow

Lehman played Wooster at Wooster tonite. We won the game 20 to 12. The band went in buses.

291st Day—74 days to follow

	Clear
	Cloudy
X	Rain
	Snow

*8

III. Who has not heard of the geysers of Yellowstone National Park, great fountains of very hot water and great clouds of steam thrown one hundred feet into the air at times.

The phenomenon of the volcano is also well known. The molten lava, which a volcano will let escape through fissures and at times over the lip, is heated to a degree of heat somewhere over 2000° F. The limited amount of matter poured forth in modern times cools near the place of escape and seldom flows to the distance of ten miles. In earlier times the molten lava issued in such quantity as to retain its liquid state for a distance of one hundred miles and to set fire to areas as broad as states.

292nd Day—73 days to follow

	Clear
	Cloudy
	Rain
	Snow

*9

The period in the earth's history which was marked with outflows of molten lava—mostly from fissures but also in building up moderate sized cones in great abundance—was called the Tertiary Age. In remote geological ages lava eruptions were of frequent occurence but still less copius than in this later age. The earth is evidently cooling. This internal heat is therefore, probably the residual heat of a cooling and once molten globe. Again, it has been contended that the internal heat results, at least in part, from crushing and friction in the earth's crust.

The solid crust formed around a cooling molten globe becomes to large for the shrunken nucleus. Relief is obtained, in part, by the development of wrinkles, as in the skin of

293rd Day—72 days to follow

	Clear
	Cloudy
	Rain
	Snow

*10

a shriveled apple, and by a process of crushing together. The earth's crust has stronger and weaker portions. It yields in spots; the strain is removed; the rocks recoil and an earthquake is produced.

With the loss of heat in the interior the nucleus contracts or gets smaller; the crust is now larger than the shrunken core; mountain ranges formed as large folds on the earth's surface are the results, such as the Adirondacks or the Appalachians. These are called "Mountains of Upheaval."

"Mountains of Relief," however, are the results of erosion on a grand scale. Examples of this type are the Catskills and the Cumberland Table Land.

Mountains composed of volcanic accumulations have already been mentioned. Some striking examples are Mount Aetna and Mount Vesuvius, Mount Ranier and Mount Hood.

294th Day—71 days to follow

	Clear
	Cloudy
	Rain
	Snow

*

Illustrating Section I of this summary is a section of land being cut away at the bottom of the twenty third street hill. About 10 feet beneath the surface of the land is a stratum of sand varying from 6 to 12 inches in height. Under this is a layer of sandstone, perhaps 1 inch in height. These alternate to the bottom of the cut, an example, I think, of semi-stratification.

295th Day—70 days to follow

	Clear
	Cloudy
	Rain
	Snow

*
11

IV. The fourth section of the book is on "the wealth of the hills"—gold, silver, coal, natural gas, and petroleum—which doesn't particularly interest me. I will therefore not attempt to summarize these chapters.

296th Day—69 days to follow

	Clear
	Cloudy
	Rain
	Snow

I didn't mention it on October 19 but Sunday morning when I delivered papers I saw starlings, a mourning dove, pigeons, sparrows, a pair of cardinals and a bluejay in the same tree, and a squirrel.

297th Day—68 days to follow

	Clear
	Cloudy
	Rain
	Snow

We had no school today because of a teachers meeting at Cleveland. Papoose Jack Williams and I hiked to Ca Thoth. It is much the same as usual.

298th Day—67 days to follow

	Clear
	Cloudy
	Rain
	Snow

I have always wanted to make a list of the members of the re. Here it is. Naturally it is up to date.

Eef

Pitamaken (Running Eagle; formerly Yellow Bird), Richard Janson

Ug

Otter (The swimmer), Sid Kaplan

Tefs

Little Beaver, Russell Janson
, Raymond Wilkof

Lightning Deer, Raymond Janson

Rills

Tees

Sinopah (Red Fox), Earl Franz
, Roy Schwitzgebel

Papoose

Little Thunder (6/7/42) Jack Williams

Sunday, October 26, 1941

299th Day—66 days to follow

	Clear
	Cloudy
	Rain
	Snow

I didn't notice so many birds this morning when I carried papers. I went to Sunday School later.

Monday, October 27, 1941

300th Day—65 days to follow

	Clear
	Cloudy
	Rain
	Snow

I found a list of trees that were identified at Mohican State Park (See July 4).

TREES

Quaking Aspen (cottonwood)
White Oak
Sumach
Hickory (shagbark)
Red Oak
Dogwood
Cherry
Scotch Pine
Scrub Pine
Slippery Elm
Red Maple
Sassafrass
Scrub Oak
Chestnut
Chestnut Oak
Sycamore
Hemlock
Red-berried Elder
Beech
White Pine (5 needles)
Ground Hemlock
Iron Wood
Apple
Ash
Locust

PLANTS

Black-eyed Susan
Teaberry
Trillium
Poison Ivy
Wild Grapes
Jewel Weed
True Solomon's Seal
False Solomon's Seal
Maiden's Hair Fern

Tuesday, October 28, 1941

301st Day—64 days to follow

	Clear
	Cloudy
	Rain
	Snow

Following is a list of common birds which I found. I have seen most all of them.

Robin
Blue bird
English sparrow
Song sparrow
Chipping sparrow
Meadow lark
Red-headed woodpecker
Whippoorwill
Nighthawk
Downy woodpecker
Flicker
Blue jay
Yellow-bellied sapsucker
Kingfisher
Ruby-throated humming bird
Phoebe
Cardinal
Redwing blackbird
Crow
Yellow-headed blackbird
Starling
Cowbird
Baltimore oriole
Gold finch
Scarlet tanager
Hairy Woodpecker

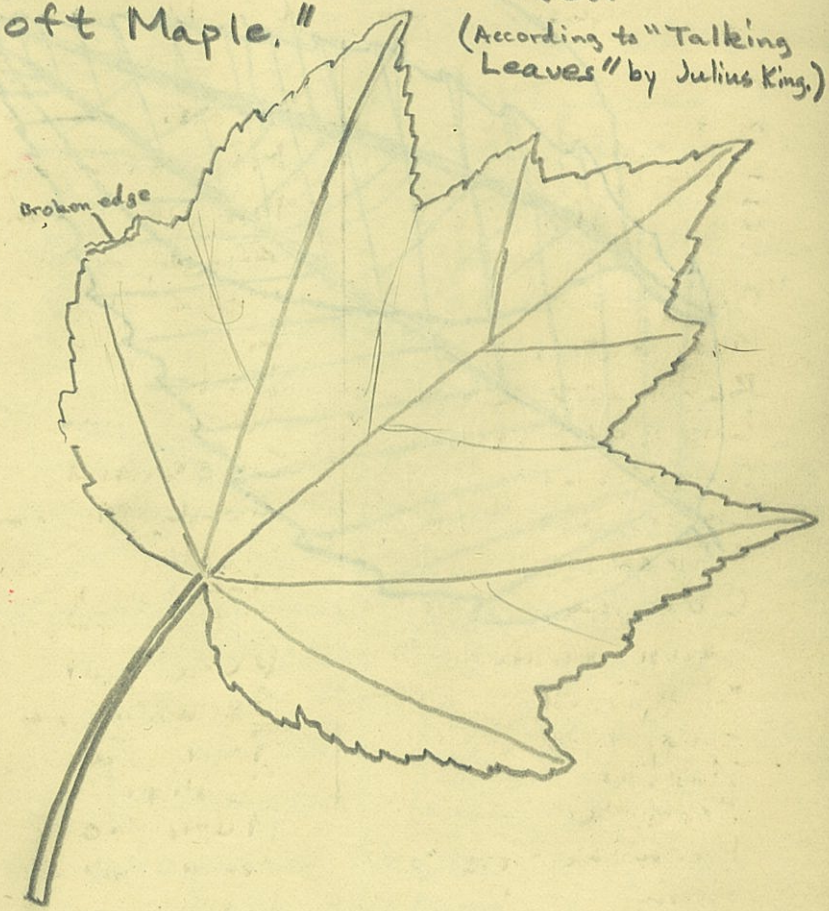
Purple martin
Barn swallow
Black and white warbler
Sandpiper
Pheasant
Quail (Bob-white)
Catbird
House wren
Chickadee
Wood thrush
Pigeon
Mourning dove
Chicken hawk (Red-Tailed)
Barn owl
Screech owl
Tree swallow
Towhee
Hairy Woodpecker
Yellow-shafted flicker
Veery
Peewee
Red-shouldered hawk
Brown Thrasher
Chimney swift
Purple grackle
Canary
Turkey Vulture

Wednesday, October 29, 1941

302nd Day—63 days to follow

	Clear
	Cloudy
	Rain
	Snow

I traced around a pressed leaf I found. It is "Red or Soft Maple." (According to "Talking Leaves" by Julius King.)

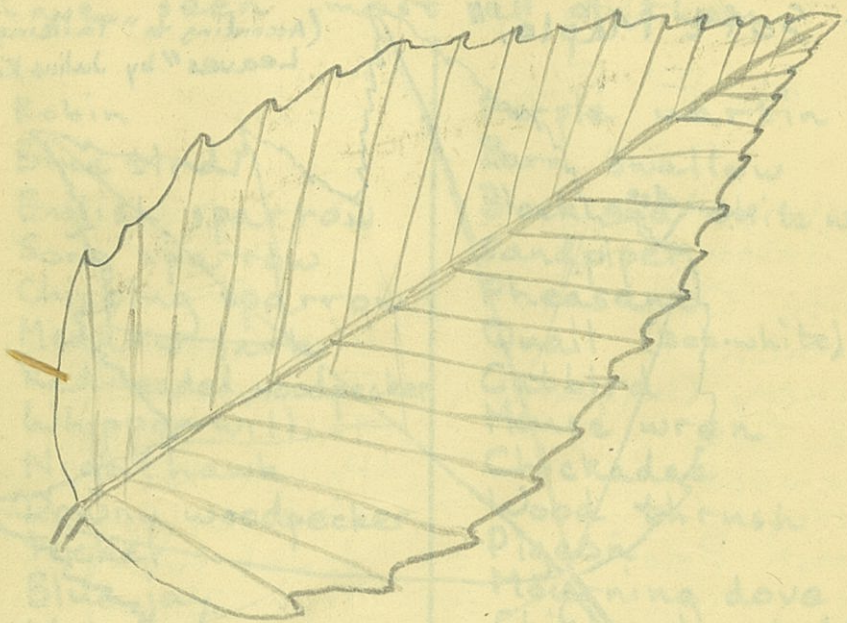


Thursday, October 30, 1941

303rd Day—62 days to follow

	Clear
	Cloudy
	Rain
	Snow

This is a beech. (A rather large leaf).

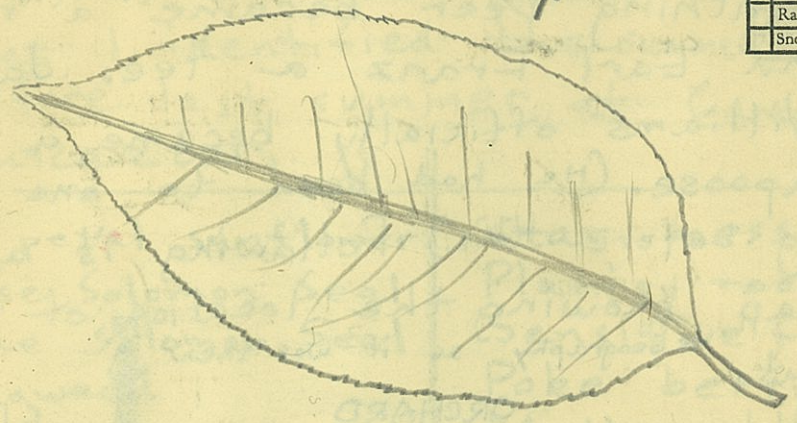


Friday, October 31, 1941

304th Day—61 days to follow

	Clear
	Cloudy
	Rain
	Snow

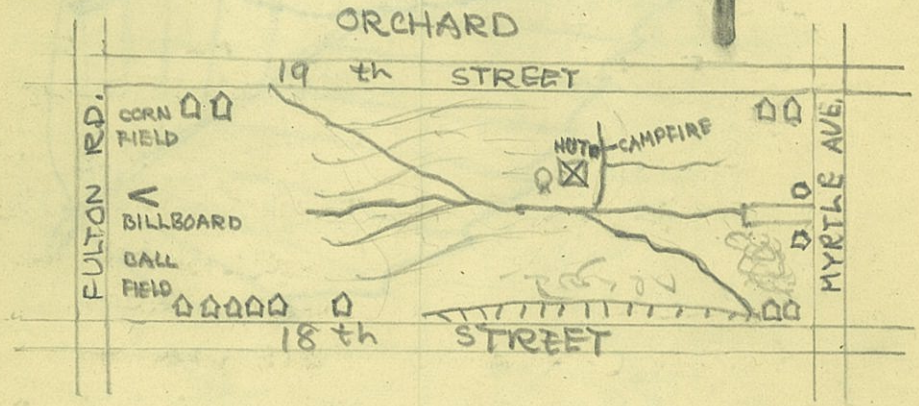
This is wild cherry.



Continued from pg. "Special Data" before pg. "Oct. 1"

Lightning Deer became a rill and Earl Franz a tee. Jack Williams officially became a papoose. (He had been to one meeting before this.) Following is a map showing the location of the hut.

* Geography as it was then.



The day after this Roy Schwitzgebel reported to me. He said that someone in our re had broken their promise of strict secrecy, and told Bevier Bell some things about there. There was only one person

Continued on pg. "Special Data" after pg. "Nov. 30"

305th Day—60 days to follow

	Clear
	Cloudy
	Rain
	Snow

This is a list of plants that I identified the summer before last summer at Camp Tuscazoar.

Ten petal sunflower
False Solomon Seal
True Solomon Seal
Ragweed
Blackberry
Mayapple
Black kohash
Wild grape
Yarrow
Joe-pye-weed
Bed Straw (Ordinary)
Crows foot
Meadow rue
Snakeweed
Bellflower
Tennessee orchid
Arrow root
Sinkelfoil
Bellwort
Giant Bed Straw
Arrow ~~root~~ head

Star moss
Plurisy root
Sensitive fern
Poke berry
Mullen
Jewel weed
Yellow wood sorrell
Bird tooth violet
Rough-stemmed golden-rod
Shield fern
Bell wort
Maiden's hair fern
Wild ginger
Citranella
Christmas tree fern
Rattlesnake fern (divides in 3's)
Knotting trillium
Bloodroot
Heal-all
Baby nettle
Jewel weed

306th Day—59 days to follow

	Clear
	Cloudy
	Rain
	Snow

This is a list of most of the trees found in camp.

Ash
Aspen, large toothed
Quaking aspen
Basswood
Beech
Box elder
Buckeye
Butternut
Catalpa
Cherry
Chesthut
Cottonwood
Crab-apple
Dogwood
Slippery elm
American elm
Hawthorne
Hemlock
Shagbark hichory
King nut hickory
Hop hornbeam
American hornbeam
Horse chestnut
Black honey locust
Lombardi poplar

Silver maple
Sugar maple
Mulberry
Black Oak
Blackjack oak
Laurel oak
Pin oak
Red oak
Chestnut
Jack Pine
White pine
Sassafrass
Sycamore
Tamarach
Tulip tree
Tupelo
Walnut
Witchhazel
Black willow
Sandbar willow
Judas tree

307th Day—58 days to follow

	Clear
	Cloudy
	Rain
	Snow

MORE NATURE STUDY

Ferns

Bracken
Christmas tree
Interrupted
Lady's
Maiden's hair
Rattlesnake
Sensitive
Walking

Stars *

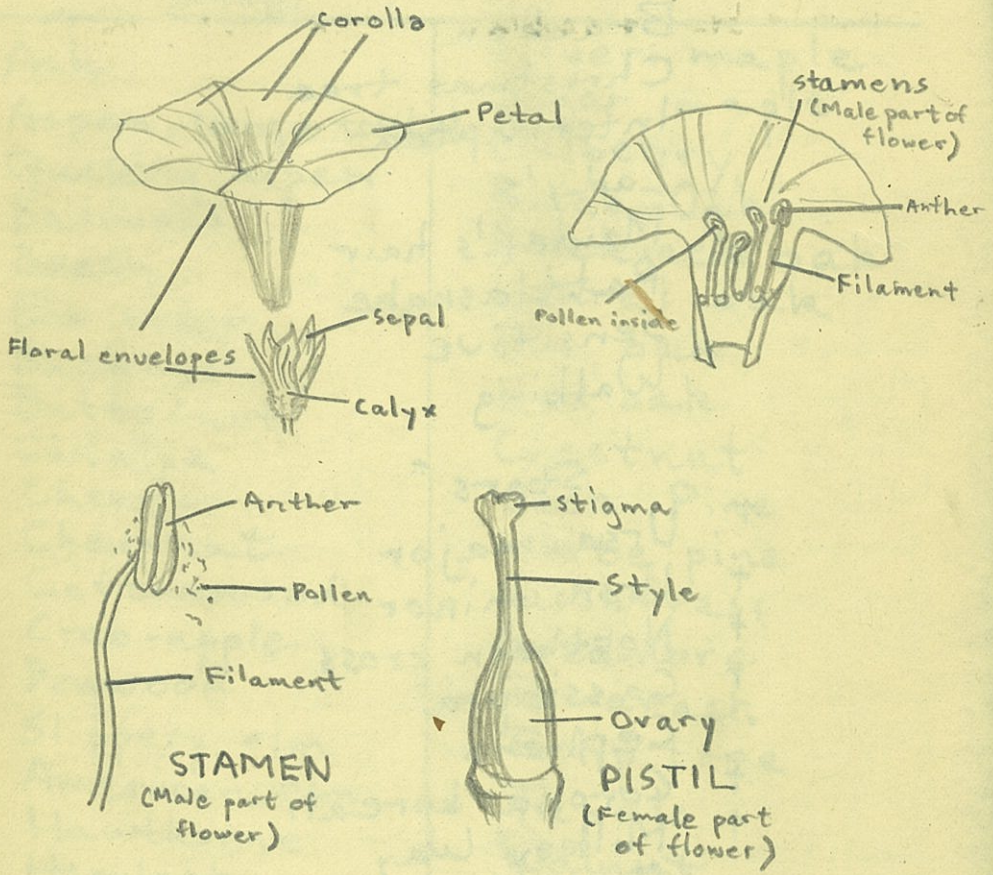
+ Ursa major
+ Ursa minor
+ Northern cross
+ Cassiopia
Cephens
+ Corona boreali
+ Milkey Way
Bootes
+ Draco
Jacobs coffin

* I know very little about stars.
+ The ones I can recognize.

308th Day—57 days to follow

	Clear
	Cloudy
	Rain
	Snow

This is a diagram of a flower with its parts labled.



309th Day—56 days to follow

	Clear
	Cloudy
	Rain
	Snow

I believe in my diary for next year I will make a more complete account on plants.

310th Day—55 days to follow

	Clear
	Cloudy
	Rain
	Snow

The reason I'm putting all of these plant and bird lists in this book is so that they are all together instead of on a thousand and one scraps of paper. Below is a list of edible wild plants.

Indian thistle (root)
Milkweed (leaves) (green shoots)
Sassafrass (root)
Sumac (Red berries)
Dandelion (leaves)
Black mustard (seed)
Crab apples (fruit)
May apple (fruit)
Choke cherry (fruit)
Sourgrass (leaves)
Skunk cabbage (leaves)
Cattail (low part of leaves)
Arrow-head (root bears bulb which is substituted for potatoes)
Jack-in-the-pulpit (root-boil and dry to make into mush.)

311th Day—54 days to follow

	Clear
	Cloudy
	Rain
	Snow

Lehman had its annual football dance tonite. I sold ice cream bars. We finished our 10 game schedule undefeated.

312th Day—53 days to follow

Clear
Cloudy
Rain
[X] Snow

The first snow of the year! The paper said that it started about 5:30 this morning. It snowed off and on most of the day.

continued from pg. Nov. 9.

on the northwest corner of the fence was blocked by a small hut and was on the eastern side facing the extension of the clee. A fireplace was also on the eastern side within which a fire was still smoking! The ashes nearby were cold. I presume that the fire was built sometime this morning. The trees at the base and the rocks within the clee were white-washed. A trail leading from between the two clees led to the wagon road. * * * We visited Big Rock Woods.

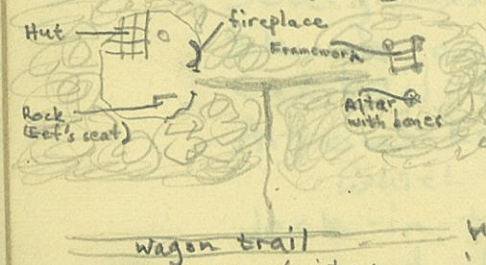


Diagram of sites.

313th Day—52 days to follow

Clear
Cloudy
Rain
[X] Snow

I went to Sunday School this morning. After dinner Lightning Deer, Little Beaver, and I went on a hike to Ca Thoth. We saw two groups of boys, including 9 or 10 fellows, (we also saw and heard a chickadee) so we moved on to the Clee in the Thicket. The leanto mentioned on page "November 2" was torn down. The Clee in the Thicket was changed. We came in from the back way. About 50 feet east of the Clee in a small clearing was a little framework. A rock, resembling an alter, was painted green and upon it were bones, some of which were also painted green. The clee itself was also greatly changed. The door which had previously been

(Continued on pg. Nov. 8)

314th Day—51 days to follow

	Clear
	Cloudy
	Rain
	Snow

I was on a committee at school to get a speaker for assembly today. Paul Gnau spoke. I was elected president of Latin Club II this afternoon at its first meeting.

315th Day—50 days to follow

X	Clear
	Cloudy
	Rain
	Snow

We didn't have any school today as this is Armistice Day. Instead of going on a hike as I had originally planned I played football most of the day.

316th Day—49 days to follow

	Clear
	Cloudy
	Rain
	Snow

At a scoutmeeting over a year ago a man by the name of Weber gave a talk on plants. It was interesting to me so I took notes on what he said. I have copied them in this book.

EARTH BEGINS TO COOL

I. No Life
   A. Land too hot
   B. Sea too hot
II. First appearance of life
   A. At cooler sea bottom
   B. Vegetable life
      1. Plants feed themselves
      2. Animals feed on plants
   C. Plant's life cycle
      1. Breathes
      2. Feeds
      3. Grows
      4. Dies

Continued on next page.

317th Day—48 days to follow

	Clear
	Cloudy
	Rain
	Snow

STEPS IN PLANT PROGRESS

I. Alga (Green scum on ponds)-seaweeds-
   A. Green coloring, chlorophil
      1. Shows it can manufacture own food.
   B. Individually microscopic
   C. Migrates from sea to land
   D. Settles in sheltered, moist spots
II. Fungus (Mushrooms)
   A. White in color
      1. Cannot manufacture food
   B. Hardy plant-can stand sun
   C. Settles with alga
      1. Fungi supplies moisture and protection from weather.
      2. Alga makes the food.
         a. Forms new plant—
III Lichen
   A. Hard surface
   B. Forms on trees, hedges, etc.

Continued on page 335

318th Day—47 days to follow

	Clear
	Cloudy
	Rain
	Snow

I found a list of plants that Lightning Deer passed for nature study at camp. Compare with page August 28.

PLANTS....

Poison ivy
Blackberry
Blueberry
Bluebell
Ragweed
Grapevine
Pig ears
True solomon seal
False solomon seal
May apple
Common violet
Daisy fleabane
Arrow root
Snake root
Buffalo grass
Bed straw
Sweet Amse
Black cohash
Virginia creeper
Orchard grass
Dandelion
Wild barley

ANIMALS...

Frog
Toad

319th Day—46 days to follow

	Clear
	Cloudy
	Rain
	Snow

Dad and I went to put up a curtain and a cyclorama at South Zanesville today. We left about 12:40 P.M and returned home about 4:20 tomorrow morning! Hunting season opened today at noon.

continued from page 333.

IV. Moss
- A. Stronger and hardier
- B. Protects its seed

V. Ferns
- A. Brown spots hold seeds
- B. Throw 3 or 4 inches when ripe
- C. Giant Ferns
  1. Hardy but soft
  2. Many feet tall
  3. Break off and decay in marshes
  4. Forms COAL

continued on page 337.

320th Day—45 days to follow

	Clear
	Cloudy
	Rain
	Snow

While cleaning a little-used room upstairs I found "The Records of the C. of B." (The Clan of Blackbirds) As I remember it, it had to do mostly with the study of birds. The members were Raymond, Russell, and I. I was the Raven. Following, is a chart copied from the record book. Lightning Deer and I hiked to Clee in the Thicket.

The Blackbird's Clan

1 Crows

2. Blackbirds
   - Yellow Headed Blackbird
   - Starling
   - Rusty Blackbird
   - Brewer's Blackbird
   - Red-Winged Blackbird

3 Grackles
   - Purple Grackle
   - Bronzed Grackle

4 The RAVEN

321st Day—44 days to follow

X	Clear
	Cloudy
	Rain
	Snow

I was nominated for president of the Sophmore class. It was an open nomination, everyone voting for anyone. Bob Augsburger is my opponent. I won't get the election because I'll be damned if I electioneer.

Continued from page 335.

VI. Flowering plants (Phaenogamous)
- A. Higher plants
  1. Masters of plant kingdom
  2. Crowds out many lower forms.
- B. All trees are flowering
- C. Plants progress
  1. Vegetation
  2. Reproduction
- D. Classes of plants
  1. Flowerless or cryptogamous
  2. Flowering or phaenogamous

The End

322nd Day—43 days to follow

X	Clear
	Cloudy
	Rain
	Snow

We had the election this morning. I am afraid I lost. Robert, Rheda, and Cousin John, from Phoenix Arizona are here for Thanksgiving.

323rd Day—42 days to follow

	Clear
	Cloudy
	Rain
	Snow

I did. Oh well, I've got two more years in Lehman,— worse luck for me.

August 23, 1944
Granville, Ohio

Dear Ivy,

A wise man once said that no one can sympathize with another person unless he himself has passed through a similar period of grief or sorrow. If that is the case, dear Ivy, then I can truly sympathize with you, and I sincerely do.

An old colored lady, when asked for the definition of a "friend" made a statement something like this, "People become friends when they like to do things together - work together, play together, laugh

together, sing together; but they can't really become close friends untill they cry together." What she meant by that was the thought that no one can understand a friend, entirely, until he has even shared in the other's grief.

The night that Marye-Ann cryed with me- the night Bob's death was confirmed- I fell so much in love with her that I'll always be; because she helped share a part of that burden of sorrow; and somehow her kindness made the burden lighter. Ivy, in two nations separated by thousands of miles of ocean, your friends are grieving with you, not knowing what to say or how to say it,

324th Day—41 days to follow

	Clear
	Cloudy
X	Rain
	Snow

Thanksgiving today! We had turkey. Lightning Deer and I carried papers early in the morning. I didn't notice very many birds.

but honestly and sincerely trying to hold a portion of your sorrow.

It is perhaps useless for me to try to express myself and me feelings with a pen, for I do not ~~ex~~possess that unusual gift of expression.

Many will tell you of the great ideals for which your brother has died. Now, it is little consolation but try always to remember that he has died that others might live – that others might live in a better world, a world of which they are an integral part.

In the words of Christ, "Greater love hath no man than this, that he lay down his life

325th Day—40 days to follow

	Clear
X	Cloudy
	Rain
	Snow

I played football most of the morning. The field was very muddy.

for a friend," and a man that has died "in the performance of his duty and the service of his country" has died for his nation – his family, and his friends.

And Iuy do not doubt. There is a Happy Hunting Grounds on the other side of the Great Divide – a place where the warriors of every nation will live together in everlasting peace.

I am not preaching. I am a practical man, and you are a practical person. Believing in an afterlife is not yielding to prejudice or credulity.

On the contrary, it must be the truth – a fundamental

326th Day—39 days to follow

	Clear
	Cloudy
	Rain
	Snow

I had to collect today. I don't mind delivering papers but when it comes to collecting you can leave me out.

---

axiom, else this life is pointless. If this were not so, then Hitler can not be condemned for trying to make the most of his short life here. If there is nothing farther and beyond this life, then crime, loose-living, and relaxation in moral standards would very naturally be the keynote. If that were so then "Eat, drink, and make merry"- (for life is short) (tomorrow you die)- would be the motto of all. But Hitler is wrong. There is a point to this life. He has not died in vain! Sometimes we can see the truth when we get it in

327th Day—38 days to follow

	Clear
	Cloudy
	Rain
	Snow

When Raymond and I carried papers this morning a Bob-White walked across the road and into the brush. I was within about 10 feet of him. I also saw three starlings and about eight pigeons still roosting. Robert, Rheda, and my cousin, John, left for Ohio State today.

---

perspective - see the truth which we might not see at all when it is blurred by our own near passions. "With malice toward none; with charity for all; with firmness in the right, as God gives us to see the right, let us strive on to finish the work we are in; to bind up the nations wounds; ..... to do all which may achieve and cherish a just and lasting peace among ourselves, and with all nations."

Your Friend,

328th Day—37 days to follow

	Clear
	Cloudy
	Rain
	Snow

This season of the year is called "Indian Summer." It is my favorite time of all the year. Our new scoutmaster (I don't know his name) promised to take my patrol on a hike next week.

329th Day—36 days to follow

	Clear
	Cloudy
	Rain
	Snow

Today after school I saw a Downy Woodpecker. Every day I see fewer and fewer birds.

Wednesday, November 26, 1941

330th Day—35 days to follow

	Clear
	Cloudy
	Rain
	Snow

I saw a pair of cardinals near the Fulton Tavern while carrying papers.

Thursday, November 27, 1941

331st Day—34 days to follow

	Clear
	Cloudy
	Rain
	Snow

This morning on the way to school Lightning Deer and I got a very good look at a Downy Woodpecker, the little red band at the back of the head and the black and white striped wing.

332nd Day—33 days to follow

	Clear
	Cloudy
	Rain
	Snow

THE MIGRATION OF BIRDS

Distances Traveled: The world's record as an aerial traveler is held by the Arctic tern which nests as far north as land has been discovered and winters in the vicinily of the Antarctic continent, 11,000 miles from their nests!

333rd Day—32 days to follow

X	Clear
	Cloudy
	Rain
	Snow

THE MIGRATION OF BIRDS

Speed: An English ornithologist gave chase in an airplane to one of the larger European hawks and found that it attained a speed of 110 miles an hour. Such speeds are nevertheless exceptional. Thirty or forty miles an hour is more nearly the average and during migration flights it may even be less.

334th Day—31 days to follow

	Clear
X	Cloudy
	Rain
	Snow

The Russians retook Rostov last nite... Within a few minutes thisafternoon I saw three or four species of sparrows, pigeons, starlings, a cardinal, a downy woodpecker, and a pair of blue jays. All of these were positively identified.

Continued from pg. "Special Data" before pg. "Nov. 1"

in our tribe that we suspected. That person was Bob Weinland. He had been absent from every meeting since his initiation. I had had suspicions myself because of little things Bevier said. A hasty cil meeting was called and the facts of the case were discussed. Not more than a day later Raymond Wilkof reported that he had definite proof that Bob was the traitor. Now, all that remained was to decide his punishment. Bevier had admitted that Bob was the one that told him. By telling Raymond the truth he broke a promise himself. (He had promised Bob never to mention that Bob had broken his promise to there.) Another council meeting was called. Everyone in the cil ring, except

Lightning Deer, agreed that the best thing to do was to get Bob to promise that he would never mention our re again. An added punishment was that no one in the re was to speak to him for three weeks. Although this term is up, it is still practiced to a great extent by our re.

With a little strategy and a little force we brought Bob to the orchard. We told him what we had decided. He agreed to do as we had stated and he promised to come to another "trial" at any time that we should choose. This case has never been re-opened. Bob, so far as we know, has kept his second promise to us. Although his crime of treason was great it did little harm. He was there at his initiation only, and that ceremony has been changed since then.

Continued on page "Special Data" after pg. "Dec. 31"

335th Day—30 days to follow

	Clear
	Cloudy
	Rain
	Snow

I went to Scout meeting tonite. We are going to have a hike on Saturday. I will carry papers first.

Tuesday, December 2, 1941

336th Day—29 days to follow

Clear
Cloudy
Rain
Snow

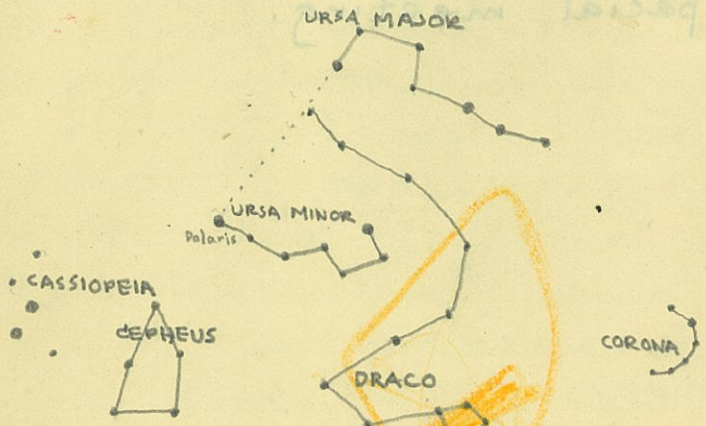
I made a lot of signs for an ad job at Brimfield tonite.

Wednesday, December 3, 1941

337th Day—28 days to follow

Clear
Cloudy
Rain
Snow

Looking north April 1, 8 P.M.; Mar. 15, 9 P.M; Mar. 1, 10 P.M; Feb. 15, 11 P.M.



Thursday, December 4, 1941

338th Day—27 days to follow

	Clear
	Cloudy
	Rain
	Snow

The re will soon have its second anniversary, December 27 to be exact. We will have to have some kind of special meeting.

Friday, December 5, 1941

339th Day—26 days to follow

	Clear
	Cloudy
	Rain
	Snow

The Scout troop is going on a hike tomorrow. It's about time.

Saturday, December 6, 1941

340th Day—25 days to follow

	Clear
✓	Cloudy
	Rain
	Snow

It was very cold today, with a twenty mile wind. After papers today I left the house at 7 minutes until four, planning to meet the Scout Troop at a campsite which I had never seen but which the new scoutmaster described as being about a block and a half down the Middlebranch Road.

To make a long story short I left here, cut across the infirmary grounds to 30th and Market, and from there to various points in the vicinity looking for the group. I never found them. My scoutmaster was just off about one half a mile. I returned home at 5:20 having covered about 5 or 6 miles in a little less than 1½ hours. The wind was <u>very</u> cold.

WAR WITH JAPAN!

Sunday, December 7, 1941

341st Day—24 days to follow

X	Clear
	Cloudy
	Rain
	Snow

The Japanese bombed Pearl Harbor, Hawaii. The American Navy naturally fought back and a war is on!

* * * *

After dinner today I went on a hike. I visited Timken's woods and the clee in the thicket. While in the clee in the thicket I heard two very old women arguing as to the direction. I slipped onto the trail and asked them what they wanted to know. They said that they were looking for thorn apples. "If you gather the apples after the first frost," they said, "they will not be so bitter. Boil them in water until the bitterness has left them. Then simmer in sugar or syrup water." The thorn apples which they knew about were near the tree cache (page one),

continued on page 360.

WAR WITH JAPAN!

Monday, December 8, 1941

342nd Day—23 days to follow

	Clear
	Cloudy
	Rain
X	Snow

Congress declared war on Japan this afternoon about one o'clock. There was but one dissenting vote, that of Miss Rankin, a woman representative who voted against war in World War I.

continued from page 359.

but they were scorched by a fire which someone probably lit to clear the underbrush. They started for home but I wandered around looking for some apples and finally found some near the place marked "Camp Plot" (page 192). I filled two coat pockets, caught up with them, and gave the apples to them. (The "Elee in the Thicket" is actually a small camp plot in a grove of these thorn apples, as they called them.)

Tuesday, December 9, 1941

343rd Day—22 days to follow

	Clear
X	Cloudy
	Rain
	Snow

I noticed in an almanac that on December 7, 1917 the U.S. declared war on Austria. The Japs bombed Pearl Harbor on December 7, 1941, just 24 years later.

Wednesday, December 10, 1941

344th Day—21 days to follow

	Clear
X	Cloudy
	Rain
	Snow

I noticed on a calendar that today is the day that the peace treaty was signed with Spain in 1898. Rather unappropriate, I think.

WAR WITH GERMANY & ITALY!

Thursday, December 11, 1941

345th Day—20 days to follow

	Clear
X	Cloudy
	Rain
	Snow

This morning Germany and Italy declared war on the United States! Near noon today Congress declared war on them. It took exactly 36 minutes!

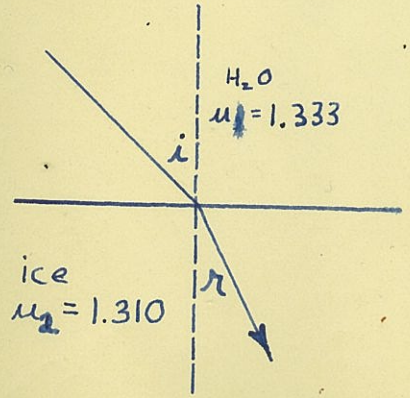
REFRACTION

$$\mu = \frac{\sin i}{\sin r}$$

$\angle i$ = ∠ of incidence
$\angle r$ = ∠ of refraction
μ = index of refraction

The relative index of refraction equals the Sine i over Sine r.

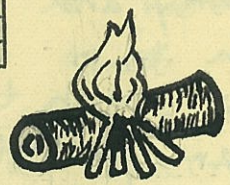
The relative index of refraction equals the index of refraction of the second substance over the index of refraction of the first substance.



$$\frac{\sin i}{\sin r}$$

346th Day—19 days to follow

	Clear
	Cloudy
	Rain
	Snow

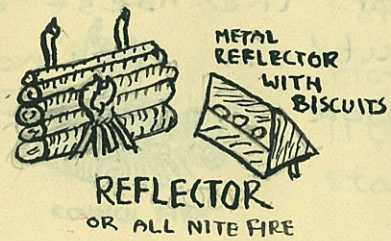


BACK LOG

Easy to make. Good, general cooking fire.

347th Day—18 days to follow

	Clear
	Cloudy
	Rain
	Snow

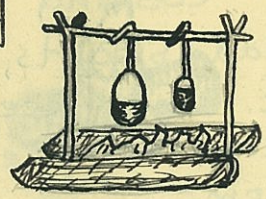


For cooking bread, biscuits, etc. For keeping over-nite shelters warm.

Sunday, December 14, 1941

348th Day—17 days to follow

	Clear
	Cloudy
	Rain
	Snow



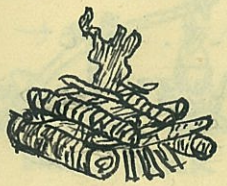
WOODSMAN FIRE

For the best of outdoor cooking. Good steady fire.

Monday, December 15, 1941

349th Day—16 days to follow

	Clear
	Cloudy
	Rain
	Snow



COUNCIL FIRE

For councils. Hot fire. Needs little care once started.

Tuesday, December 16, 1941

350th Day—15 days to follow

	Clear
	Cloudy
	Rain
	Snow

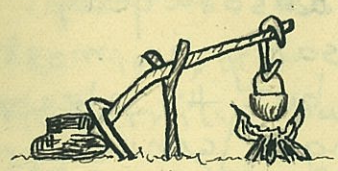
STAR OR INDIAN FIRE

Small flame at one point. Not much smoke.

Wednesday, December 17, 1941

351st Day—14 days to follow

	Clear
	Cloudy
	Rain
	Snow



DINGLE STICK

Used for cooking in a pot or kettle. Needs little watching.

1939
Nazis scuttle Graf Spee

352nd Day—13 days to follow

Clear
Cloudy
Rain
Snow

FIELD STOVE MADE FROM STONES

Not absolutely necessary in most cases, but is cleaner and more convenient, especially for more than one meal.

353rd Day—12 days to follow

Clear
Cloudy
Rain
Snow

Today is Robert's 21st birthday. He is still in Columbus on Fraternity business but Rheda came today. She has to work tomorrow.

354th Day—11 days to follow

	Clear
	Cloudy
	Rain
	Snow

I collected this morning and received over five dollars in Christmas tips! Robert came in from Columbus.

355th Day—10 days to follow

X	Clear
	Cloudy
	Rain
	Snow

I went to Sunday School this morning. After dinner I made signs for Moxahala School.

Monday, December 22, 1941

The shortest day of the year.

356th Day—9 days to follow

X	Clear
	Cloudy
	Rain
	Snow

I went downtown this-morning to buy Christmas gifts. The paperboys of the city have been mobilized to sell Defense stamps for the government.

Tuesday, December 23, 1941

357th Day—8 days to follow

	Clear
	Cloudy
X	Rain
	Snow

It doesn't look like we'll have snow for Christmas.

I finished the signs for that school tonite after the church's Christmas program.

Wednesday, December 24, 1941

358th Day—7 days to follow

	Clear
	Cloudy
X	Rain
	Snow

CHRISTMAS EVE: I hope we have snow tomorrow but I have just about given up the thought. I finished my Christmas shopping. Mother has been ill these last couple of days but she is feeling much better tonite.

Thursday, December 25, 1941

359th Day—6 days to follow

	Clear
X	Cloudy
	Rain
	Snow

Christmas Day: Santa Claus was pretty good to me this year. All in all I received almost nine dollars in tips on the paper route along with three boxes of candy and a brush and comb set, a box of handkerchiefs and a necktie. From the family I received a swell wallet, a pair of leather gloves, underwear, a pants hanger, two pairs of socks, and a game, something like Dominos. No snow. Uncle Howard spent the day with us.

360th Day—5 days to follow

X	Clear
	Cloudy
	Rain
	Snow

Uncle Don, Aunt Anna, and James came up today and ate supper with us.

Continued from pg. 379

and with the hope that a precident be set for all future chiefs of the Coomretifna to resign once a year, at the anniversary council.

Before the vote for a new eef and ug was taken a new law was made. Before, only members of the Cil Ring could vote for eef and ug; now, the rest of the re has one vote, among them all.

Little Beaver was elected the new eef and Lightning Deer was elected the new ug.

After the Cil Ring the re had a weiner and marshmallow roast.

The END

361st Day—4 days to follow

X	Clear
	Cloudy
	Rain
	Snow

Today is the re's second anniversary. The Coomretifna is exactly two years old. The history of the re before 1941 is found on the pages in this book marked "Special Data" while the history of the re during 1941 is, of course, found on the page with the corresponding date.

Continued from pg. 380.

was that of expulsion. It was determined that no Din from our tribe be expelled for inactivity unless he himself request it, or has no satisfactory excuse, or, of course, he does not live up to his pledge.

Otter took the tomahawk and plunged it into a tree, thereby voting for war against the invaders of our Clee in the Thicket, but his was the only affirmative vote. It was advised that a much sterner watch be kept on the clee.

After this, Eef Pitamaken and Ug Otter resigned their offices,

continued on pg. 378.

Sunday, December 28, 1941

362nd Day—3 days to follow

	Clear
	Cloudy
	Rain
X	Snow

Pitamaken, Otter, and Little Beaver went on a hike today. We visited Timken Woods (see page 213). and walked its trails. We returned to the Clee in the Thicket where we built a fire. Somebody had been there recently. The eastern addition to the clee had been changed since December 7. The re's anniversary will be celebrated tomorrow.

Continued from pg. 381

the tom-tom. When all were assembled in the thicket, and Lightning Deer had beat the tom-tom for some minutes, at a final boom Ug Otter jumped up with a whoop and started a war dance. He was followed by Little Beaver and Lightning Deer. After the dance Eef Pitamaken told why the Cil Ring had been called, to decide issues which had arisen in the past year. The first matter examined

Continued on pg. 379.

Monday, December 29, 1941

363rd Day—2 days to follow

	Clear
X	Cloudy
	Rain
•	Snow

Thisafternoon Pitamaken and Otter went to the Clee in the Thicket where we gathered wood for the fire tonite.

* * *

Pitamaken, Otter, Little Beaver, Lightning Deer, Sinopah, and Jack Williams started on the anniversary hike about 7:20 tonite. Otter and Lightning Deer went ahead to start the fire. The rest of us proceeded more slowly to the corner of Timken's fence where Sinopah and Jack Williams, not members of the Cil Ring, were told to wait until summoned. Pitamaken and Little Beaver went into the clee where the members of the Cil Ring, all tefs, changed into their Indian costumes. Pitamaken, dressed as an Indian warrior, ran back to the corner of the fence where he motioned to the other two Indians to follow him. Lightning Deer played on

Continued on pg. 380

Tuesday, December 30, 1941

364th Day—1 day to follow

X	Clear
	Cloudy
	Rain
	Snow

In accordance with that which transpired last nite a scouting party consisting of Little Beaver, Lightning Deer, Pitamaker, and Jack Williams went on a scouting party to the Clee in the Thicket to hunt the invaders. We left home about 10:15 A.M. and returned home about 12:40 P.M. We found no trace of the invaders. I cached the big, half-burned logs we used last nite for future reference.

Wednesday, December 31, 1941

365th Day—Last day

	Clear
	Cloudy
	Rain
X	Snow

Little Beaver and I went on another hike today. Again we missed the other party that has been using the Clee in the Thicket. I, personally, have made numerous trips to the clee this year for the sole purpose of finding out their identity, but with no luck. (Better luck next year.)

The End

Continued from pg. "Special Data" before pg. "Dec. 1"

About the first day of September, 1940 the re had another important meeting. It was a weiner roast and overnight camping. Although he was unable to attend the meeting Jack Williams lent us a tent of his. Raymond Wilkof and Otter slept in the tent while Little Beaver, Lightning Deer, and I slept in the hut. For breakfast we foraged for our food. It consisted of roasted corn, grapes, and apples. The meeting was very successful. We had planned on having an adventure hike at this meeting but we decided to have it a few days before this time. It was a very short

and unsuccessful meeting.

About this time something happened that was to anger us for a long time. Our hut, which had taken so long to build was torn down. Part of the thatching was ripped from the back when we first discovered anything wrong.

The persons responsible for this tried it again but were spied on by Don Kifer and Junior Camp (not in the re). They scared them away but while reporting the incident to me the two Consul boys and Kattman boy, for they were the belligerents, came again and ripped it completely down.

After this, there was much talk about building another hut, Little Beaver and I stacked the lumber;

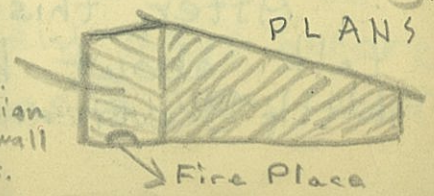
soon to be used in our new hut.

The Consul boys were punished by several of our warriors. Later, (when we were building the hut in the field near William's house) I caught one of the boys and forced him to promise never to interfere in our club's affairs. I succeded to keep my hot temper from boiling over.

About the 23rd day of October we decided to build a new hut. After considerable argument we proceded to build it in the field next to Jack William's house. We thought if anyone would try to wreck it our warriors would be near at hand.

The framework was quickly built but at the time of this writing little else was completed.

PLANS



Following the start of the construction of the hut there were several unimportant meetings. On December 24, '40, I discovered the date of our founding to be December 27, '39. I thought it would be a good plan to have a meeting on our anniversary day.

All was in readiness to start the hike. We planned to go to the corner of Timken's fence, cook our supper, and have a campfire and council. Then something happened that spoiled all these well laid plans, it rained, hard.

It ended up that we were playing cards and bingo at Otter's house. A lunch was served afterwards. The whole re was in attendance. So ends the first year of our club's duration and so ends this history.

* Special note on next page.

Insurance Expiration

Date	Issue	Name of Company	Policy No.	Amount	Premium	Expires

* A day by day account of the doings of our re during the year 1941 will be found on the pages of this book on the date of the happening.

The End

Anno Domini 1942

January

S	M	T	W	T	F	S
.	.	.	.	1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

February

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
.	.	.	.	.	.	.

March

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31	.	.	.	.

April

S	M	T	W	T	F	S
.	.	.	1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	.	.
.	.	.	.	.	.	.

May

S	M	T	W	T	F	S
.	.	.	.	.	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31	.	.	.	.	.	.

June

S	M	T	W	T	F	S
.	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	.	.	.	.
.	.	.	.	.	.	.

July

S	M	T	W	T	F	S
.	.	.	1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	.
.	.	.	.	.	.	.

August

S	M	T	W	T	F	S
.	.	.	.	.	.	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31	.	.	.	.	.

September

S	M	T	W	T	F	S
.	.	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	.	.	.
.	.	.	.	.	.	.

October

S	M	T	W	T	F	S
.	.	.	.	1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31
.	.	.	.	.	.	.

November

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	.	.	.	.	.
.	.	.	.	.	.	.

December

S	M	T	W	T	F	S
.	.	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31	.	.
.	.	.	.	.	.	.

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