Welcome to the world of making maple syrup!

Enjoy the activities, see where maple syrup comes from, and find ways you can enjoy this wonder from the woods!
Match the letters to the numbers to complete the secret message!

Give a _______ _______ _______ a _______.

Fill a _______ _______ up with _______.

_______ it down and it gets _______ _______.

_______ _______ _______ _______ _______ _______.

a _______ _______ _______ _______ _______ _______ _______ _______.

ANSWER: Give a maple tree a tap. Fill a bucket up with sap. Boil it down and it gets sweet, maple syrup, a golden treat!
Which of the leaf shapes below is NOT a maple leaf? Put an X through it.

Which one is a sugar maple leaf? Circle the sugar maple.

The other two leaves are from other kinds of maple trees not usually used in making maple syrup.

ANSWERS: The first leaf (top left) is a sugar maple, the last (bottom right) is an oak leaf.
Tapping Rules: Can you fill in the missing words?

1. The most common months for tapping are __________ and __________.
2. Only __________ trees should be tapped, not oak or poplar.
3. The tree should not be tapped unless it is at least __________ inches in diameter.
4. The tap hole should be less than _________ inches deep.
5. The largest trees should have no more than _________ taps.
6. Collected sap should be gathered from buckets at least once per _________.

Answers: February and March, maple, ten, two, three, day
What are your favorite maple foods? Make a maple-lover’s shopping list.

SHOPPING LIST

syrup  maple cream  maple fudge
maple cream  pancake mix  maple sugar
maple jelly  ice cream
Use the grid to finish the maple leaf below.
Which sign belongs in front of a maple sugarhouse?

ANSWER: The sign on the left in the middle row is the sign for a maple sugarhouse.
Find your way through the tree maze into the bucket.

Like in this maze, maple trees have growth rings each year that tell how old the tree is, the maze would represent a tree nine years old (count the rings). Real maple trees are between 35 and 70 years old when they are finally big enough (10 inches in diameter) to tap for sap.
How many words can you think of that rhyme with each sugarhouse word below?

<table>
<thead>
<tr>
<th>sap</th>
<th>pan</th>
<th>fire</th>
<th>jug</th>
<th>steam</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Count the buckets of sap it takes to make one gallon of syrup.

ANSWER: Typically it takes 43 gallons of sap to make one gallon of maple syrup.
Unscramble the words below shown in bold above.

1. bntgpeamuli ___________________ ____________________
2. huusergaso ______________________________________
3. katggrinhanet ___________________ ___________________
4. dragknitig _______________________ ___________________
5. lamorcoreb ______________________ ___________________
6. tvaropearo ______________________________________
7. wideroof ______________________________________
8. pratep ______________________________________
9. baskcutep ________________________ ____________________
10. samypurple ______________________ ____________________

Maple syrup is made each spring when freezing nights and warm days make the sap run. The maple producer takes a tapper and drills a small hole called a tap in the maple tree. Sap is collected from each tap in maple tubing or with a sap bucket and moved to the sugarhouse in the gathering tank. The sap is boiled in an evaporator often using firewood or oil as the fuel. When the maple syrup is finished a grading kit is used to decide if it is a Golden color - delicate taste, Amber color - rich taste, Dark color - robust taste, or Very Dark color - strong taste.

ANSWERS: Maple tubing, sugarhouse, gathering tank, grading tank, grading kit, amber color, evaporator, firewood, tapper.
Which stack of pancakes is different from the others?

**Answer:** The middle right stack of pancakes has four pancakes, the rest have only three.
ACROSS
2. Measure boiling sap.
3. Made from sap. (2 wds.)
6. ___ rises off boiling sap.
11. Syrup is made in a ____.
13. Syrup can be made into ____.

14. Maple trees have a green ____.
15. Easy way to collect sap.
17. A fuel used to boil sap.

DOWN
1. A ____ is needed before sap will flow.
2. Maple is a type of ____.
4. Something you eat syrup on.
5. ____ drips from a tap.
7. Sap comes from a ____ tree.
8. ____ burns in an evaporator.
9. Sap will ____ when hot.
10. ____ the tree with a drill.
11. Maple syrup tastes ____.
12. Holding place for sap.
16. Amber color - rich taste is a syrup ____.
Draw a picture of your favorite maple food.
Find the tube that leads from the tree to the sugarhouse.

Maple tubing is used by many maple producers to bring the sap fresh from the tree to the sugar house for boiling.
Connect the dots.

The evaporator is used to boil the sap into syrup. It consists of a fire arch, boiling pan, and steam hood.
Color all the shapes with a dot in them. What do you see?
Circle the words from the list as you find them in the puzzle.

- maple
- tree
- tap
- sweet
- steam
- snow
- freeze
- bucket
- thermometer
- candy
- jug
- sugarhouse
- pancake

<table>
<thead>
<tr>
<th>R</th>
<th>T</th>
<th>D</th>
<th>W</th>
<th>T</th>
<th>S</th>
<th>R</th>
<th>E</th>
<th>U</th>
<th>S</th>
</tr>
</thead>
<tbody>
<tr>
<td>E</td>
<td>Z</td>
<td>R</td>
<td>E</td>
<td>R</td>
<td>W</td>
<td>R</td>
<td>B</td>
<td>E</td>
<td>W</td>
</tr>
<tr>
<td>T</td>
<td>Z</td>
<td>U</td>
<td>S</td>
<td>E</td>
<td>T</td>
<td>O</td>
<td>Y</td>
<td>R</td>
<td>T</td>
</tr>
<tr>
<td>E</td>
<td>A</td>
<td>E</td>
<td>T</td>
<td>E</td>
<td>E</td>
<td>E</td>
<td>O</td>
<td>A</td>
<td>Y</td>
</tr>
<tr>
<td>M</td>
<td>G</td>
<td>P</td>
<td>E</td>
<td>M</td>
<td>R</td>
<td>C</td>
<td>R</td>
<td>D</td>
<td>P</td>
</tr>
<tr>
<td>O</td>
<td>F</td>
<td>W</td>
<td>A</td>
<td>R</td>
<td>T</td>
<td>E</td>
<td>N</td>
<td>O</td>
<td>T</td>
</tr>
<tr>
<td>M</td>
<td>S</td>
<td>P</td>
<td>M</td>
<td>N</td>
<td>F</td>
<td>A</td>
<td>J</td>
<td>C</td>
<td>T</td>
</tr>
<tr>
<td>R</td>
<td>L</td>
<td>N</td>
<td>M</td>
<td>W</td>
<td>C</td>
<td>R</td>
<td>U</td>
<td>U</td>
<td>A</td>
</tr>
<tr>
<td>E</td>
<td>S</td>
<td>U</td>
<td>O</td>
<td>H</td>
<td>R</td>
<td>A</td>
<td>G</td>
<td>U</td>
<td>S</td>
</tr>
<tr>
<td>H</td>
<td>S</td>
<td>C</td>
<td>R</td>
<td>W</td>
<td>R</td>
<td>T</td>
<td>K</td>
<td>K</td>
<td>K</td>
</tr>
<tr>
<td>T</td>
<td>Z</td>
<td>Z</td>
<td>C</td>
<td>B</td>
<td>U</td>
<td>C</td>
<td>K</td>
<td>E</td>
<td>T</td>
</tr>
</tbody>
</table>
Color the sugarhouse.
Can you find the differences between the pictures on the left to the ones on the right? There are 8 differences in each.
**Sodoku Puzzle**

Leaving one picture per box, cross out extra shapes so that every row, every column, and every 2x2 box contains the following 4 shapes:

<table>
<thead>
<tr>
<th>Sample</th>
<th>Sample</th>
<th>Sample</th>
<th>Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="leaf.png" alt="Sample" /></td>
<td><img src="bucket.png" alt="Sample" /></td>
<td><img src="pancakes.png" alt="Sample" /></td>
<td><img src="icon.png" alt="Sample" /></td>
</tr>
</tbody>
</table>

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="pancakes.png" alt="Pancakes" /></td>
<td><img src="bucket.png" alt="Bucket" /></td>
<td><img src="pancakes.png" alt="Pancakes" /></td>
<td><img src="pancakes.png" alt="Pancakes" /></td>
</tr>
<tr>
<td><img src="leaf.png" alt="Leaf" /></td>
<td><img src="bucket.png" alt="Bucket" /></td>
<td><img src="leaf.png" alt="Leaf" /></td>
<td><img src="leaf.png" alt="Leaf" /></td>
</tr>
<tr>
<td><img src="pancakes.png" alt="Pancakes" /></td>
<td><img src="pancakes.png" alt="Pancakes" /></td>
<td><img src="leaf.png" alt="Leaf" /></td>
<td><img src="pancakes.png" alt="Pancakes" /></td>
</tr>
<tr>
<td><img src="icon.png" alt="Icon" /></td>
<td><img src="icon.png" alt="Icon" /></td>
<td><img src="bucket.png" alt="Bucket" /></td>
<td><img src="icon.png" alt="Icon" /></td>
</tr>
<tr>
<td><img src="pancakes.png" alt="Pancakes" /></td>
<td><img src="pancakes.png" alt="Pancakes" /></td>
<td><img src="pancakes.png" alt="Pancakes" /></td>
<td><img src="pancakes.png" alt="Pancakes" /></td>
</tr>
<tr>
<td><img src="leaf.png" alt="Leaf" /></td>
<td><img src="leaf.png" alt="Leaf" /></td>
<td><img src="leaf.png" alt="Leaf" /></td>
<td><img src="leaf.png" alt="Leaf" /></td>
</tr>
<tr>
<td><img src="bucket.png" alt="Bucket" /></td>
<td><img src="bucket.png" alt="Bucket" /></td>
<td><img src="bucket.png" alt="Bucket" /></td>
<td><img src="bucket.png" alt="Bucket" /></td>
</tr>
<tr>
<td><img src="icon.png" alt="Icon" /></td>
<td><img src="icon.png" alt="Icon" /></td>
<td><img src="icon.png" alt="Icon" /></td>
<td><img src="icon.png" alt="Icon" /></td>
</tr>
</tbody>
</table>

21
Draw a picture and write a story about the process of maple syrup.
Which one doesn't not belong with the others? Put an X through it.

Maple Sugar
The Story of Maple Syrup

Maple trees are tapped in February or March by drilling a small hole in the tree. Trees will have 1, 2 or 3 taps depending on size. A spile, or spout, is put in the tap hole. Spiles have buckets or plastic tubing attached to them. Sap is either poured from buckets or channeled through tubing into holding tanks before it is processed in the sugarhouse. Alternate freezing and thawing temperatures are required to produce a flow of sap from the tree. These conditions occur only on relatively few days (5 to 20 days) in the late winter or early Spring. Sap is heated in evaporators, large cooking pans, to remove most of the water and to concentrate the sugar into syrup. The cooking also causes the sugars to produce the maple flavor and amber color. It takes about 40 gallons of sap to make a gallon of syrup. As sap moves through the evaporator the sugar concentration increases from about 2% to 66% when it is drawn off from the syrup pans... After syrup is collected from the evaporator, it is filtered and stored in airtight barrels to preserve its quality and freshness until it is moved into consumer sized packages.

Maple syrup is classified by color and taste from almost clear (golden color - delicate taste) to amber (amber color - rich taste). All contain the same amount of sugar. The color relates to the intensity of flavor. Some people enjoy the golden and delicate taste, while other people prefer the dark color and robust taste syrup. The most intense maple flavor is found in very dark - strong taste syrup.

Maple Popcorn

Here’s what you will need to make it:
• 1/2 stick melted butter or margarine  
• 4 cups popped popcorn in a large bowl  
• 1/2 cup maple syrup  
• spoon for mixing

Here’s what you have to do:

1. Check with a grown-up before you start this.

2. Melt a half stick butter in the microwave for about 45 seconds. Make sure you use a microwave-safe bowl -- no metal in the microwave!

3. Add 1/2 cup maple syrup to the melted butter and stir it together.

4. Pour the mixture over the popcorn and mix it with a wooden spoon.

5. Now you’re all set for a night at the movies!
Good-bye and thanks for coming!

To find and visit a sugarhouse near you check out mapleweekend.com or nysmaple.com

For more information about maple production and maybe some help for some of the tougher activities in this activity book, check out www.cornellmaple.com

All illustrations by Tim Davis