

NATURAL SCIENCE -

SEPTEMBER

- DAY BY DAY

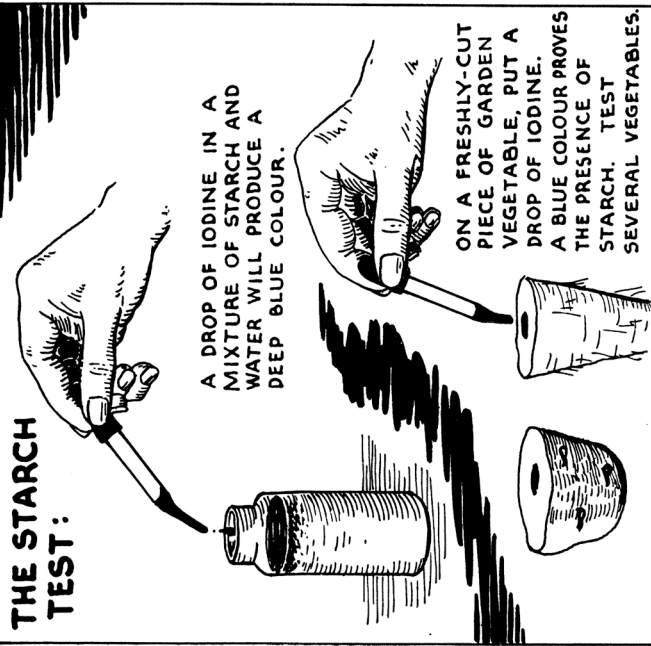


SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
<p>3</p> <p>"I think that I shall never see A poem lovely as a tree"</p>	<p>LABOUR DAY 4</p>	<p>5</p> <p>SCHOOL OPENING</p>	<p>6</p> <p>Last Quarter. See me in the morning</p>	<p>7</p> <p>Explore the school garden</p>	<p>1</p> <p>"Come forth into the light of things, Let Nature be your teacher"</p>	<p>2</p> <p>Have you seen the red berries of the Jack-in-the-Pulpit?</p>
<p>10</p> <p>Have hydrangea flowers started to turn colour?</p>	<p>11</p> <p>Start a group collection showing how seeds travel</p>	<p>12</p> <p>Make a bouquet of wild flowers Name them</p>	<p>13</p> <p>New Moon Can you see me?</p>	<p>14</p> <p>What birds are going south now?</p>	<p>15</p> <p>Has the King Billy left for the south?</p>	<p>16</p> <p>Trim your hedge for the last time</p>
<p>17</p> <p>Learn to know one new flower</p>	<p>18</p> <p>Start a group chart showing food preservation</p>	<p>19</p> <p>A hike around the school grounds to name the trees.</p>	<p>20</p> <p>First Quarter Look for me in the south-west. What time do I rise?</p>	<p>21</p> <p>Watch the sunflower face to the sun</p>	<p>22</p> <p>Find a spider's egg-case Save it</p>	<p>23</p> <p>Look for winter muskrat homes</p>
<p>24</p> <p>Find one beautiful thing in Nature new to you</p>	<p>25</p> <p>Start a group diary of how plants prepare for winter.</p>	<p>26</p> <p>Find me, Queen Cassiopeia Look north</p>	<p>27</p> <p>Record to-day's temperature, brightness, wind direction and strength, humidity.</p>	<p>28</p> <p>Full Moon Where am I at 8 p.m.? 9 p.m.? 10 p.m.?</p>	<p>29</p> <p>Pot plants from the garden for indoor enjoyment.</p>	<p>30</p> <p>Remove weeds from your lawn at home.</p>

Have your pupils build this calendar day by day on a blackboard or chart Use substitutions if desired

J.A. PARTRIDGE
Drawn by D. Farwell

THE STARCH TEST:



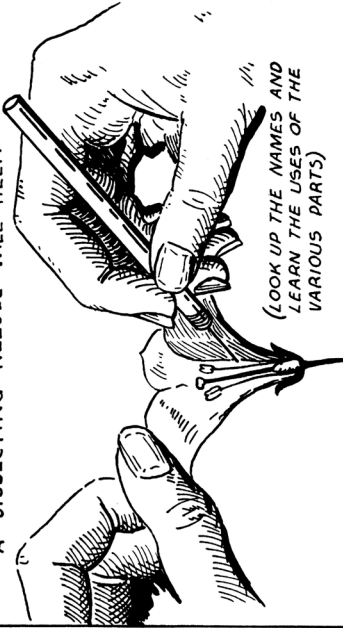
A DROP OF IODINE IN A MIXTURE OF STARCH AND WATER WILL PRODUCE A DEEP BLUE COLOUR.

ON A FRESHLY-CUT PIECE OF GARDEN VEGETABLE, PUT A DROP OF IODINE. A BLUE COLOUR PROVES THE PRESENCE OF STARCH. TEST SEVERAL VEGETABLES.

OF WHAT VALUE IS STARCH IN THE DIET?

FROM FLOWER TO SEED:

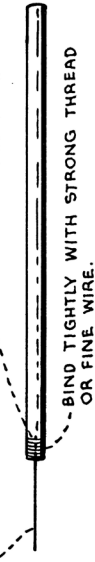
THE LONG-FLOWERING PETUNIA PLANT WILL PROBABLY SHOW SEVERAL STAGES IN THIS DEVELOPMENT. CAREFULLY TAKE A FLOWER APART. A DISSECTING NEEDLE WILL HELP.



(LOOK UP THE NAMES AND LEARN THE USES OF THE VARIOUS PARTS)

HOW TO MAKE A DISSECTING NEEDLE:

OLD NEEDLE, OR PIN WITH PLIERS, FORCE NEEDLE WITH HEAD CUT OFF INTO SOFTWOOD HANDLE.



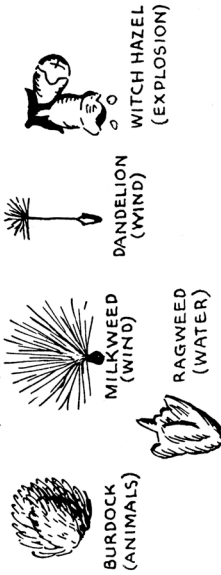
AN OUTDOOR ACTIVITY:

COLLECT SEEDS OF MANY KINDS. CLASSIFY, AS TO THEIR WAY OF SPREADING, UNDER THE HEADINGS:

1. BY WIND
2. BY ANIMALS OR MAN
3. BY EXPLOSION
4. BY WATER



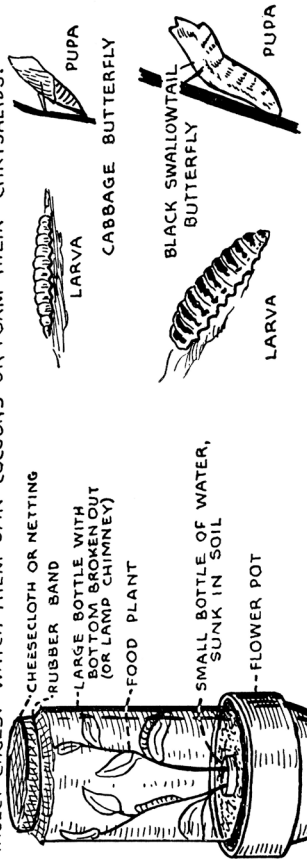
HERE ARE A FEW EXAMPLES:



HOW IS EACH SEED FITTED FOR ITS PARTICULAR METHOD OF DISPERSAL?

FOR INSECT STUDY:

COLLECT CATERpillars, AND PIECES OF THEIR FOOD PLANT. PUT THEM IN INSECT CAGES. WATCH THEM SPIN COCOONS OR FORM THEIR CHRYSALIDS.



FRUIT PRESERVING:

USING SMALL JARS OR MAYONNAISE BOTTLES, TRY THE FOLLOWING EXPERIMENTS:



PUT IN COOL, DARK PLACE

FOR THE PURPOSE OF THESE EXPERIMENTS, SEALING MAY BE DONE BY DIPPING THE TOP OF THE FILLED, CAPPED JAR IN MELTED PARAFFIN SEVERAL TIMES

IN WHICH JAR DOES THE FRUIT KEEP BEST? WHY?

D. FARWELL

NATURAL SCIENCE -



OCTOBER

- DAY BY DAY



SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
<p>1 October is a month of colour.</p> <p>Watch the changes.</p>	<p>2 Set up a vivarium in your classroom.</p>	<p>3 Feed caterpillars. Watch them spin cocoons.</p>	<p>4 Find five kinds of seeds that fly.</p>	<p>5 Start a collection of fruits that birds like to eat.</p>	<p>6 Which way does the moon's crescent face to-night?</p>	<p>7 How many things of nature can you find in one square yard of roadside or park?</p>
<p>8 Compare the length of day to-day with that a month ago.</p>	<p>9 Find the yellow blossoms of witch hazel trees.</p>	<p>10 After the first killing frost, store tubers of tuberous-rooted begonias in a cool, dry place.</p>	<p>11 Start a weather chart to show the direction and strength of the wind.</p>	<p>12 Why can you not see the moon to-night?</p>	<p>13 Make a school display, entitled "Nature's October Harvest."</p>	<p>14 Store worms in a large box of soil in the cellar to feed frogs, toads, etc., in winter.</p>
<p>15 Which side of a tree has the brightest colours? Why?</p>	<p>16 Have trees formed buds yet for next spring?</p>	<p>17 Dig and store gladiolus corms when tops turn yellow.</p>	<p>18 Make a rainbow of coloured autumn leaves.</p>	<p>19 In what direction does the moon appear to move to-night? Why?</p>	<p>20 Watch how frost forms on the outside of a tin can containing ice and salt.</p>	<p>21 Recall summer birds not with us now.</p>
<p>22 What garden plants have been killed by the frost?</p>	<p>23 Plant indoor bulbs in water and in soil.</p>	<p>24 Are animal coats becoming thicker? What use?</p>	<p>25 Which trees have shed their leaves already?</p>	<p>26 Clear away annuals; dig the ground; plant outdoor bulbs.</p>	<p>27 Draw some stars seen in the north sky.</p>	<p>28 How does the moon light the earth?</p>
<p>29 Make a bouquet. What plants still bloom?</p>	<p>30 List the birds that are still with us.</p>	<p>31</p>				

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J.A. PARTRIDGE
Drawn by D. Farwell

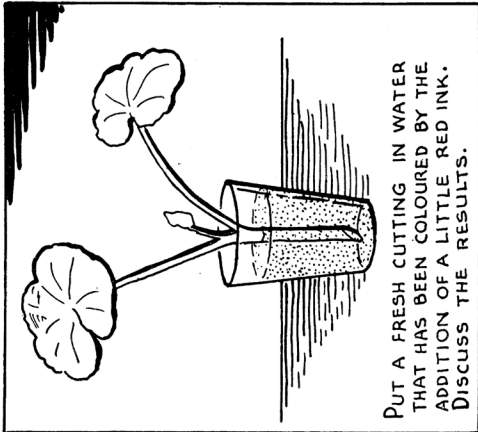
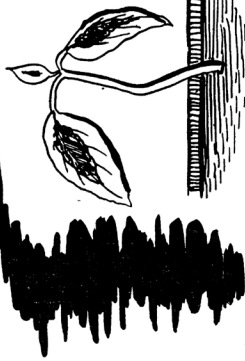
SCIENCE IN ACTION

OCTOBER

CUTTINGS:

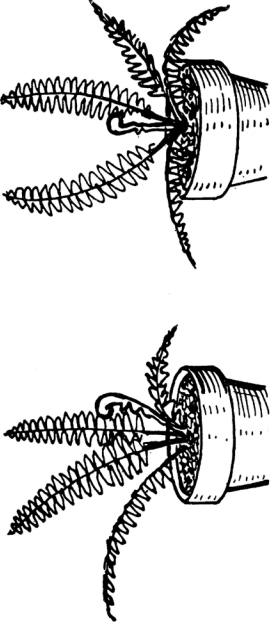


CHOOSE GOOD HEALTHY STALKS. REMOVE ALL BUT ONE OR TWO LEAVES. PLANT IN MOIST SAND. IN ABOUT TWO WEEKS, WHEN NEW GROWTH HAS STARTED, TRANSPLANT INTO POTS.



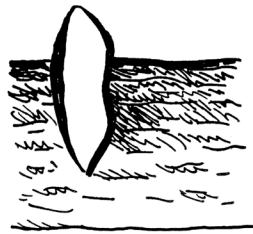
PUT A FRESH CUTTING IN WATER THAT HAS BEEN COLOURED BY THE ADDITION OF A LITTLE RED INK. DISCUSS THE RESULTS.

A LONG-TERM EXPERIMENT:



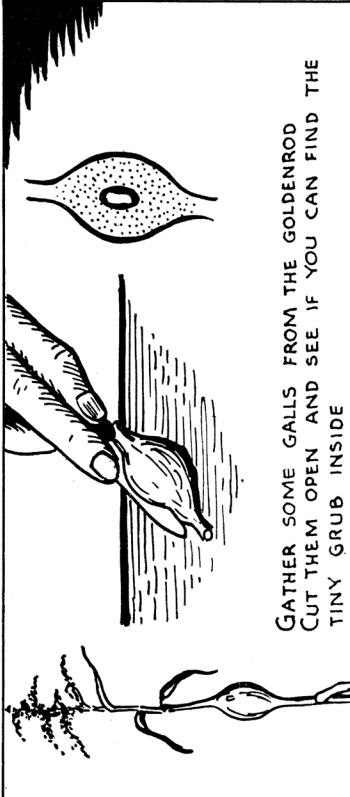
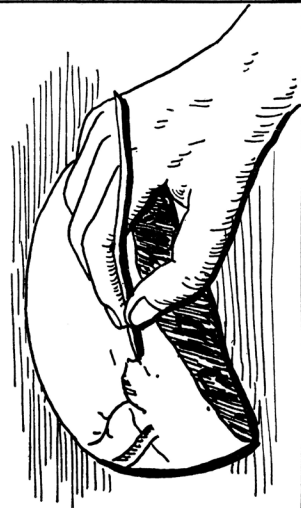
CHOOSE TWO FERNS AS NEARLY ALIKE AS POSSIBLE. CARE FOR EACH SIMILARLY, BUT USE FERTILIZER TABLETS FOR ONE FERN. NOTE WHAT CHANGES OCCUR OVER A PERIOD OF SEVERAL MONTHS.

FIND A BRACKET FUNGUS:



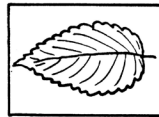
WITH A STICK, DRAW A PICTURE ON THE WHITE UNDERSIDE

(WHY DOES THE PRESSURE OF THE STICK LEAVE BROWN MARKS?)



GATHER SOME GALLS FROM THE GOLDENROD CUT THEM OPEN AND SEE IF YOU CAN FIND THE TINY GRUB INSIDE

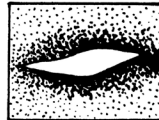
AND, OF COURSE, SUCH ACTIVITIES AS:



LEAF COLLECTIONS



WEED COLLECTIONS



SPATTER PRINTS

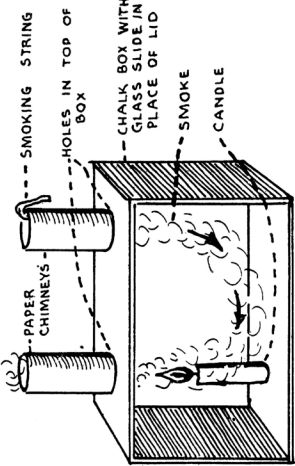


BLUE-PRINTS

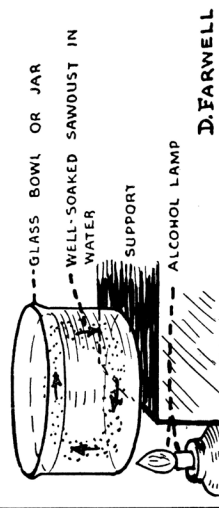


VARIETIES OF TREE BARK

"CONVECTION" CURRENTS:



USE THESE SIMPLE EXPERIMENTS TO SHOW HOW STOVES OR FURNACES PROVIDE WARMTH FOR COLD ROOMS.





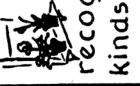

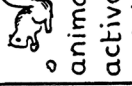

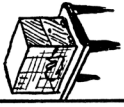

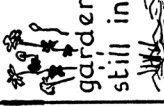
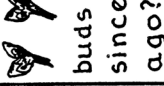

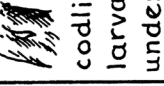
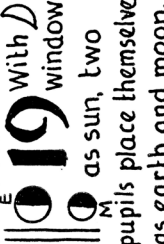

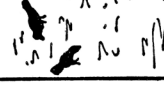
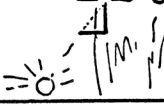

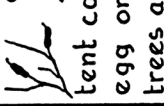

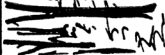
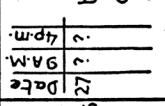
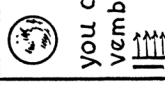
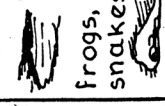



D. FARWELL

NATURAL SCIENCE -

NOVEMBER

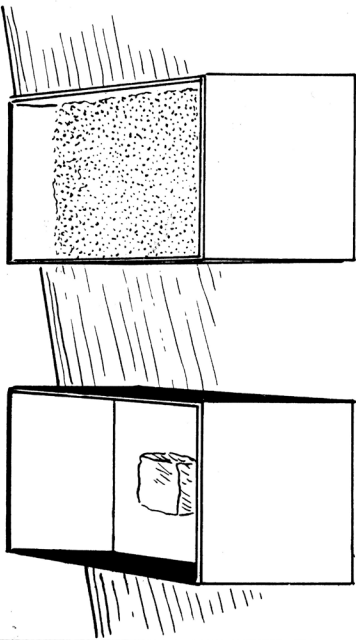
- DAY BY DAY

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
<p>5 Start a collection of poetry suitable for November.</p> 	<p>6 Why do I face to your right now?</p> 	<p>7 Why does smoke go up the chimney?</p> 	<p>8 How is the length of day changed since a month ago? Why?</p> 	<p>9 Learn to recognize five kinds of house plants by sight.</p> 	<p>10 Why are wool clothes warmer than cotton ones?</p> 	<p>11 What wild animals are still active in your neighbourhood?</p> 
<p>12 How many days since the last new moon? Why?</p> 	<p>13 Bring a pet to school for a week and care for it.</p> 	<p>14 At the first opportunity watch ice crystals form on water.</p> 	<p>15 Search the garden for flowers still in bloom.</p> 	<p>16 Have buds changed since a month ago?</p> 	<p>17 Cut a wormy apple. Draw the worm's tunnel.</p> 	<p>18 Look for codling moth larvae in cocoons under tree bark.</p> 
<p>19 With D window as sun, two pupils place themselves as earth and moon.</p> 	<p>20 Start a picture story of coal or other fuel.</p> 	<p>21 What birds are still here? Feed them.</p> 	<p>22 Sketch the height of the sun at noon.</p> 	<p>23 Sketch your bulbs planted a month ago.</p> 	<p>24 Search for caterpillar egg on twigs of trees and shrubs.</p> 	<p>25 Sketch November landscape with green and leafless trees.</p> 
<p>26 A walk in the woods will be interesting.</p> 	<p>27 Make a temperature chart for a week.</p> 	<p>28 Repeat what you did on November 19.</p> 	<p>29 Where are frogs, toads, and snakes now?</p> 	<p>30 Cover your perennials with straw manure or garden refuse.</p> 		

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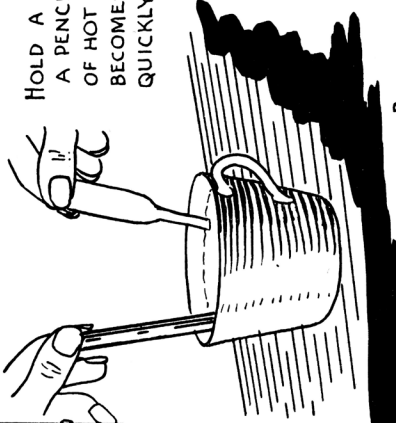
INSULATION:



PLACE AN ICE CUBE IN AN EMPTY CHALK BOX. BURY A SECOND ICE CUBE IN SAWDUST IN ANOTHER CHALK BOX. COVER EACH BOX WHICH CUBE OF ICE MELTS FIRST? WHY?

HOW IS THIS PRINCIPLE APPLIED IN THE INSULATION OF HOUSES?

AND INSULATORS:

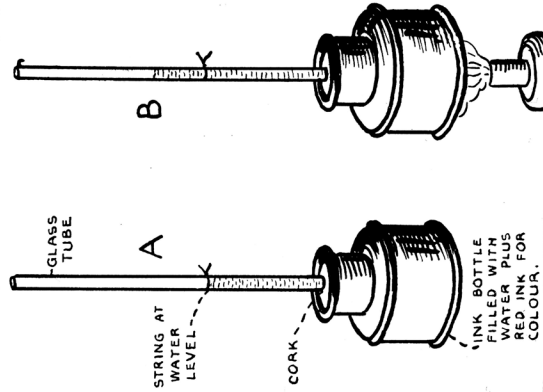


HOLD A SPOON AND A PENCIL IN A CUP OF HOT WATER. WHICH BECOMES WARM MORE QUICKLY?

FIND THE INSULATORS ON YOUR KITCHEN POTS AND KETTLES.



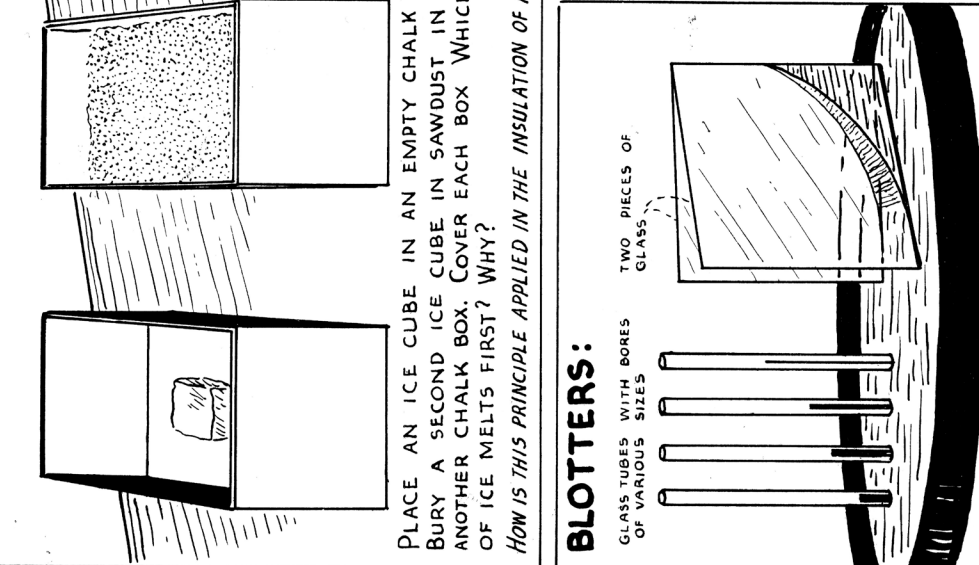
HOW A THERMOMETER WORKS:



ASSEMBLE THE MATERIALS AS SHOWN IN A. THEN HEAT THE BOTTLE (B). WHAT HAPPENS? WHY?

HOW IS THIS EXPERIMENT USEFUL IN UNDERSTANDING THE WORKING OF THE THERMOMETER?

BLOTTERS:



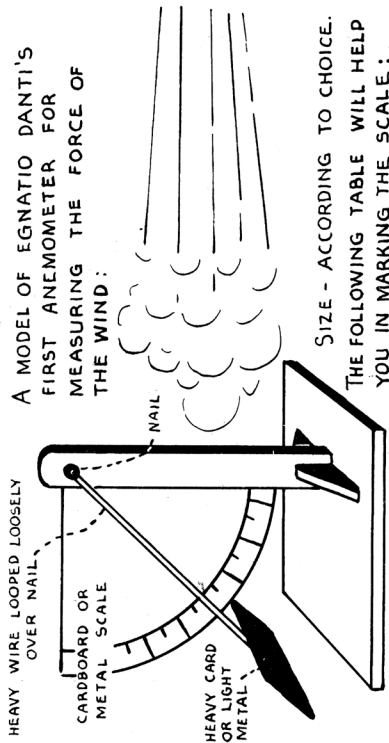
GLASS TUBES WITH BORES OF VARIOUS SIZES

TWO PIECES OF GLASS

USE EITHER THE TUBES, OR THE GLASS, OR BOTH COLOUR THE WATER WITH RED INK. THE WATER RISES BECAUSE OF "CAPILLARY ACTION". CAN YOU UNDERSTAND BETTER HOW A BLOTTER HELPS TO DRY THE INK?

SOMETHING TO MAKE!

A MODEL OF EGNATIO DANTI'S FIRST ANEMOMETER FOR MEASURING THE FORCE OF THE WIND:

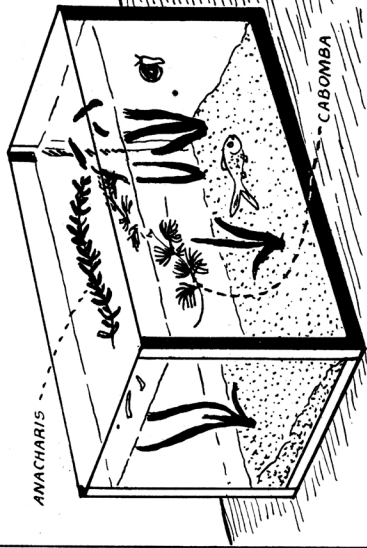


SIZE - ACCORDING TO CHOICE. THE FOLLOWING TABLE WILL HELP YOU IN MARKING THE SCALE:

SMOKE RISES STRAIGHT UP	0 m.p.h.
SMOKE MOVES, FACE FEELS WIND	1-7 m.p.h.
HANDKERCHIEF EXTENDED	8-12 m.p.h.
SMALL BRANCHES MOVE	13-18 m.p.h.
SMALL TREES SWAY	19-24 m.p.h.
HARD TO WALK	25-38 m.p.h.
TREE LIMBS BROKEN	39 m.p.h. and up.

m.p.h. = miles per hour.

AQUARIUM WEEDS:



INSTEAD OF PLANTING SUCH WEEDS AS ANACHARIS AND CABOMBA, TRY LETTING THEM FLOAT FREELY ON THE SURFACE. ANY ADVANTAGES? DISADVANTAGES? *D. FARWELL.*

NATURAL SCIENCE -

DECEMBER

- DAY BY DAY



SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
<p>3 When does the moon rise to-night?</p>	<p>4 Explain how your breath forms on a cold day.</p>	<p>5 How do birds keep warm now?</p>	<p>6 Compare the height of the sun to-day at noon with its height two weeks ago.</p>	<p>7 Bring bulbs planted six weeks ago to light and warmth.</p>	<p>1 Start the month right. Plan to feed the birds every day.</p>	<p>2 What birds and other animals are still active?</p>
<p>10 New moon. Show by drawing which side of the moon is lighted now.</p>	<p>11 What season is it in Australia? Why?</p>	<p>12 Where are our summer birds? What doing?</p>	<p>13 Learn to know the Christmas cactus and the poinsettia.</p>	<p>14 Record the length of day and night to-day.</p>	<p>8 Draw four shapes of snow-flakes the first day it snows.</p>	<p>9 Draw and name two kinds of winter buds.</p>
<p>17 Read about the Star of Bethlehem.</p>	<p>18 Why is moonlight really sunlight?</p>	<p>19 Spruce needles will roll between the thumb and finger.</p>	<p>20 Hemlock needles are single, flat, each with a tiny stalk.</p>	<p>15 Plan a sand-table Christmas scene.</p>	<p>16 Look for materials for your sand-table scene.</p>	<p>23 Draw holly and mistletoe.</p>
<p>24 How old is your Christmas tree? Nature better in 1940."</p>	<p>25 MERRY CHRISTMAS!</p>	<p>26 Draw trees and their shadows as seen from your window at night.</p>	<p>27 Birds eat weed seeds from above the snow.</p>	<p>21 Balsam needles are single, flat, with no stalk; branches have circular scars.</p>	<p>22 Compare the length of day and night with those December 14.</p>	<p>30 Draw tracks of a cat and dog in snow.</p>

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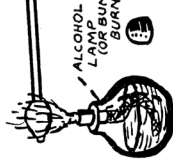
Science in Action --- December

AN EXPERIMENT IN GLASS BLOWING WILL TEACH YOU MUCH ABOUT THE QUALITIES OF GLASS:

SEAL THE END OF A GLASS TUBE BY ROTATING IT SLOWLY IN A HOT FLAME UNTIL THE EDGES OF THE TUBE'S END SOFTEN AND RUN TOGETHER.

THEN BLOW INTO THE OTHER END OF THE TUBE AS YOU CONTINUE TO ROTATE IT. BE CAREFUL NOT TO TOUCH THE HOT PART OF THE TUBE.

WHAT DO YOU LEARN FROM THIS EXPERIMENT?



A "TELEPHONE" EXPERIMENT

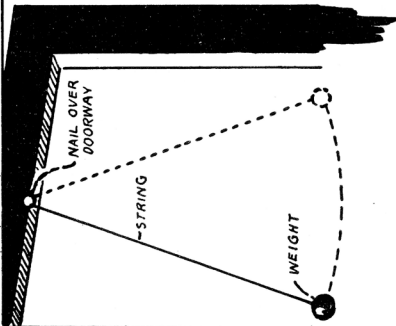
THREAD



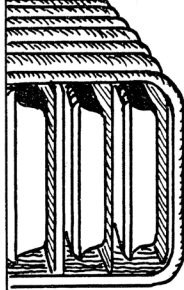
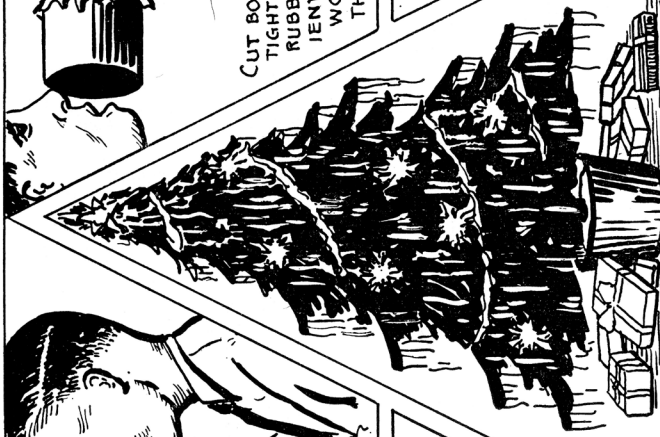
CUT BOTH ENDS FROM TWO TIN CANS. OVER ONE END OF EACH STRETCH TIGHTLY A PIECE OF TOUGH PAPER AND FASTEN IT IN PLACE WITH RUBBER BANDS. JOIN THE TWO PAPER DIAPHRAGMS WITH A CONVENIENTLY LONG, WAXED THREAD AS SHOWN. PULL TAUT. TALK. WHY WON'T IT WORK WHEN THE THREAD IS LOOSE? WHEN THE THREAD IS TOUCHING SOMETHING?

WITH A SIMPLE PENDULUM LIKE THIS, EXPERIMENT TO FIND OUT HOW LONG THE STRING MUST BE SO THAT THE PENDULUM WILL SWING AT THE RATE OF SIXTY TIMES A MINUTE. ADD MORE WEIGHT TO THE STRING'S END. WHAT CHANGE, IF ANY, DO YOU NOTICE IN THE RATE OF SWINGING?

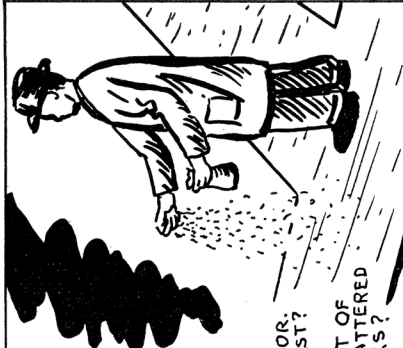
WHY DOESN'T THE PENDULUM OF A CLOCK COME TO A STOP AS QUICKLY?



TO HELP PREVENT THE NEEDLES OF YOUR CHRISTMAS TREE FROM DROPPING, SET THE BASE OF THE TREE IN A CONTAINER OF MOIST SAND. KEEP THE SAND MOIST.



PUT A TRAY OF WATER, AND ONE CONTAINING A SOLUTION OF SALT, IN AN ELECTRIC REFRIGERATOR. WHICH FREEZES FIRST? THEN HOW IS SALT OF USE WHEN IT IS SCATTERED ON ICY SIDEWALKS?



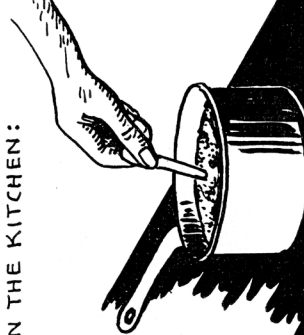
DID YOU KNOW THAT A SINGLE DROP OF WATER, PLACED ON TOP OF A TINY HOLE IN A PIECE OF METAL, CAN BE USED AS A MICROSCOPE? SUCH AN OBJECT AS A HAIR, IF PLACED CLOSE UNDER THE HOLE, IS MAGNIFIED MANY TIMES.



A LITTLE TASTY SCIENCE IN THE KITCHEN:

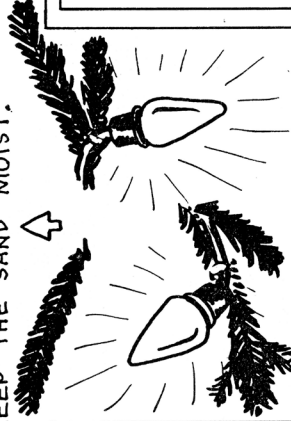
TOFFEE RECIPE:

- 1 CUP BROWN SUGAR
 - 1 CAN CONDENSED MILK (NOT EVAPORATED MILK)
 - 1/2 CUP BUTTER
 - 1/2 CUP CORN SYRUP
- BOIL, STIRRING CONSTANTLY, TILL BRITTLE IN WATER. (TAKES 25 MINUTES OR MORE.) POUR INTO BUTTERED PAN.



D. FARWELL

USE YOUR TREE LIGHTS SAFELY: BIND THEM TO TWIGS IN SUCH A WAY THAT THE HOT BULBS CAN TOUCH NEITHER NEEDLES NOR DECORATIONS.



NATURAL SCIENCE -

JANUARY

- DAY BY DAY



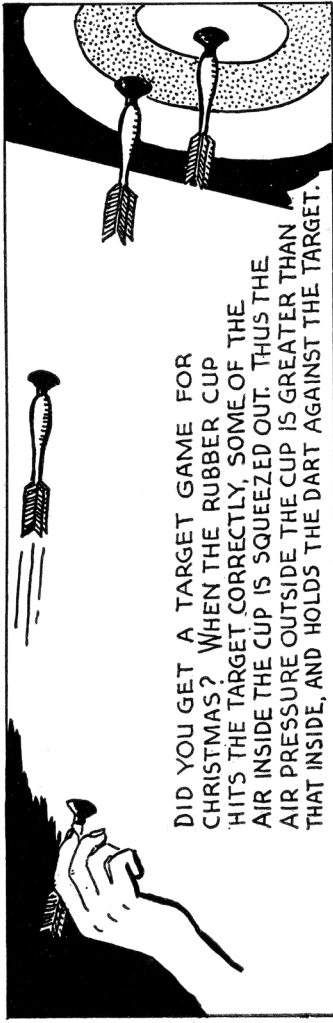
SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
<p>7 He comes out to enjoy his pine cone dinner.</p>	<p>1 The sun is rising in a NEW YEAR.</p>	<p>2 Draw the Big Dipper as you see it at 8 p.m. to-day.</p>	<p>3 Find and draw Queen Cassiopeia's chair in the north sky.</p>	<p>4 Measure the length of your shadow at noon.</p>	<p>Draw a 5 line like this pointing to the sun at noon.</p>	<p>The gray 6 squirrel searches under snow for food.</p>
<p>14 The friendly Chickadee has a black cap and a black bib.</p>	<p>8 The red squirrel stays in his hollow tree shelter.</p>	<p>The chip 9 munk enjoys his stored food underground.</p>	<p>10 Mice play about on the snow and girdle trees.</p>	<p>11 How has the length of your shadow changed?</p>	<p>Do 12 what you did on January 5.</p>	<p>13 Find the tiny "seed-birds" fluttering from birch catkins.</p>
<p>21 The frost came from water vapour in the air.</p>	<p>15 The Downy Woodpecker likes the insects under bark.</p>	<p>16 Downy will stay if you feed him mesh bag filled with suet.</p>	<p>17 The snowbird comes from the north to winter with us.</p>	<p>18 Compare your shadow to-day noon with that a week ago.</p>	<p>Is the 19 sun getting higher or lower at noon during these three weeks?</p>	<p>20 Watch frost form on the window.</p>
<p>28 Keep your living-room at 68° for good health.</p>	<p>22 Do this and you will see how ice or snow forms.</p>	<p>23 You should sleep with your window open. Do you?</p>	<p>24 Learn to read the thermometer.</p>	<p>25 Read the temperature of your room to-day.</p>	<p>Read the 26 outdoor temperature each hour from 9-4 o'clock.</p>	<p>27 Read the thermometer of your oven during baking.</p>
<p>28 Keep your living-room at 68° for good health.</p>	<p>29 Place branched fruit trees or flowering shrubs in water in the classroom.</p>	<p>30 Which way do leaves of window plants face?</p>	<p>31 Turn a potted plant around and observe 2 days later.</p>			

Have your pupils build this calendar day by day on blackboard or chart. Use substitutions if desired.

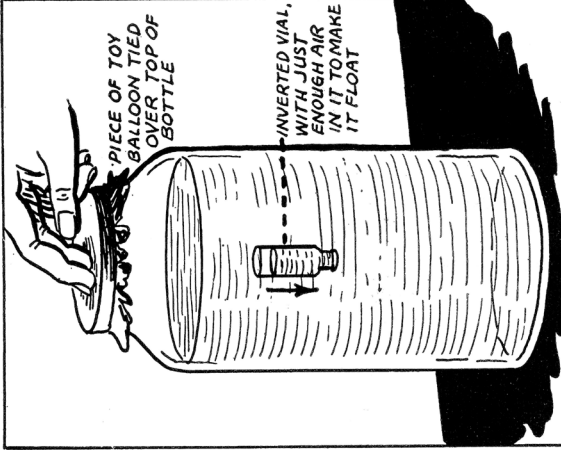
J.A. PARTRIDGE
Drawn by D. Farwell

SCIENCE IN ACTION - JANUARY

SOME EXPERIMENTS WITH AIR PRESSURE



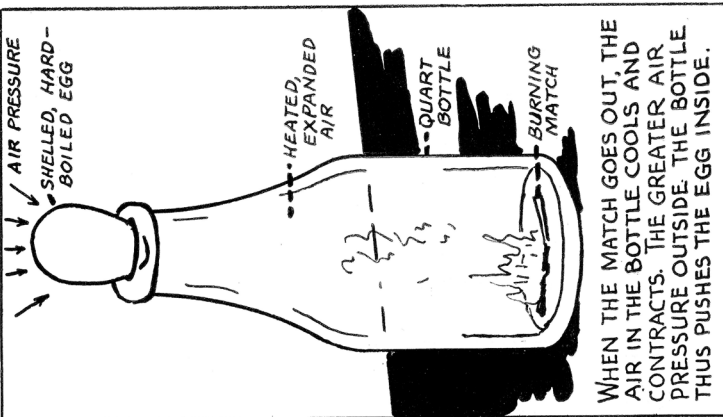
DID YOU GET A TARGET GAME FOR CHRISTMAS? WHEN THE RUBBER CUP HITS THE TARGET CORRECTLY, SOME OF THE AIR INSIDE THE CUP IS SQUEEZED OUT. THUS THE AIR PRESSURE OUTSIDE THE CUP IS GREATER THAN THAT INSIDE, AND HOLDS THE DART AGAINST THE TARGET.



PIECE OF TOY BALLOON TIED OVER TOP OF BOTTLE

INVERTED VIAL, WITH JUST ENOUGH AIR IN IT TO MAKE IT FLOAT

PRESSURE UPON THE RUBBER MEMBRANE PASSES THROUGH THE AIR IN THE BOTTLE, THROUGH THE WATER, AND FORCES MORE WATER INTO THE VIAL. THUS THE VIAL SINKS.



AIR PRESSURE

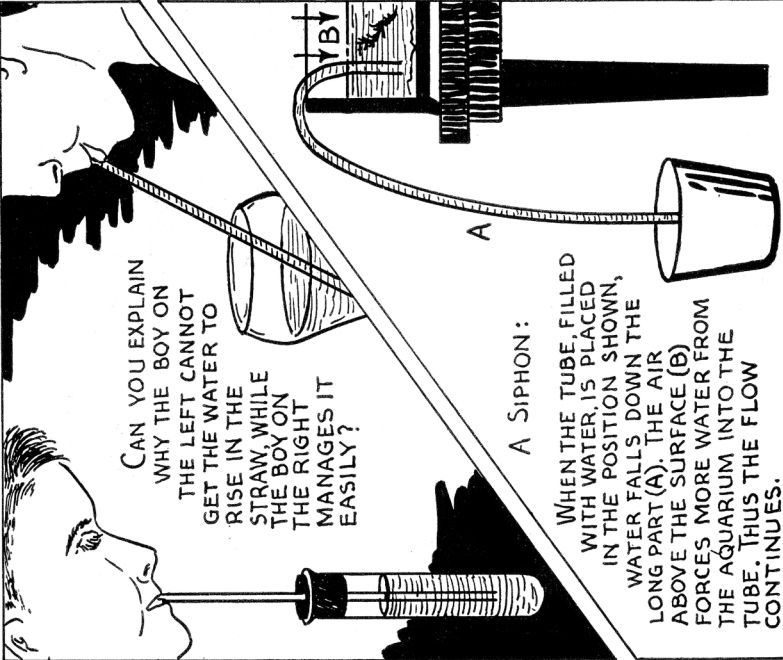
SHELLED, HARD-BOILED EGG

HEATED, EXPANDED AIR

QUART BOTTLE

BURNING MATCH

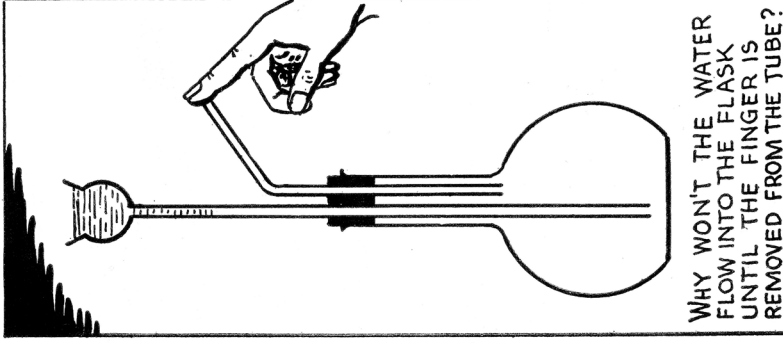
WHEN THE MATCH GOES OUT, THE AIR IN THE BOTTLE COOLS AND CONTRACTS. THE GREATER AIR PRESSURE OUTSIDE THE BOTTLE THUS PUSHES THE EGG INSIDE.



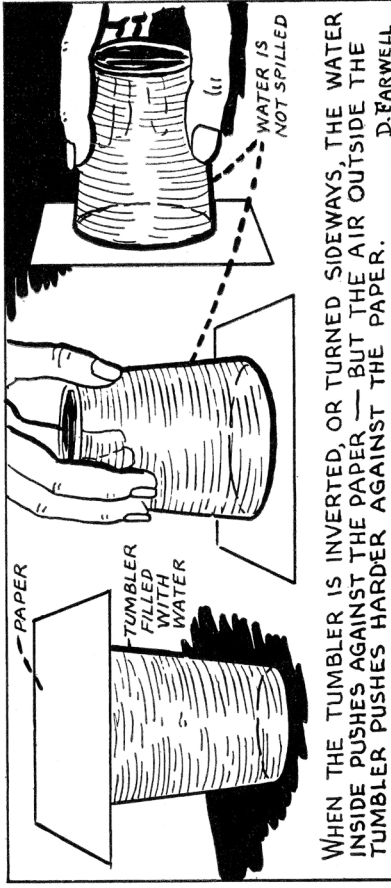
CAN YOU EXPLAIN WHY THE BOY ON THE LEFT CANNOT GET THE WATER TO RISE IN THE STRAW, WHILE THE BOY ON THE RIGHT MANAGES IT EASILY?

A SIPHON:

WHEN THE TUBE, FILLED WITH WATER, IS PLACED IN THE POSITION SHOWN, WATER FALLS DOWN THE LONG PART (A). THE AIR ABOVE THE SURFACE (B) FORCES MORE WATER FROM THE AQUARIUM INTO THE TUBE. THUS THE FLOW CONTINUES.



WHY WON'T THE WATER FLOW INTO THE FLASK UNTIL THE FINGER IS REMOVED FROM THE TUBE?



PAPER

TUMBLER FILLED WITH WATER

WATER IS NOT SPILLED

WHEN THE TUMBLER IS INVERTED, OR TURNED SIDEWAYS, THE WATER INSIDE PUSHES AGAINST THE PAPER— BUT THE AIR OUTSIDE THE TUMBLER PUSHES HARDER AGAINST THE PAPER.

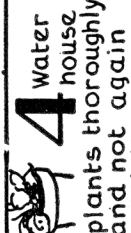
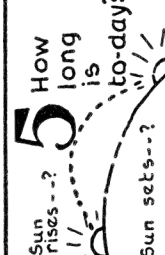




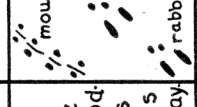



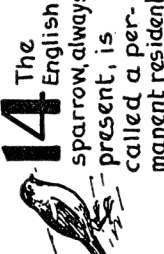
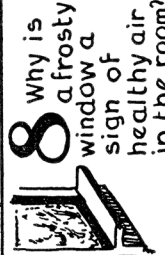
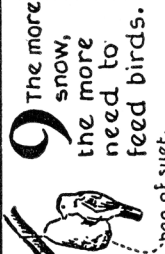
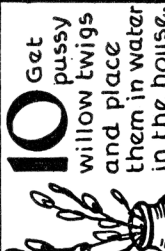

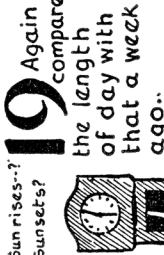
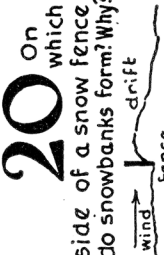
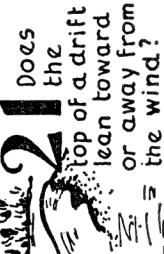

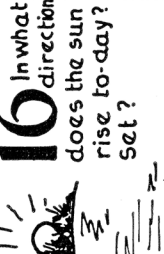

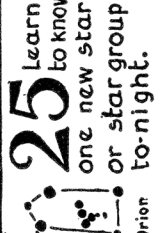
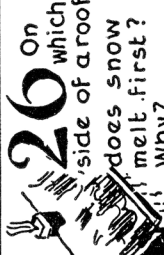




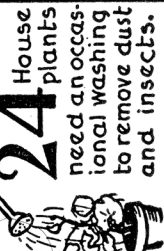
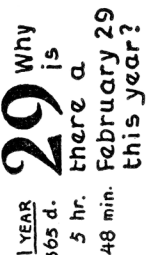
D. FARWELL

NATURAL SCIENCE -

FEBRUARY

- DAY BY DAY



SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
<p>4 water house plants thoroughly and not again until the top soil looks dry.</p> 	<p>Sun rises--? How long is it to-day? Sun sets--?</p> 	<p>6 search for cocoons for your classroom.</p> 	<p>7 The snow protects the ruffed grouse and the weeds supply him with seed.</p> 	<p>1 How does the heat get from the stove or furnace to your desk?</p> 	<p>2 Don't believe that the woodchuck comes out to see his shadow to-day.</p> 	<p>3 Find and name two kinds of animal tracks in snow.</p> 
<p>11 The blue jay still enjoys acorns for a winter meal.</p> 	<p>12 Compare the length of to-day with a week ago.</p> 	<p>13 Why does the sun not shine as far into a south room to-day as a month ago at noon?</p> 	<p>14 The English sparrow, always present, is called a permanent resident.</p> 	<p>8 Why is a frosty window a sign of healthy air in the room?</p> 	<p>9 The more snow, the more need to feed birds.</p> 	<p>10 Get pussy willow twigs and place them in water in the house.</p> 
<p>18 Find green growth on the north side of trees.</p> 	<p>19 Again compare the length of day with that a week ago.</p> 	<p>20 On which side of a snow fence do snowbanks form? Why?</p> 	<p>21 Does the top of a drift lean toward or away from the wind?</p> 	<p>15 Only the father sparrow wear a black necktie.</p> 	<p>16 In what direction does the sun rise to-day? Set?</p> 	<p>17 Examine your ferns for brown, oval, humped scales.</p> 
<p>25 Learn to know one new star or star group to-night.</p> 	<p>26 On which side of a roof does snow melt first? Why?</p> 	<p>27 Read the weather forecast to-day. Test it to-morrow.</p> 	<p>28 Who will see the first robin?</p> 	<p>22 Compare the tracks of a dog and of a cat.</p> 	<p>23 The white-breasted nuthatch usually walks head downward on trees.</p> 	<p>24 House plants need an occasional washing to remove dust and insects.</p> 
				<p>29 Why is there a February 29 this year?</p> 		

Have your pupils build this calendar day by day on blackboard or chart. Use substitutions if desired.

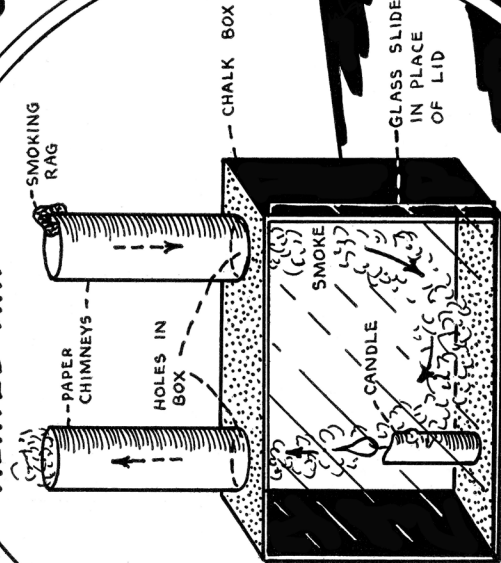
J.A. PARTRIDGE
Drawn by D. Farwell

SCIENCE IN ACTION - FEBRUARY

MORE DAYLIGHT:
 DAYS ARE BECOMING LONGER. CHART THE OFFICIAL TIMES OF SUNRISE AND SUNSET AS GIVEN IN YOUR NEWSPAPER. FIND THE AVERAGE INCREASE IN THE AMOUNT OF DAYLIGHT FOR FEBRUARY.

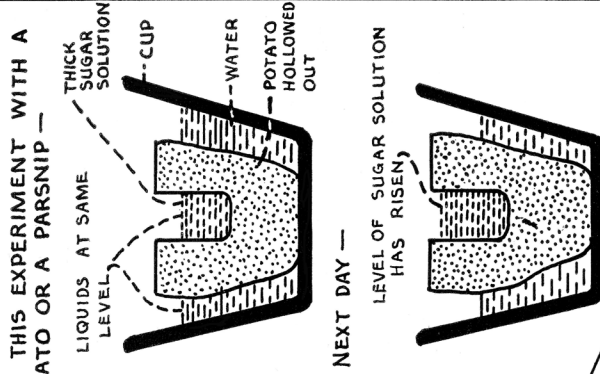
LENGTH OF DAY		
Date	Sun Rises	Sun Sets
Feb. 1	7:15 A.M.	5:15 P.M.
2	7:10 A.M.	5:20 P.M.
3	7:05 A.M.	5:25 P.M.
4	7:00 A.M.	5:30 P.M.
5	6:55 A.M.	5:35 P.M.
6	6:50 A.M.	5:40 P.M.
7	6:45 A.M.	5:45 P.M.
8	6:40 A.M.	5:50 P.M.
9	6:35 A.M.	5:55 P.M.

HEATED AIR:



CONVECTION CURRENTS IN AIR CAN BE ILLUSTRATED SIMPLY BY MEANS OF THIS APPARATUS.

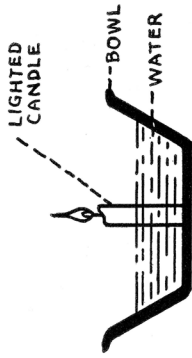
OSMOSIS:



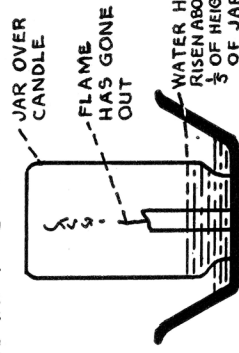
WHY THE CHANGE?

OXYGEN:

A LIGHTED CANDLE WILL BURN ONLY AS LONG AS THERE IS OXYGEN AROUND IT.



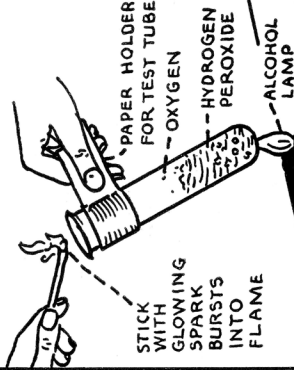
BELOW, WATER RISES TO TAKE THE PLACE OF THE OXYGEN THAT HAS BEEN USED.



WHAT FRACTION OF THE AIR DOES OXYGEN MAKE UP?

MORE ABOUT OXYGEN:

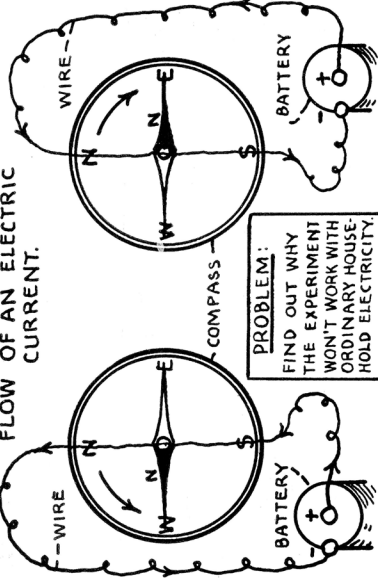
HYDROGEN PEROXIDE, HEATED IN A TEST TUBE, GIVES OFF OXYGEN. TRY IT!



D. FARWELL

ELECTRICITY:

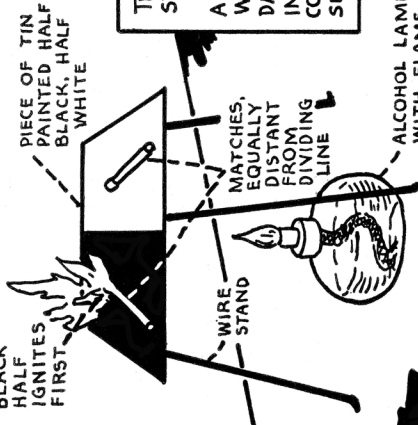
THIS EXPERIMENT INDICATES HOW A COMPASS NEEDLE MAY BE USED TO SHOW THE DIRECTION OF FLOW OF AN ELECTRIC CURRENT.



PROBLEM: FIND OUT WHY THE EXPERIMENT WON'T WORK WITH ORDINARY HOUSE-HOLD ELECTRICITY.

COLOURS AND HEAT:

MATCH ON BLACK HALF IGNITES FIRST - WHITE



TRY THE EXPERIMENT SEVERAL TIMES. DOES IT SUGGEST A PRACTICAL REASON WHY PEOPLE WEAR DARK-COLOURED CLOTHES IN WINTER AND LIGHT-COLOURED ONES IN SUMMER?

NATURAL SCIENCE -

MARCH

- DAY BY DAY



SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY																					
<p>NEW MOON MAR. 8</p> <p>3 Start a "Signs of Spring" bulletin board.</p>	<p>FIRST QUARTER MAR. 16</p> <p>4 Who will report the spring frog chorus first?</p>	<p>FULL MOON MAR. 23</p> <p>5 Garden shrubs will bloom quickly in doors in water now.</p>	<p>LAST QUARTER MAR. 30</p> <p>6 Watch for moths coming out of cocoons.</p>	<p>7 Record: Sun rises -- a.m. Sun sets -- p.m. Length of day -- hr -- min.</p>	<p>8 Write to Parks of Ottawa, for National Canada, for "Attracting Birds with Food and Water" and "Bird Houses and Their Occupants."</p>	<p>9 Watch for the V-shaped flights of Canada Geese going north.</p>																					
<p>10 The song sparrow is due.</p>	<p>11 Place a twig bearing tent caterpillar eggs in water in the classroom.</p>	<p>12 Watch for the red-winged blackbird swaying on cattails.</p>	<p>13 Make a home for a bluebird.</p>	<p>14 Observe how the water in a stream wears, carries, and deposits soil.</p>	<p>15 Start the table here: <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td>MARCH</td><td></td><td></td><td></td></tr><tr><td>15</td><td>22</td><td>29</td><td></td></tr><tr><td>Sun Rises</td><td></td><td></td><td></td></tr><tr><td>Sun Sets</td><td></td><td></td><td></td></tr><tr><td>Length of day</td><td></td><td></td><td></td></tr></table></p>	MARCH				15	22	29		Sun Rises				Sun Sets				Length of day				<p>16 It's time for the meadowlark.</p>	<p>17 Learn of the Shamrock and St. Patrick.</p>
MARCH																											
15	22	29																									
Sun Rises																											
Sun Sets																											
Length of day																											
<p>24 Place twigs of cherry, apple, or plum in water for robbing killdeer, grackle, cowbird, heron, brown creeper, phoebe.</p>	<p>18 Our orchard friend, the bluebird, settles in the new home.</p>	<p>19 List the winter sleepers that have come out.</p> <p>Recoon? Chipmunk? Bear? Skunk? Groundhog? Bat?</p>	<p>20 From maple sap to maple sugar.</p>	<p>21 Start garden seeds indoors.</p>	<p>22 Add to the table started March 15. What changes?</p>	<p>23 Prune back your roses 6"-8" from the ground.</p>																					
<p>25 Have you seen the mourning-cloak butterfly?</p>	<p>26 Look for frog's eggs. Watch a few develop in a jar of pond water in the classroom.</p>	<p>27 The chipmunk comes forth from his burrow.</p>	<p>28 The first wild flower - the skunk cabbage - a cousin of the calla lily.</p>	<p>29 Complete the chart started March 15. What conclusions?</p>	<p>30 Be sure that you water your garden seedlings thoroughly and as soon as dry looking.</p>	<p>31</p>																					

Have your pupils build this calendar day by day on blackboard or chart. Use substitutions if desired.

J. A. PARTRIDGE
Drawn by D. Farwell.

SCIENCE IN ACTION

MARCH

MAKE A SIMPLE "TELEGRAPH"

THIS DIAGRAM SHOWS THE METHOD OF WIRING. YOU CAN LEARN YOUR CODE WITH AN OUTFIT LIKE THIS.

HARD AND SOFT WATER:

PARTLY FILL TWO SIMILAR TUMBLERS WITH "CITY" WATER. DISSOLVE A TEASPOONFUL OF WASHING SODA IN B. NOW ADD TEN DROPS OF STRONG SOAP SOLUTION TO EACH. SHAKE THOROUGHLY.

Now, which is A and which is B?

SEEDS:

SOAK SOME BEANS IN WATER OVERNIGHT. THEN REMOVE THE SKIN FROM ONE OF THEM. SEPARATE THE HALVES. CAN YOU FIND THE TINY ROOT AND THE TINY LEAVES?

COVER A FEW SOAKED BEANS WITH MOIST BLOTTERS BETWEEN TWO PLATES. WHICH SPROUT FIRST — THE LEAVES OR THE ROOTS?

PLANT SOME BEANS IN MOIST SAND/ST. WHAT HAPPENS TO THE TWO HALVES OF THE SEED?

MAPLE SYRUP:

WHEN THE SAP BEGINS TO FLOW, TAP A HARD MAPLE TREE.

PUT A MEASURED AMOUNT OF SAP IN A SAUCEPAN AND BOIL THE SAP UNTIL IT BECOMES SYRUP. COOL. MEASURE AGAIN.

ABOUT HOW MUCH SAP IS REQUIRED FOR EACH QUART OF SYRUP?

MAKE A CANDLE:

1. ROLL UP A TUBE OF HEAVY PAPER, ABOUT 1" IN DIAMETER AND 5" LONG. TIE IT
2. FASTEN A STRING IN THE CENTRE OF THE TUBE.
3. STAND THE TUBE ON ONE END IN A SOUP PLATE. FILL SLOWLY WITH MELTED WAX.
4. LET THE WAX HARDEN. REMOVE THE PAPER.

MOSES:

FETCH SOME MOSES FROM THE WOODS.

PUT SOME OF THIS MOSS ON A PLATE IN THE CLASSROOM. KEEP IT MOIST. WHAT CHANGES TAKE PLACE AFTER A FEW DAYS?

D. FARWELL

NATURAL SCIENCE -



APRIL

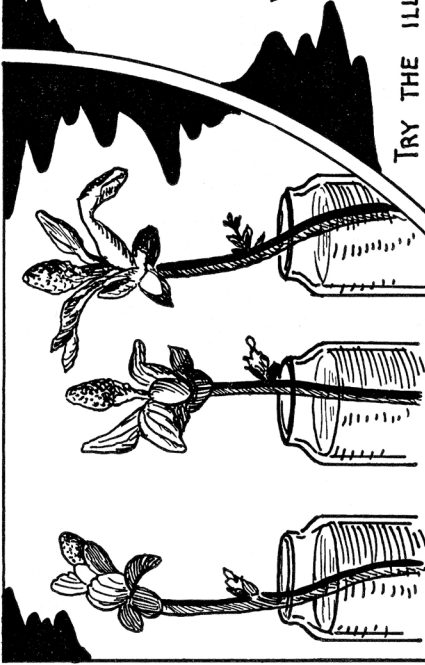
- DAY BY DAY



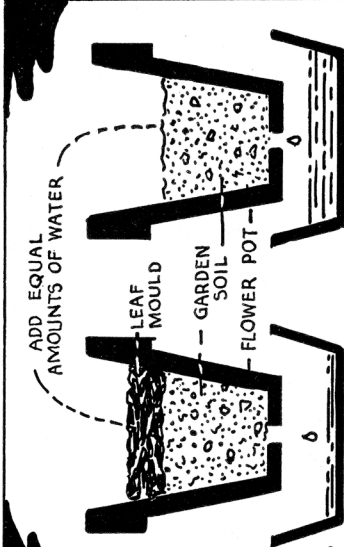
SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
<p>7 Which way is the Big Dipper facing at 8 p.m.?</p>	<p>Birds to look for this week or soon: Kingfisher; Flicker; Loon; Vesper Sparrow.</p>	<p>2 Set up a rain gauge to measure April's rainfall.</p>	<p>3 You may start new willow trees by placing cuttings in water.</p>	<p>4 Make a toy windmill.</p>	<p>5 Place more shrub branches in water in the classroom.</p>	<p>6 Build a wren's home for your backyard.</p>
<p>14 Visit your garden to discover which shrubs leaf out first.</p>	<p>Birds to look for this week or soon: Tree Swallow; Winter Wren; Sapsucker; Ruby-crowned Kinglet.</p>	<p>9 Transplant indoor seedlings when the second leaves appear.</p>	<p>10 Snakes will soon venture from their winter crevices.</p>	<p>11 Watch for the first bees in search of nectar.</p>	<p>12 Watch for new bright green growth on evergreens.</p>	<p>13 Search for opening buds of hepaticas.</p>
<p>21 A stroll in the woods will show you what trees become active first.</p>	<p>15 Start a seedling race by planting such seeds as beans, peas, wheat.</p>	<p>16 Learn to write the music for a chickadee's song.</p>	<p>17 Start a diary of a tree to show its rate of blossoming.</p>	<p>18 What trees and shrubs have been in blossom already?</p>	<p>19 Collect and plant seeds of maple, oak, and other trees.</p>	<p>20 Visit a creek to look for yellow marsh marigolds. Pick them sparingly.</p>
<p>28 Walk again in the woods. What changes since last week?</p>	<p>22 Why do bulbs on the southern slope of a bulb bed grow fastest?</p>	<p>23 What lawn weeds have started growth?</p>	<p>24 Plant a carrot from the cellar to the garden and observe its second year's growth.</p>	<p>25 Collect poplar buds: you will enjoy their odour.</p>	<p>26 Do bud scales of lilac, horse chestnut, and maple become leaves, or are they shed?</p>	<p>27 Collect snails, fly dragon nymphs, and other water animals for a pond aquarium in your classroom.</p>
	<p>29 Start a diary of a pair of birds from nest-building time.</p>	<p>30 Make and set up a bird bath using a garbage pail cover.</p>	<p>NEW MOON - APR. 7</p>	<p>1st QUARTER - APR. 15</p>	<p>FULL MOON - APR. 22</p>	<p>3rd QUARTER - APR. 29.</p>

Have your pupils build this calendar day by day on blackboard or chart. Use substitutions if desired.

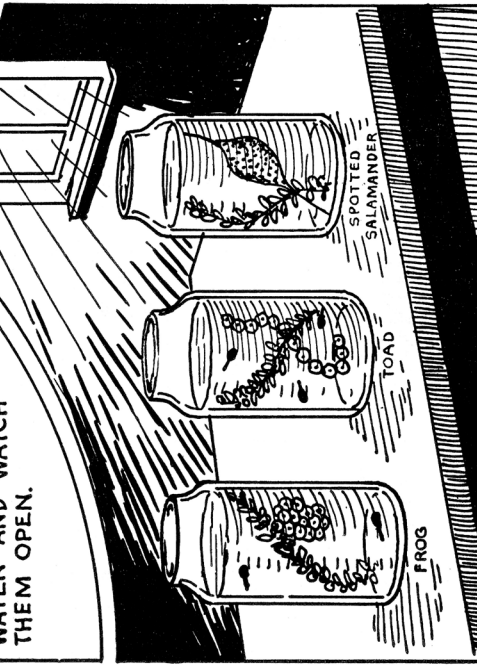
J.A. PARTRIDGE.
Drawn by D. Farwell.



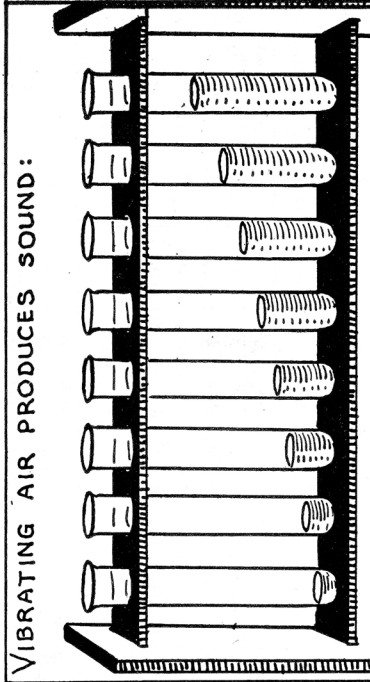
PUT SOME BUDS OF THE HORSE CHESTNUT IN WATER AND WATCH THEM OPEN.



TRY THE ILLUSTRATED EXPERIMENT. HOW DO TREES HELP PREVENT THE WEARING AWAY OF THE SOIL BY HEAVY SPRING RAINS? SUGGEST TWO WAYS.

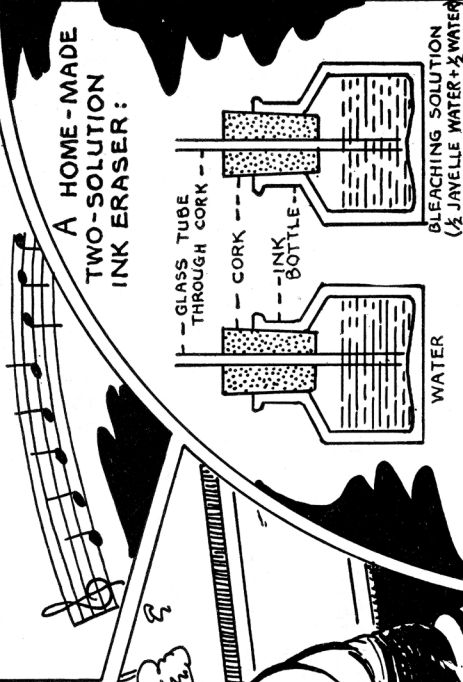


VISIT NEARBY PONDS AND STREAMS. BRING BACK EGGS OF THE FROG, THE TOAD, AND THE SALAMANDER. PUT THEM IN JARS. WATCH THEM DEVELOP.



VIBRATING AIR PRODUCES SOUND:

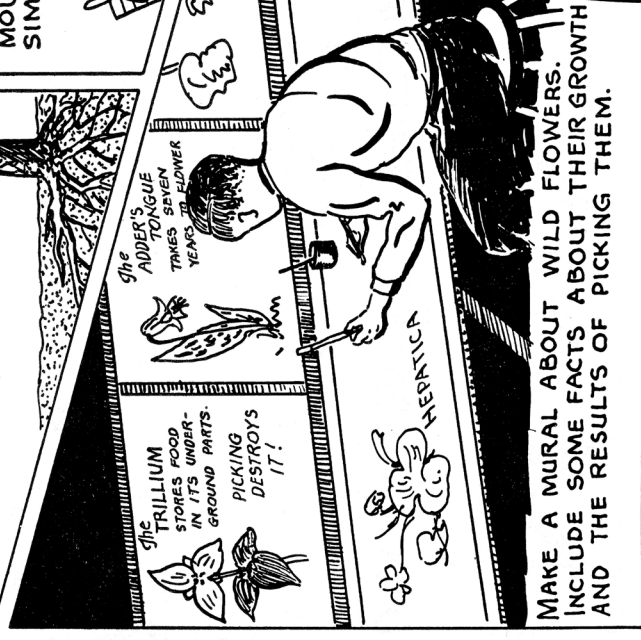
SET UP EIGHT TEST TUBES IN A STAND. ADJUST THE AMOUNT OF WATER IN EACH SO THAT YOU CAN PRODUCE THE EIGHT NOTES IN AN OCTAVE BY BLOWING ACROSS THE MOUTHS OF THE TEST TUBES. TRY TO PLAY SIMPLE TUNES.



A HOME-MADE TWO-SOLUTION INK ERASER:

APPLY WATER TO WRITING. BLOT. APPLY BLEACHING SOLUTION. BLOT. APPLY WATER AGAIN. BLOT. ALLOW PAPER TO DRY BEFORE RE-WRITING.

D. FARWELL.



MAKE A MURAL ABOUT WILD FLOWERS. INCLUDE SOME FACTS ABOUT THEIR GROWTH AND THE RESULTS OF PICKING THEM.

NATURAL SCIENCE -

MAY

- DAY BY DAY



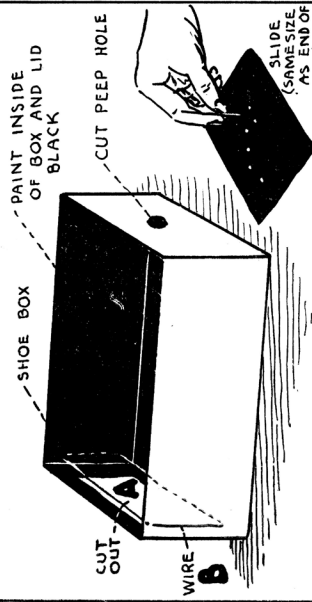
SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
<p>NEW MOON - MAY 7</p> <p>5 Look for wild flowers; but pick them sparingly or not at all.</p>	<p>1st QUARTER - MAY 14</p> <p>6 It is time to sow most vegetable seeds.</p>	<p>FULL MOON - MAY 21</p> <p>7 Be sure your hydrangea shrub has been pruned well back.</p>	<p>Be sure that your lawn has been rolled.</p> <p>8 Bird baths are needed now.</p>	<p>2 Transplant shrubs or perennials as soon as possible.</p>	<p>Draw the Big Dipper and North Star at 8 p.m.</p> <p>3 Observe how tent caterpillars find their way home at night.</p>	<p>Be sure your rose bushes have been pruned back to about 8" in length.</p> <p>4 Look and listen for bobolinks.</p>
<p>NEW MOON - MAY 7</p> <p>12 List all the things you have seen birds using in building nests.</p>	<p>1st QUARTER - MAY 14</p> <p>13 List birds that have returned during the past week.</p>	<p>FULL MOON - MAY 21</p> <p>14 Lady-bird beetles are searching for aphids.</p>	<p>Be sure that your lawn has been rolled.</p> <p>15 The trillium is Ontario's floral emblem; spare it.</p>	<p>2 Transplant shrubs or perennials as soon as possible.</p> <p>9 Most shrubs should not be pruned until after they bloom.</p>	<p>Draw the Big Dipper and North Star at 8 p.m.</p> <p>10 Observe how tent caterpillars find their way home at night.</p>	<p>Be sure your rose bushes have been pruned back to about 8" in length.</p> <p>11 Look and listen for bobolinks.</p>
<p>NEW MOON - MAY 7</p> <p>19 Discover the circle of five new twigs on the end of a branch of pine.</p>	<p>1st QUARTER - MAY 14</p> <p>20 Watch from day to day how a fruit tree blossom becomes a young fruit.</p>	<p>FULL MOON - MAY 21</p> <p>21 This is the cutworm, its work, and how to protect the plant.</p>	<p>Be sure that your lawn has been rolled.</p> <p>22 Half-grown cottontails are about now.</p>	<p>2 Transplant shrubs or perennials as soon as possible.</p> <p>16 It is about time for the scarlet tanager to return.</p>	<p>Draw the Big Dipper and North Star at 8 p.m.</p> <p>17 In what order do these bloom: apple, peach, cherry, plum, pear?</p>	<p>Be sure your rose bushes have been pruned back to about 8" in length.</p> <p>18 Find the clusters of hanging blossoms of oak trees as leaves are half-grown.</p>
<p>NEW MOON - MAY 7</p> <p>26 Hunt these butterflies: swallowtail; red admiral; painted lady.</p>	<p>1st QUARTER - MAY 14</p> <p>27 Transplant geraniums from a wet, rocky wood to a shady corner of your yard.</p>	<p>FULL MOON - MAY 21</p> <p>28 Rake out the patches of chickweed in your lawn.</p>	<p>Be sure that your lawn has been rolled.</p> <p>29 Do not take up out-of-doors bulbs until the leaves are dying.</p>	<p>2 Transplant shrubs or perennials as soon as possible.</p> <p>23 Ground-hogs eat the new clover near their burrows.</p>	<p>Draw the Big Dipper and North Star at 8 p.m.</p> <p>24 It is now safe to transplant annual flowering plants.</p>	<p>Be sure your rose bushes have been pruned back to about 8" in length.</p> <p>25 Do not buy wild flowers at the market; they should not be sold.</p>
<p>NEW MOON - MAY 7</p> <p>31 Hunt these butterflies: swallowtail; red admiral; painted lady.</p>	<p>1st QUARTER - MAY 14</p> <p>30 Cabbage butterflies will soon lay their eggs now.</p>	<p>FULL MOON - MAY 21</p> <p>31 June beetles have come out of their underground pupa cases.</p>	<p>Be sure that your lawn has been rolled.</p> <p>30 Cabbage butterflies will soon lay their eggs now.</p>	<p>2 Transplant shrubs or perennials as soon as possible.</p> <p>31 June beetles have come out of their underground pupa cases.</p>	<p>Draw the Big Dipper and North Star at 8 p.m.</p> <p>31 June beetles have come out of their underground pupa cases.</p>	<p>Be sure your rose bushes have been pruned back to about 8" in length.</p> <p>31 June beetles have come out of their underground pupa cases.</p>

Have your pupils build this calendar day by day on blackboard or chart. Use substitutions if desired.

J.A. PARTRIDGE
Drawn by D. Farwell.

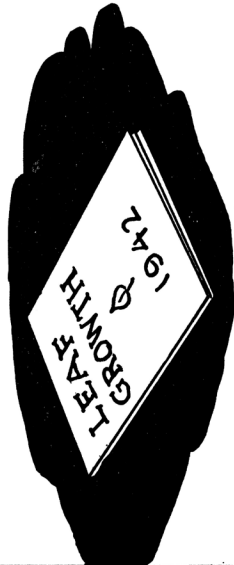
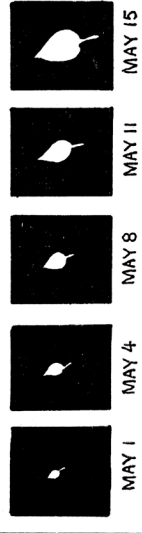
SCIENCE - ACTION - MAY.

STAR GROUPS:
LEARN THE CONSTELLATIONS WITH
A PEEP SHOW.



CUT OUT MOST OF ONE END OF BOX AS AT **A**. WIRE **B** IS TO HOLD SLIDES IN PLACE. ON BLACK PAPER, PRICK OUT STAR MAPS WITH NEEDLE. INSERT STAR MAP BETWEEN END **A** AND WIRE **B**. COVER.

TREES:



MAKE A BLUEPRINT BOOKLET SHOWING LEAF GROWTH. KEEP THE RECORD FOR COMPARISON IN FUTURE YEARS. (FOR BLUEPRINTING INSTRUCTIONS, SEE "THE SCHOOL", JUNE, 1941, PAGE 901)

WILD FLOWERS:



SKETCH THE WILD FLOWERS INSTEAD OF PICKING THEM. SEE HOW MUCH YOU WILL LEARN ABOUT THEM BY THIS METHOD OF GATHERING!

THIS?

THIS?

OR THIS?

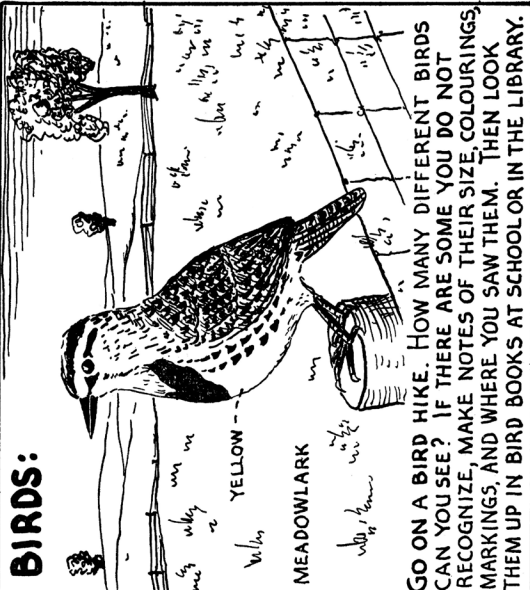


GO FISHING!



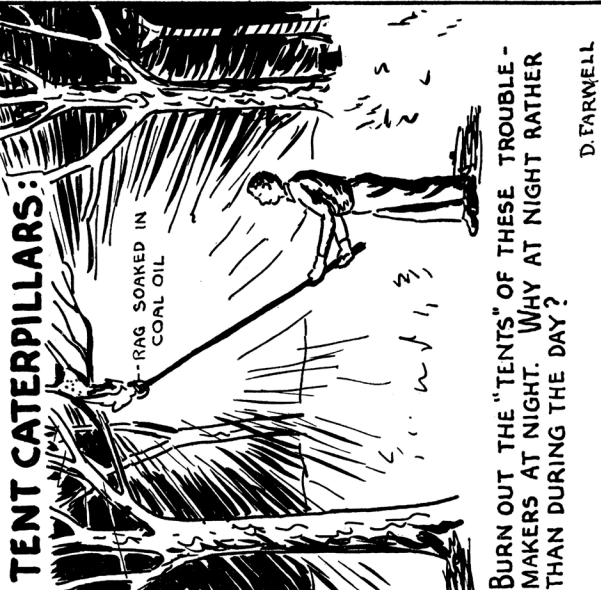
FRESH AIR, SUN, QUIETNESS, REST, EXERCISE, FUN, KNOWLEDGE, HEALTH, — AND FOOD! TRY IT!

BIRDS:



GO ON A BIRD HIKE. HOW MANY DIFFERENT BIRDS CAN YOU SEE? IF THERE ARE SOME YOU DO NOT RECOGNIZE, MAKE NOTES OF THEIR SIZE, COLOURINGS, MARKINGS, AND WHERE YOU SAW THEM. THEN LOOK THEM UP IN BIRD BOOKS AT SCHOOL OR IN THE LIBRARY.

TENT CATERpillars:



BURN OUT THE "TENTS" OF THESE TROUBLE-MAKERS AT NIGHT. WHY AT NIGHT RATHER THAN DURING THE DAY?

D. FARMWELL

NATURAL SCIENCE -

JUNE

- DAY BY DAY



SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
<p>NEW MOON - JUNE 5.</p> <p>2 What constellations can you name to-night?</p> <p>BOÖTES</p>	<p>1st QUARTER - JUNE 13.</p> <p>3 Visit a local stream and collect water life for a school aquarium.</p>	<p>FULL MOON - JUNE 19.</p> <p>4 Set up an aquarium with sand, pond water, water plants and animals.</p>	<p>LAST QUARTER - JUNE 27.</p> <p>5 List the names of birds nesting nearby - but do not disturb the nests!</p>	<p>6 What birds nest under bridges, in cliffs, or near water?</p>	<p>7 Visit the school lawn and list all the weeds you can find.</p>	<p>1 Read "What is so rare as a day in June?"</p>
<p>9 In what direction does the moon move between 8 and 9 p.m. to-night?</p>	<p>10 Make a sketch of young apples, peaches, pears, or cherries on a small twig.</p>	<p>11 Listen for the call of the ovenbird. "Teacher! Teacher! Teacher!"</p>	<p>12 Where, and at what time, does the moon set to-night?</p>	<p>13 Why is to-night's shape of the moon called "First Quarter"?</p>	<p>14 Record time of sunrise and sunset, and the length of day...</p>	<p>15 Compare the shape of the moon to-night with that of June 13.</p>
<p>16 Look for wild geranium plants in a damp woods.</p>	<p>17 Find all the kinds of clover that you can.</p>	<p>18 moths about an outdoor flame at night. Some are likely mayflies and some caddis-flies.</p>	<p>19 Bring five roadside weeds to school and look up their names.</p>	<p>20 Blossoms of evening primrose open at night. Find them by the roadside.</p>	<p>21 time of sunrise and sunset, and the length of day. Compare with June 14.</p>	<p>22 Pond lilies are rooted in the mud at the bottom of the pond.</p>
<p>23 You will enjoy a walk in the woods now. side may be beautiful.</p> <p>24 Using light, what you can about the habits of dew-worms in your lawn at night.</p>	<p>25 Find the small rose-pink sphinx moth visiting the flowers at night.</p>	<p>26 Mother bats fly about now with their young clinging to them.</p>	<p>27 Make a list of ways in which Nature has appealed to you in June.</p>	<p>28 Record sunrise and sunset, and the length of day. Compare with June 14 and June 21.</p>	<p>29 The population of birds and mammals is at about its highest now.</p>	

Have your pupils build this calendar day by day on blackboard or chart. Use substitutions if desired.

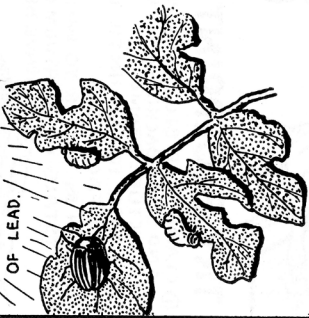
U. A. PARTRIDGE.
Drawn by D. Farwell

SCIENCE IN ACTION

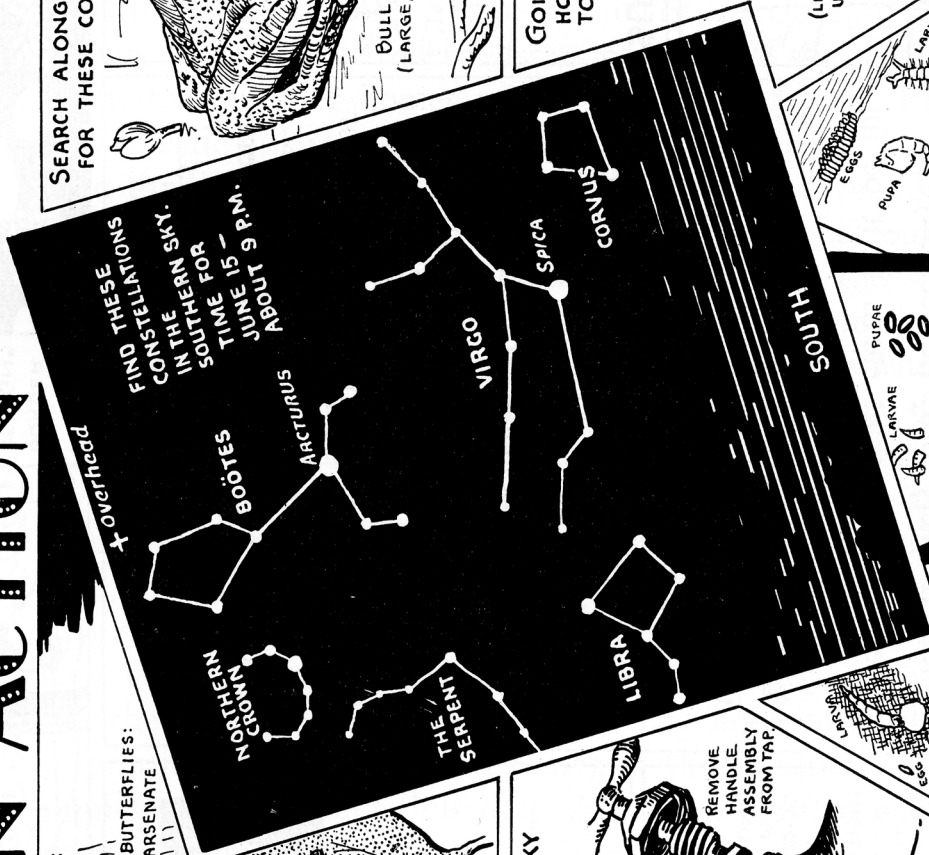
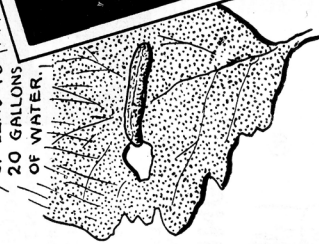
JUNE

PROTECT YOUR GARDEN AGAINST INSECTS:

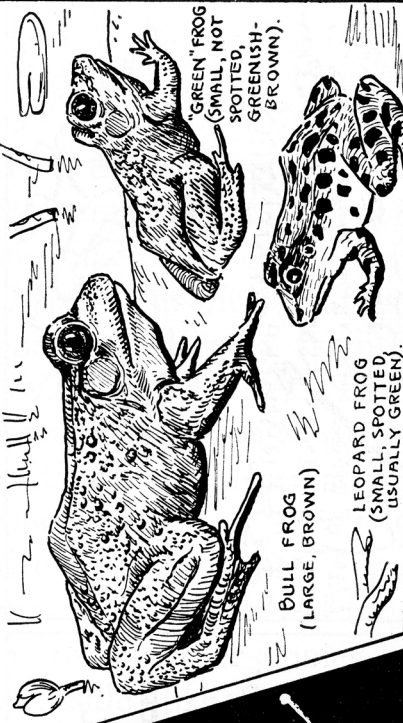
FOR POTATO BEETLES:
DUST OR SPRAY, PARIS
GREEN OR ARSENATE
OF LEAD.



FOR CABBAGE BUTTERFLIES:
SPRAY, 1 LB. ARSENATE
OF LEAD TO
20 GALLONS
OF WATER.

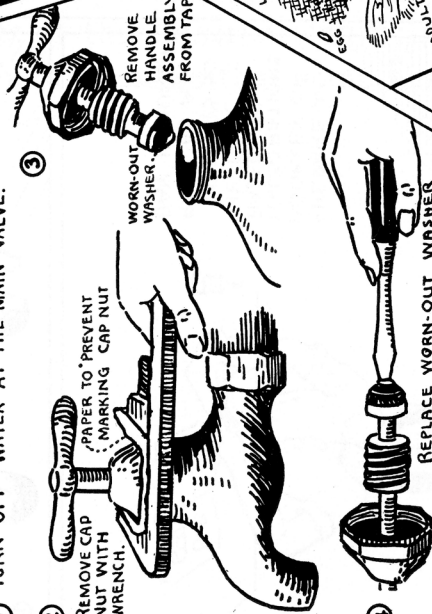


SEARCH ALONG THE SHORES OF CREEKS AND PONDS FOR THESE COMMON VARIETIES OF FROGS:



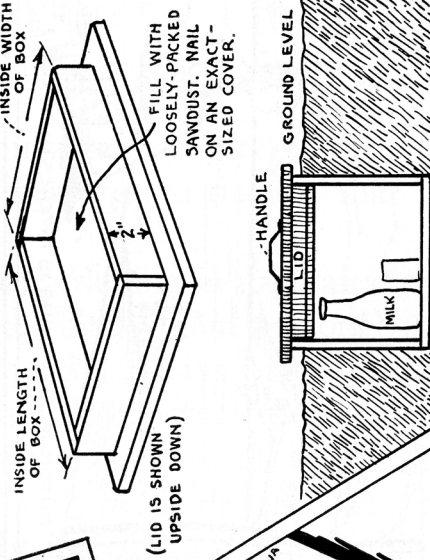
CAN YOU REPLACE THE WASHER OF A LEAKY TAP?

- TURN OFF WATER AT THE MAIN VALVE.
- REMOVE CAP NUT WITH WRENCH. PAPER TO PREVENT MARKING CAP NUT.
- REMOVE HANDLE ASSEMBLY FROM TAP.
- REPLACE WORN-OUT WASHER WITH A NEW ONE.
- REPLACE HANDLE ASSEMBLY AND CAP NUT. TIGHTEN WITH WRENCH.
- TURN ON WATER AT MAIN VALVE.

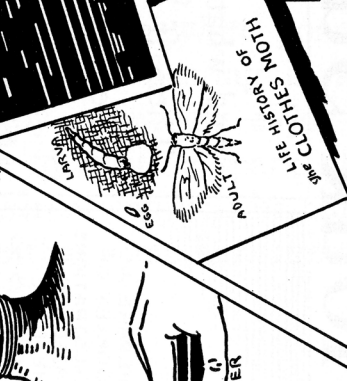
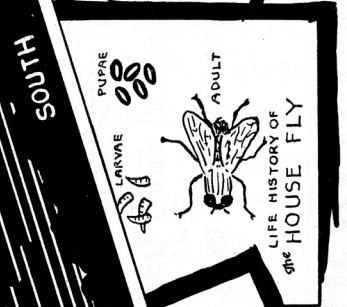
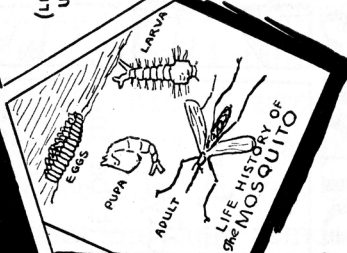


GOING CAMPING THIS SUMMER? HERE'S HOW TO MAKE A SIMPLE "REFRIGERATOR" TO HELP KEEP YOUR FOOD COOL:

GET OR MAKE A BOX 3" DEEPER THAN A MILK BOTTLE. MAKE A LID LIKE THIS FOR IT:



BURY BOX IN COOL GROUND, IN SHADE. IF ICE IS OBTAINABLE, A SMALL PIECE BESIDE THE FOOD WILL LAST WELL. PROVIDE DRAINAGE HOLE. D.FARWELL



FOR REFERENCE, MAKE CHARTS SHOWING THE LIFE HISTORIES OF HOUSEHOLD INSECT PESTS. DO WHAT YOU CAN TO CONTROL THEM.