Maple Production -
Hidden in History

Find the following hidden objects in the picture below:
banana, needle, fish, toothbrush, paper clip, open book, bell, tack, pencil, ice cream cone
Maple Production -
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banana, needle, fish, toothbrush, paper clip, open book, bell, tack, pencil, ice cream cone
Maple Production - Hidden in History

Find twelve hidden objects in the picture.

FIND: fish, pencil, toothbrush, paper clip, ice cream cone, comb, needle, shoe, light bulb, piece of pizza, mouse, heart.
Sugarbush Animal Classification

Maple producers have many animal friends who live in the sugarbush. Help them classify each animal on the list.

Sugarbush animals
Turtle
Squirrel
Wood Pecker
Rabbit
Deer
Chipmunk
Turkey
Peeper
Frog
Fox
Salamander
Snake
Grouse
Owl
Hawk

1. __________
2. __________
3. __________
4. __________
5. __________

1. __________
2. __________
3. __________
4. __________
5. __________

1. __________
2. __________
3. __________
4. __________
5. __________

Name ____________________
A maple tubing system is made up of several parts. At the tree is the spout, it is placed in the tap hole and connected to the drop line. Several drop lines will connect to the lateral line and several lateral lines will connect into the main line which delivers the sap to the sugarhouse or holding tank.

Maple Math – Adding spouts on tubing

The number of spout and drop lines on each of 4 lateral lines are listed below.

- Lateral line #1 has 4 spouts
- Lateral line #2 has 5 spouts
- Lateral line #3 has 5 spouts
- Lateral line #4 has 3 spouts

The 4 lateral lines are connected to a mainline. Add the spouts below.

<table>
<thead>
<tr>
<th>Line #1</th>
<th>Line #3</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>+Line #2</td>
<td>+Line #4</td>
</tr>
<tr>
<td>5</td>
<td>3</td>
</tr>
</tbody>
</table>

1st Total ____ 2nd Total ____

How many spouts are on mainline?
Add 1st total ____ and 2nd total ____ = ____ spouts

If each tap hole yielded 20 gallons of sap during the sap season, this mainline would carry a total of 340 gallons of sap, enough to make 8 gallons of maple syrup.
Maple Languages

Maple syrup is made in North America but not everyone who makes maple syrup speaks the same language. In the United States most maple producers speak English while in Canada maple producers speak French, English or both. See if you can learn to speak and write both.

<table>
<thead>
<tr>
<th>English</th>
<th>French</th>
</tr>
</thead>
<tbody>
<tr>
<td>Say the number/ Spell the number</td>
<td>Say the number/ Spell the number</td>
</tr>
<tr>
<td>1. One ___________</td>
<td>Un ___________</td>
</tr>
<tr>
<td>2. Two ___________</td>
<td>Deux ___________</td>
</tr>
<tr>
<td>3. Three ___________</td>
<td>Trois ___________</td>
</tr>
<tr>
<td>4. Four ___________</td>
<td>Quatre ___________</td>
</tr>
<tr>
<td>5. Five ___________</td>
<td>Cinq ___________</td>
</tr>
<tr>
<td>6. Six ___________</td>
<td>Six ___________</td>
</tr>
<tr>
<td>7. Seven ___________</td>
<td>Sept ___________</td>
</tr>
<tr>
<td>8. Eight ___________</td>
<td>Huit ___________</td>
</tr>
<tr>
<td>9. Nine ___________</td>
<td>Neuf ___________</td>
</tr>
<tr>
<td>10. Ten ___________</td>
<td>Dix ___________</td>
</tr>
</tbody>
</table>

Quebec is the only place where more maple producers speak French than English.

The gray shading on the map shows where sugar maples grow, they only grow in the southern half of Quebec.
A maple tree grows by adding a new ring of wood each year. By counting the rings we can tell how old a tree is. How old are these trees?

This tree is too young to tap. How many growth rings does it have? ____

This tree is still too small to tap. How many growth rings does it have? ____

Turn to the back of this page when this side is finished
This tree is just big enough to tap for the first time, 10” in diameter. How many rings does this tree have? _____. How many years old is it? _____.

It takes many years for a maple tree to grow big enough to tap, usually 25 to 70 years, less years where it gets lots of sun, more years where crowded by other trees.
Maple Words – Cross Word Puzzle

Across
1. I have fun when I ____
3. What I say when I meet someone ____
4. When I get maple candy I take a ____
5. I like to run ____ in a sugarhouse
8. When it rains the trees get ____
10. You collect sap in a sugar ____
11. Boiling syrup is very ____
12. The trunk of the tree is ____
13. I eat maple ice cream with a ____
16. A spout or ____ is placed into the tap hole
17. Sap comes from a ____
19. Pancakes with syrup I eat with a ____

Down
2. Sap is made up mostly of ____
6. Maple cream tastes so very ____
7. When the maple season starts, the woods are full of ____
9. Making maple syrup is hard work not ____
14. You can collect sap with a ____
15. Sap comes out of the tap ____
17. Sap is stored in a big ____
18. The sun makes a maple tree ____
20. Maple syrup is great to ____

Word Bank
Easy, Water, Hello, Horses, Tank, Pail, Play, Fork, Spile, Good, Snow, Bite, Bush, Round, Hot, Grow, Hole, Tree, Spoon, Wet
Maple Words

Circle the words from the list as you find them in the puzzle.

Maple  Trees  Butter
Spoon  Farm  Maple
Cake  Sugarhouse  Soil
Old  Money  Woods
Hike  Ate  Tap
Steam  Cotton  Bush
Jug  Pan  Snow
Cook  Snack  Gallon
Green  Eat  Tubing

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Maple Geography

Maple syrup is made only in North America. It is made in some of the states of the United States and in several provinces of Canada. Draw a line from the state symbol on the map to the name of the state or province.

New York  Vermont  New Brunswick  Maine  Ohio

In the United States Vermont makes the most syrup followed by New York second and Maine third. In Canada Quebec makes more maple syrup than all the other states and provinces combined.
Maple Geography

Maple syrup is made only in North America. It is made mostly around the area of the Great Lakes, St. Lawrence River and the Atlantic Ocean. Draw a line connecting the Lake, the River and the Ocean to the correct name.

Lake Superior  Atlantic Ocean
St. Lawrence River
Lake Huron
Lake Michigan
Lake Erie
Lake Ontario

Sugar maple trees grow best where it is cold in the winter and plenty of rain in the summer. They do not grow well where it is either too hot or too dry.
Maple Production in History – Boiling Sap

In the 1700s and 1800s maple sap was usually boiled outside in large cast iron kettles hung over a wood fire. The whole family would be involved in collecting firewood and gathering sap. Usually the sap was boiled to make granulated maple sugar rather than the maple syrup common today.

Questions from the story and picture
1. Boiling sap takes a lot of heat, the fuel used to boil sap was ________.
2. Instead of making maple syrup from sap the early settlers made the sap into ________.
3. The sap was usually boiled in large kettles made of cast ________.
4. Today maple sap is usually boiled in a sugar house, back then it was boiled ____ _____.
Maple Production in History – Gathering Sap

In the 1700s and 1800s maple sap was collected in wooden buckets. Gathering the sap was done by hand where the buckets full of sap were carried to the boiling kettles. At times a yoke was used to make the trip easier. If the sugar maples were too far away, sap was poured into a gathering tank that was mounted on a sled pulled by horses or oxen.

Questions from the story and picture
1. As the sap came from the tree it was collected in ________ buckets.
2. A sled mounted with a gathering tank would be pulled by horses or ________.
3. A maple producer could carry buckets of sap more easily if they used a ________.
4. If the sugar maples were not too far away the _____ would be carried by hand in buckets to the boiling kettles.
Maple Letters

Match the letters to the numbers to complete the secret message!

MAPLE _______ ARE _______ IN FEBRUARY OR

_______ BY _______ A _______ _______ IN THE

_____. TREES WILL _______ 1, 2 OR 3 _______ HOLES

ON THE TREE _______ A _______ OR

_______ IS PUT ______ THE TAP HOLE. SPOUTS _______ OR _______ TUBING ATTACHED

TO _______ THE SAP. SAP WILL ______ EACH _______

THE TEMPERATURE _______ BELOW _______

FOLLOWED BY A _______. SPOUTS ARE REMOVED _______

AT THE _______ OF THE SYRUP _______.
Maple Math - Addition

Add the numbers to find the letters that spell a tasty maple treat.

8 +2 Y
5 +6 M
6 +9 P
1 +2 T

3 +4 A
5 +3 B
11 +12 E
8 +9 N

7 +9 C
14 +6 F
21 +6 K
12 +6 O

5 +4 R
17 +7 W
21 +10 L
8 +4 D

11 7 15 31 23 16 18 3 3 18 17 16 7 17 12 10

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www.agclassroom.org/ny
Maple Spelling Words

Say the word       Write the word       Use the word
1. Maple  ___________ I love maple syrup on pancakes.
2. Spoon  ___________ I use a spoon to put maple syrup on my ice cream.
3. Steam  ___________ When maple syrup is cooking it makes a lot of steam.
4. Tree  ___________ Maple syrup is made from sap that comes from the maple tree.
5. Green  ___________ A sugar maple tree has green leaves in the spring and summer.
6. Hike  ___________ It is great fun to hike through the sugarbush to watch sap running.
7. Jug  ___________ Maple syrup is often sold in a brown plastic jug.
8. Deer  ___________ Deer are a very common sight in the maple sugar bush.
9. Sap  ___________ It takes about 40 gallons of sap to make one gallon of syrup.
10. Leaf  ___________ A sugar maple leaf will usually turn yellow or orange in the fall.
11. Drill  ___________ A power drill is used to make the tap hole about 2 inches deep.
12. Pan  ___________ Sap is boiled in a syrup pan called an evaporator.
13. Sugar  ___________ Maple sap is usually about 2% sugar, maple syrup is about 67%.
14. Snow  ___________ Snow helps keep the sugar bush cool during the maple season.
15. Bush  ___________ A sugar bush is a forest with maple trees used to make maple syrup.
Maple sap will flow from a taphole any time the temperature drops below freezing then warms up to above freezing again. Based on the high and low temperatures listed for each day, cross out the days when the sap did not run. To run the low temperature must be less than 32° F and the high above 32° F.

### April 2013 Calendar

<table>
<thead>
<tr>
<th>Sunday</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
<th>Saturday</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Low 28° F High 30° F</td>
<td>Low 23° F High 31° F</td>
<td>Low 31° F High 40° F</td>
<td>Low 42° F High 50° F</td>
<td>Low 55° F High 61° F</td>
<td>Low 33° F High 38° F</td>
</tr>
<tr>
<td>7</td>
<td>Low 28° F High 31° F</td>
<td>Low 27° F High 36° F</td>
<td>Low 29° F High 39° F</td>
<td>Low 30° F High 44° F</td>
<td>Low 28° F High 45° F</td>
<td>Low 31° F High 56° F</td>
</tr>
<tr>
<td>14</td>
<td>Low 38° F High 50° F</td>
<td>Low 28° F High 58° F</td>
<td>Low 38° F High 41° F</td>
<td>Low 18° F High 30° F</td>
<td>Low 22° F High 31° F</td>
<td>Low 31° F High 39° F</td>
</tr>
<tr>
<td>21</td>
<td>Low 41° F High 49° F</td>
<td>Low 35° F High 57° F</td>
<td>Low 34° F High 50° F</td>
<td>Low 39° F High 60° F</td>
<td>Low 37° F High 52° F</td>
<td>Low 44° F High 49° F</td>
</tr>
<tr>
<td>28</td>
<td>Low 41° F High 68° F</td>
<td>Low 51° F High 71° F</td>
<td>Low 48° F High 74° F</td>
<td>Low 55° F High 61° F</td>
<td>Low 33° F High 38° F</td>
<td>Low 45° F High 53° F</td>
</tr>
</tbody>
</table>

How many days did the sap run? _____
Each **spring** a **hole**, called a **tap**, is drilled in a maple **tree**. When it **warms** up **after** a freeze, **sap** will **run** out of the hole into a **pail** or a **tube** to be collected for making **maple syrup**. Sap has **some sugar** in it but it is **not** very **sweet**.

Unscramble the words below shown in bold above then use the second column to put them in alphabetical order.

1. Meso ______ 1. ______
2. Ton _____ 2. ______
3. Etbu _____ 3. ______
4. Ringps _______ 4. ______
5. Lohe _____ 5. ______
6. Rete _____ 6. ______
7. Nur ____ 7. ______
8. Rugas_______ 8. ______
9. Apil _____ 9. ______
10. Pat ____ 10. ______
11. Pas ____ 11. ______
12. Ewtes_______ 12. ______
13. Rysup_______ 13. ______
14. Mepal ______ 14. ______
15. Swarm_______ 15. ______