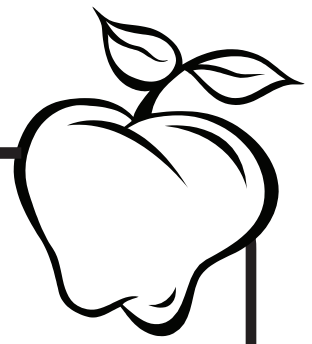


Eastern Apples



CRISPIER • JUICIER • TASTIER

About Pennsylvania's Apple Industry

Did you know that Pennsylvania's apple growers harvest between 10 and 12 million bushels of apples per year? This production ranks Pennsylvania as fifth in the nation!

The four south central Pennsylvania counties of Adams, Cumberland, Franklin and York make up one of the Eastern United States' greatest apple growing regions. Can you find these counties on a map of Pennsylvania? Bedford, Berks, Erie, Juniata, Lehigh and Snyder counties are also major apple producing counties. However, apples are grown in all 67 counties.

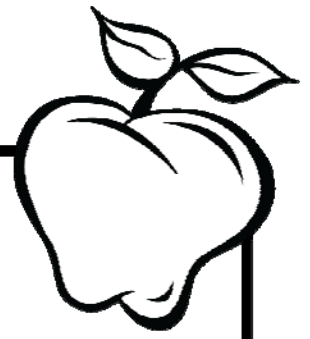
Apples are a very versatile and nutritious fruit. Approximately one-third of our state's apple crop is sold fresh through farm markets and supermarkets. What better way to spend a fall weekend than touring one of Pennsylvania's farm markets for fresh apples and cider!

The remainder of the crop is sold for processing to make apple cider, applesauce, apple pies and delicious apple juice. Did you know that the world's largest apple processor, Knouse Foods Cooperative, Inc., is based in Adams County? Knouse Foods sells its apple products under brand names like Musselman's, Lucky Leaf, and Speas Farm. Mott's USA and Zeigler's Cider are other nationally known brands that are produced in Pennsylvania.

Did you know that Red Delicious apples make up 30% of our state's apple crop – our most popular variety? The second most popular variety is Golden Delicious, which accounts for 16% of the crop.

You know the old saying, "An Apple a Day Keeps the Doctor Away." Well, apples are a very nutritious and tasty way to chase away your hunger. They are an excellent source of fiber, ranking just behind prunes, with four grams per serving. The National Cancer Institute suggests that diets high in fiber may reduce the risk of developing certain types of cancers. So stock up and enjoy!

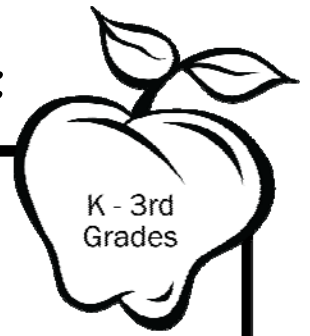
Not only are apples an excellent source of fiber, but they contain pectin, potassium, vitamin C, only 80 calories and are fat free. Best of all, apples have no cholesterol, saturated fat or sodium. What better way to treat your body right and tingle your taste buds!



Information about Apples

- 🍏 Apples are one of the oldest of all fruits grown by fruit growers. Growers have cultivated different varieties of apples for at least 2,000 years. About 2,500 different varieties are found in the United States.
- 🍏 Each variety of apples is grown for special food uses. Some types of apples make better cider or juice. Other kinds of apples are used for cooking or eating. Apples may be colored shades of red, green, or yellow.
- 🍏 The growers use a method called “grafting” to produce the best apple crop. Grafting means to take a branch from one tree and attach it to another apple tree. Soon the branch grows along with the tree. A tree may take up to 8 years to produce an apple crop. Although some orchards have full-grown apple trees, a newer method is to graft branches with full-size fruit onto smaller dwarf trees. This allows the grower to fit more trees in the orchard.
- 🍏 Apple trees need careful pruning, or trimming, during the first five years of growth. The trees, blossoms, and fruit need to be protected from insects that harm the apples. Usually, chemicals are used to protect the orchard. The apple tree needs a season of dormancy, or rest. For this reason, apple trees do not grow well in areas where winter temperatures average higher than 48 degrees Fahrenheit. Frost can damage the apple blossoms in the spring. Apple trees grow best on hilltops or slopes because the frost moves down the slope before the blossoms can be ruined.
- 🍏 Unlike some other fruit, apples are usually harvested when they are fully ripe. Apples stored carefully at low temperatures will be fresh for almost a year.
- 🍏 Washington, New York, Michigan, California and Pennsylvania are the leading states in the production of apples in the United States.

Teacher Ideas by Subject:



Science Ideas

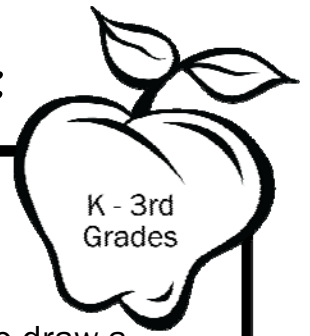
- 🍏 Have students make a mural to show how the apple tree would look in each of the four seasons
- 🍏 Bring in 4-5 different apple varieties for students to weigh and measure
- 🍏 Have students examine a fresh apple and complete the enclosed five senses chart
- 🍏 Make a class chart entitled “An Apple a Day Keeps the Doctor Away” then have students list, draw or cut and glue pictures to show all the ways apples are prepared

Reading and Writing Ideas

- 🍏 Read the book, “Ten Apples Up on Top” by Dr. Seuss. Provide students with a 12 x 17 piece of drawing paper. Have the students draw their picture at the bottom of the page (held lengthwise) and use apple cut outs to count and glue the apples on their papers as you read the story
- 🍏 Have students examine a fresh apple, then write a sensory poem with the sentence starters: I hear, I taste, I feel, I see, I smell
- 🍏 Students can create an acrostic poem using the letters A-P-P-L-E
- 🍏 Students can create a shape poem using the outline of an apple. Use the graphic organizer found at <http://www.readwritethink.org> to help students generate word lists and shapes



Teacher Ideas by Subject:



Arts and Crafts Ideas

- 🍏 Have students create a fingerprint apple tree. Use brown paint to draw a tree trunk, then allow students to dip finger in green paint to create fingerprint leaves. Copy the following poem on the project for a special keepsake:

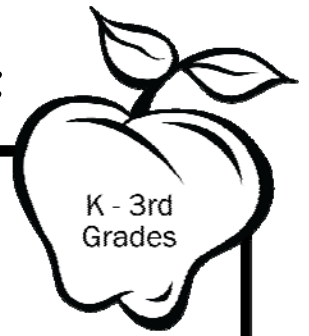
*These are special apples, hanging on this tree.
I made them from my finger prints, they are a part of me!*

- 🍏 Cut fresh apples in half sideways to show the 'hidden star' inside. Then, allow students to use paints, with the apple as a stamp to create a beautiful print. The "Apple Star" poem goes nicely with this craft.
- 🍏 Duplicate the enclosed apple blossom worksheet for each student. Allow students to color the picture, then glue fresh popcorn onto the paper to represent the blossoms
- 🍏 Create a "Mr. Apple Head"- provide each student with a fresh apple, then use toothpicks to attach marshmallow eyes, gum drop ears, licorice arms, etc.


Book List

- 🍏 How Do Apples Grow? - by Betsy Maestro ISBN# 0064451178
- 🍏 Ten Red Apples - by Pat Hutchins ISBN# 0688167974
- 🍏 Apple Farmer Annie - by Monica Wellington ISBN# 0142401248
- 🍏 Apples -by Gail Gibbons ISBN# 0823416691
- 🍏 The Seasons of Arnold's Apple Tree - by Gail Gibbons ISBN# 0152712453
- 🍏 The Story of Johnny Appleseed - by Alike ISBN# 0671667467
- 🍏 The Apple - by Joy Cowley, The Wright Group ISBN# 078020509-X
- 🍏 Apple Picking Time - by Michele Benoit Slawson ISBN# 0517885758
- 🍏 Applesauce - by Shirley Kurtz ISBN# 1561480657
- 🍏 Apple Tree - by Barrie Watts ISBN# 0382094360
- 🍏 Apples, Apples, Apples - by Nancy Eliz Wallace ISBN# 0761451815
- 🍏 An Apple Tree Through the Year - by Claudia Schnieper ISBN# 0876144830


Teacher Ideas by Subject:




Songs

 **Little Apples** – sung to the tune of *“Ten Little Indians”*


One little, two little, three little apples,
Four little, five little, six little apples,
Seven little, eight little, nine little apples,
All fell to the ground.

 **Apples Off My Tree** – sung to the tune of *“Skip to My Lou”*

Pick some apples off my tree,
Pick some apples off my tree,
Pick some apples off my tree,
Pick them all for you and me.

 **Apple Song** – sung to the tune of *“Have You Ever Seen a Lassie?”*

Have you ever seen an apple, an apple, an apple,
Have you ever seen an apple, that grows on a tree?
A red one, a yellow one, a red one, a yellow one.
Have you ever seen an apple, that grows on a tree?

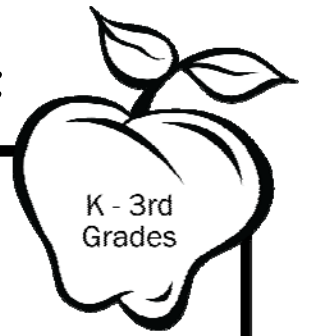
 **Apple Teapot** – sung to the tune of *“I’m a Little Teapot”*

I’m a little apple, short and round,
I make a munchy, crunchy sound.
If you bite into me you will see –
I’m delicious as can be!

 **Apples** – sung to the tune of *“Are You Sleeping?”*

Picking apples, picking apples,
One by one, one by one.
Put them in a basket, put them in a basket.
Oh what fun! Oh what fun!

Teacher Ideas by Subject:



Poems

Apple Tree

Way up high in the apple tree
Two red apples smiled at me.
I shook that tree as hard as I could-
Down came the apples,
Mmmm...they were good!

The Apple Star

Take an apple
round and red.
Don't slice down,
Slice through instead.
Right inside it
You will see,
A star as pretty as can be.

Apple Tree

Apples, apples,
One, two, three,
Apples for you
Apples for me.
Apples big,
Apples small.
Apple trees tiny,
Apple trees tall.
Apples sour,
Apples sweet,
Apples, apples,
are nice to eat.

The Apple Star

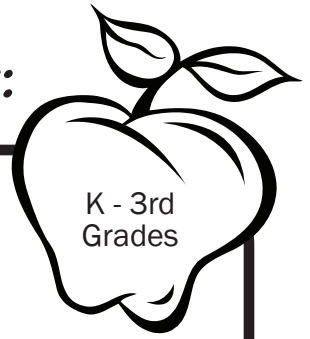
Apples, apples, what a treat,
Sweet and tart and good to eat.
Apples green and apples red,
Hang from branches overhead.
And when they ripen,
Down they drop,
So we can taste our apple crop.

Apples

Apples in the attic,
Apples in the hall.
Apples in the summer,
Apples in the fall.
Apples make you healthy,
Apples make you tall.
I will eat some apples.
I will eat them all!



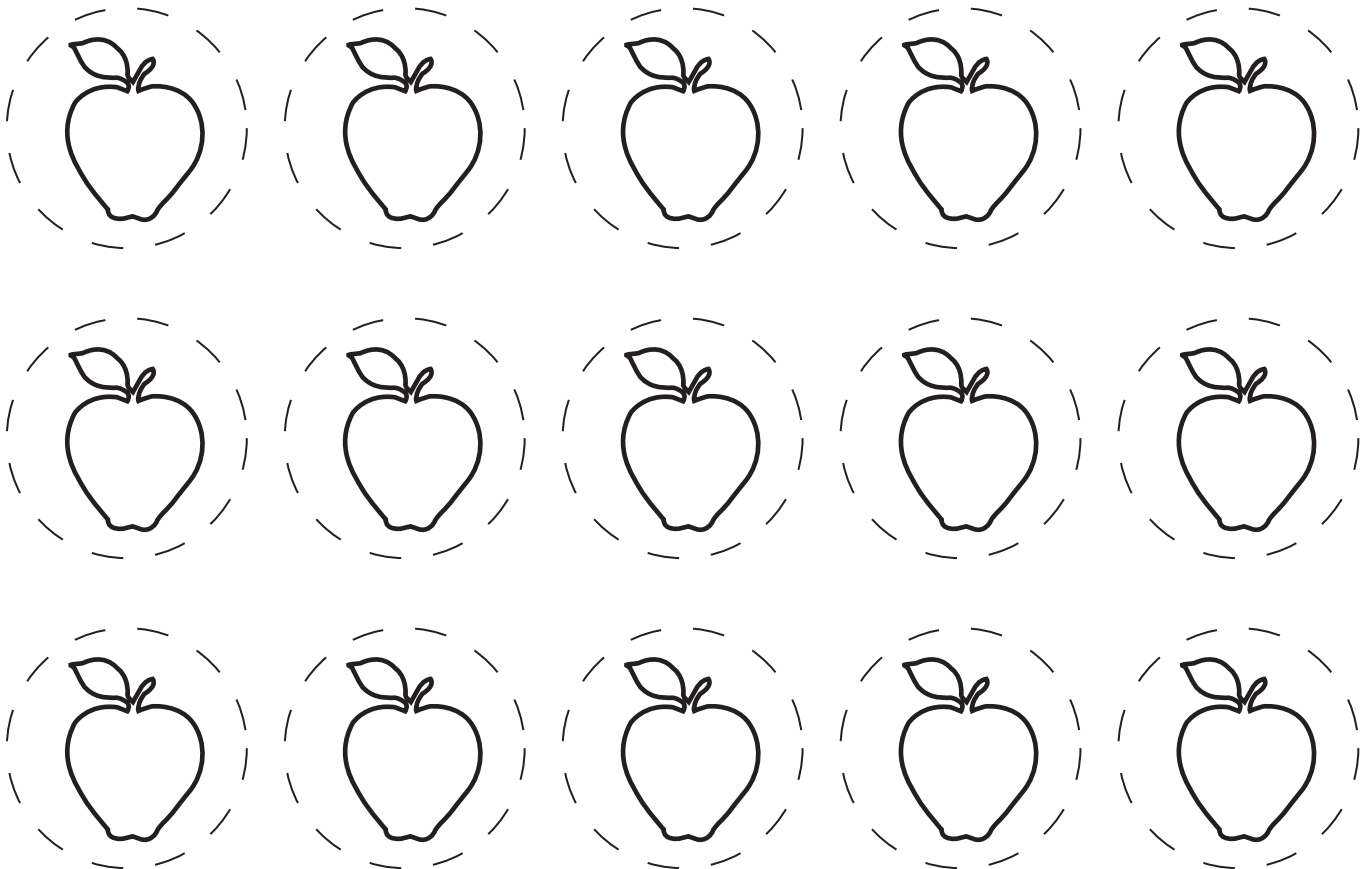
Teacher Ideas by Subject:



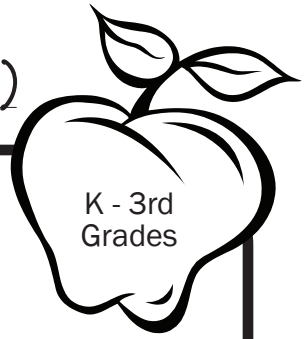
Math Ideas

Use these apple cut outs in the following ways:

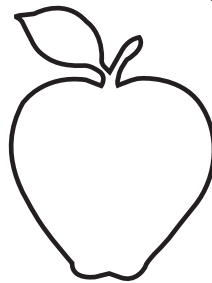
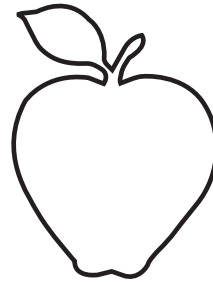
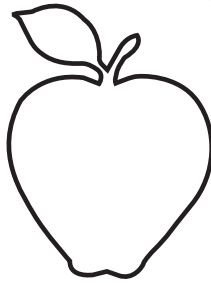
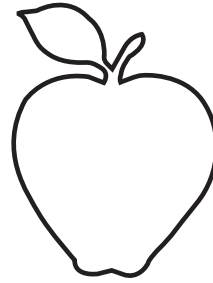
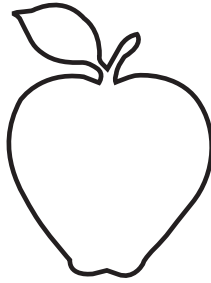
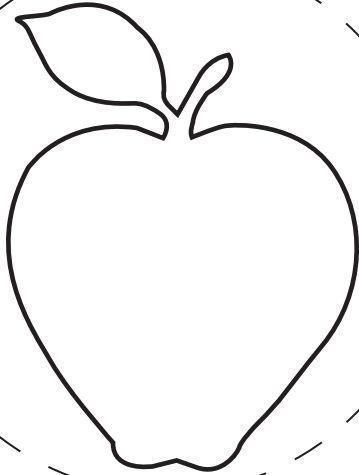
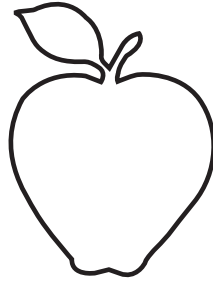
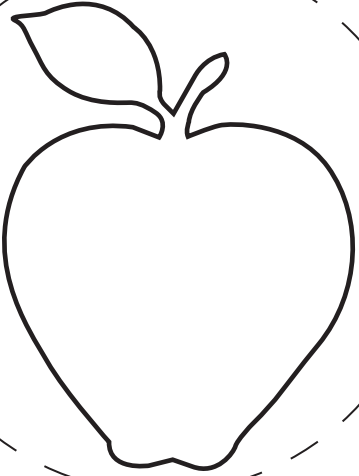
- Print these pages on different colors (such as pink, green and yellow), have students cut out and sort the apples by color or size
- Have students cut out apples and place them in size order
- Use the apple cut outs to create a pattern and have students duplicate the pattern with their own apples
- Cut the apples in strips and have students color their own patterns (for longer, more complicated patterns, tape strips together)
- Use the apple cut outs for a non-standard measurement tool. Ask students, “how many apples long is your desk, your pencil” etc.
- Use the apple cut outs for a variety of counting or fraction activities



Math Ideas: (continued)

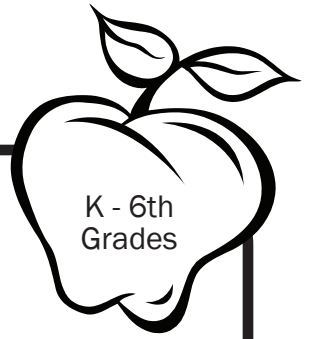


K - 3rd
Grades

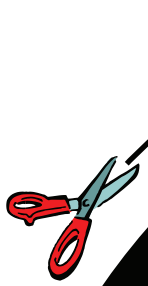


Name: _____

Date: _____



K - 6th
Grades



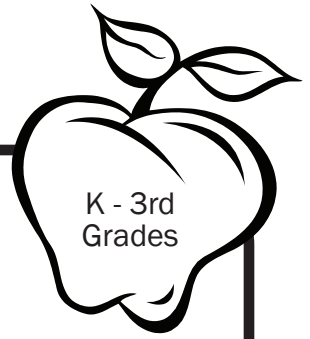
How Apples Grow

BY: _____

Cut
Out

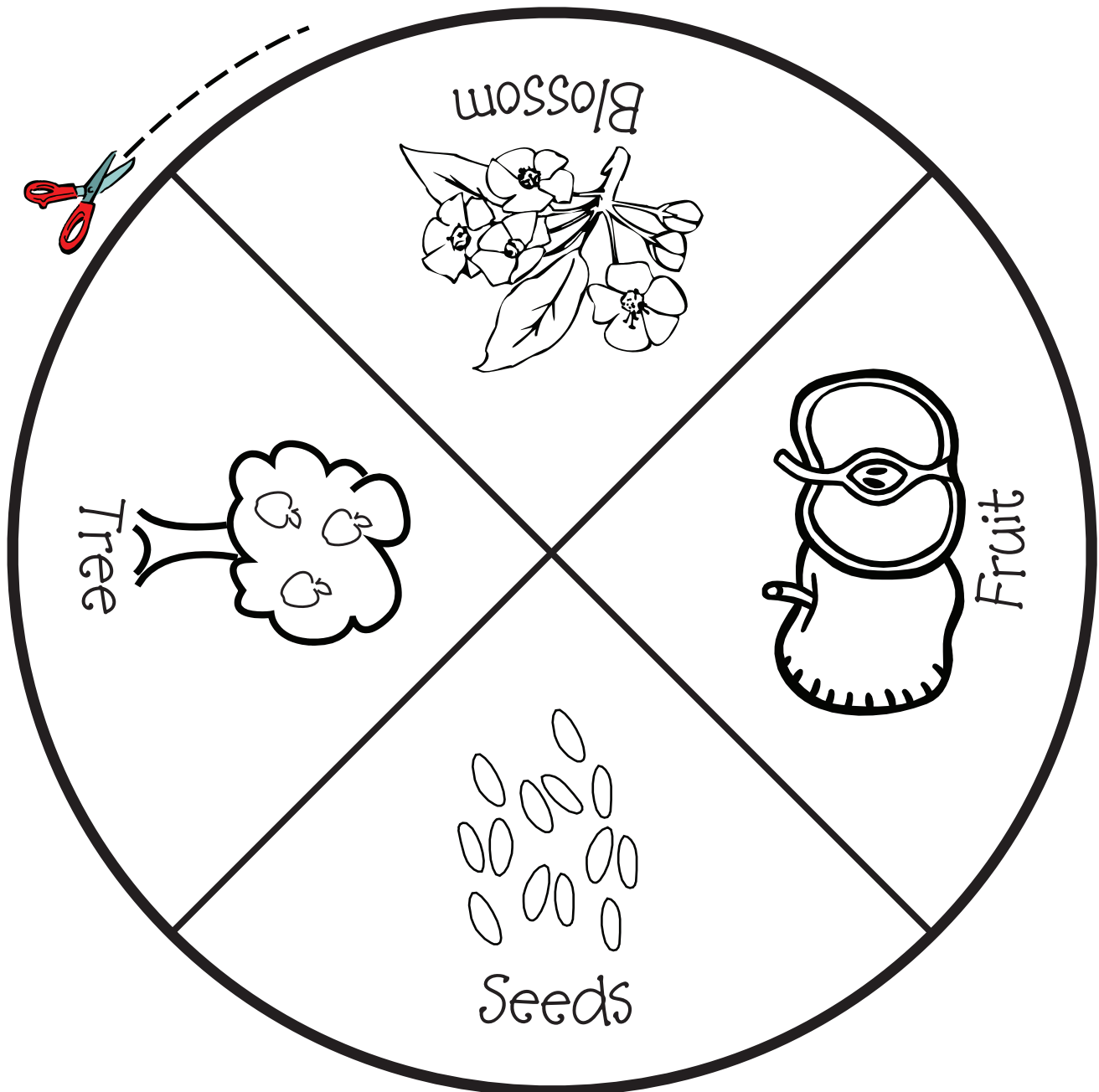
Name: _____

Date: _____



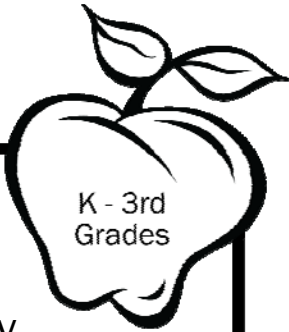
Directions: Create an apple life cycle wheel

1. Cut out the apple on the previous page.
2. Cut out the triangle shape to create a viewing window.
3. Cut out the circle below and place it behind the first circle.
4. Attach circles with a brad at the dot in the center.
5. Students can turn the wheel as they explain how an apple grows!



Name: _____

Date: _____



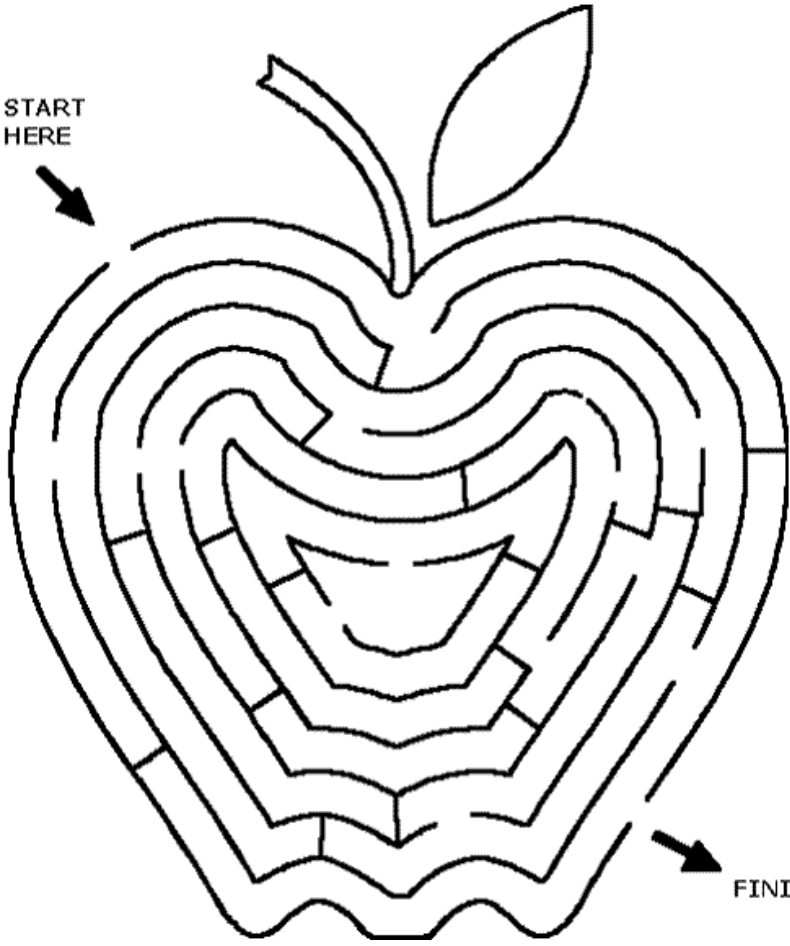
Apple Products

How many ways can apples be prepared? List as many as you can think of, the list is started for you!

applesauce

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
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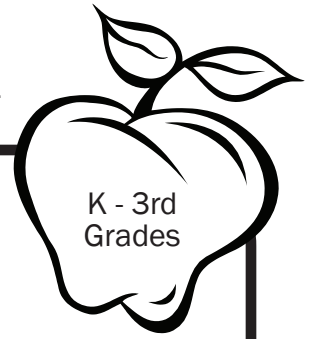
START
HERE



FINISH

Name: _____

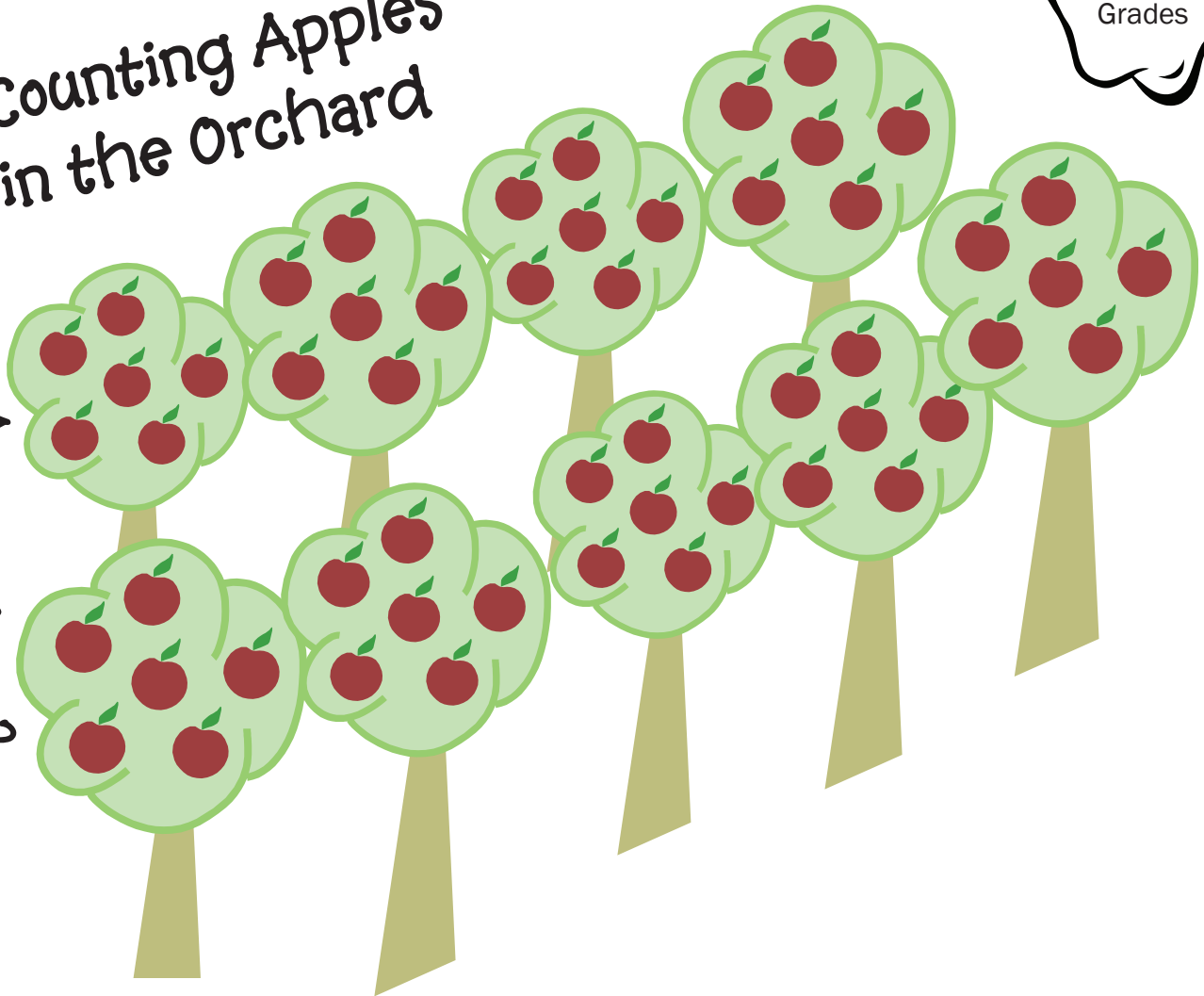
Date: _____



Counting Apples in the Orchard

ROW 1

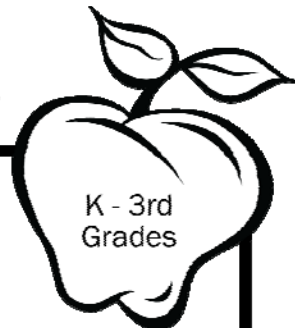
ROW 2



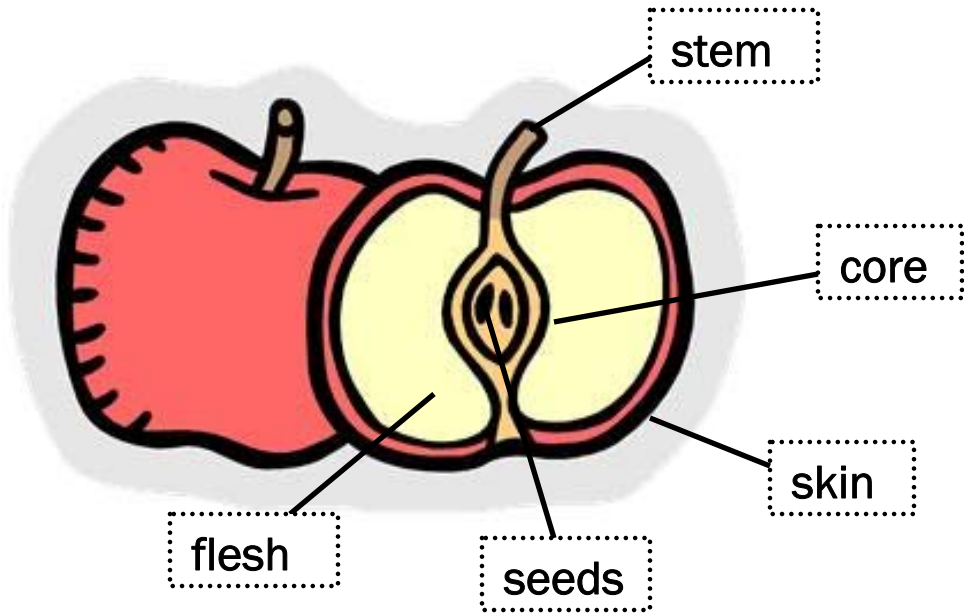
1. How many apple trees are in Row 1? _____
2. How many apple trees are in Row 2? _____
3. How many more apple trees are in Row 2 than Row 1? _____
4. How many apple trees in all? _____
5. How many apples are in Row 1? _____
6. How many apples are in Row 2? _____
7. How many more apples are in Row 2 than Row 1? _____
8. How many apples are in the orchard? _____

Name: _____

Date: _____



The Parts of an Apple



Directions: Look at the parts of the apple above. Now see if you can unscramble each apple part.

ROCE _____

DESES _____

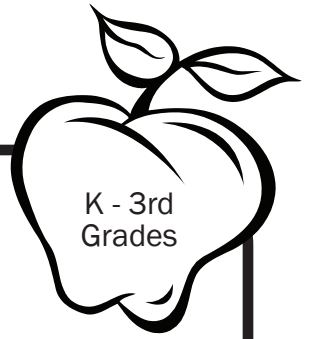
MEST _____

EHLSE _____

KINS _____

Name: _____

Date: _____

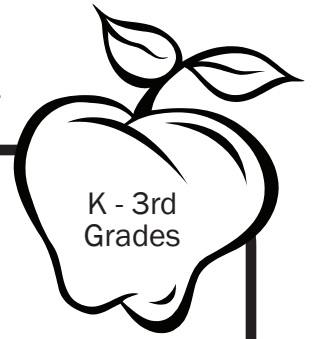


Apples in Bloom!



Name: _____

Date: _____

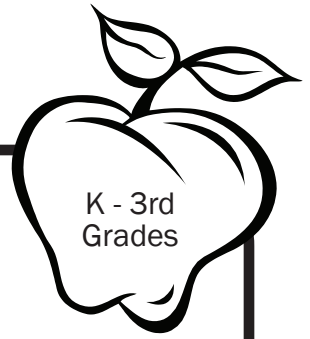


Connect the Dots!



Name: _____

Date: _____

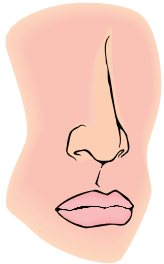
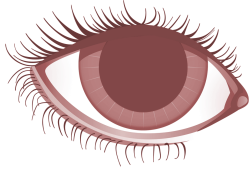


Sensing Apples!

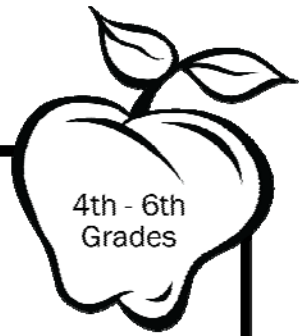
Apple Variety
#1

Apple Variety
#2

Apple Variety
#3



Teacher Ideas by Subject:



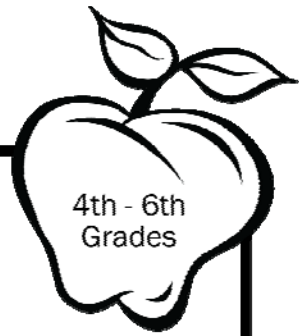
Math Ideas

- 🍏 Bring in 4-5 different varieties of apples for students to weigh and measure, then create graphs to compare the results
- 🍏 Using the same apples above, have students count the seeds in each variety and graph the results
- 🍏 Using the familiar rhyme “I love you a bushel and a peck”, discuss what these measurements mean. Use the website <http://www.convert-me.com> to discover which really is more, a bushel or a peck
- 🍏 Have students use a string to measure the distance around an apple. Use this information to calculate circumference, diameter or radius

Science Ideas

- 🍏 Research the nutritional value of an apple and have students explain how each vitamin and mineral helps the human body
- 🍏 Collect leaves and blossoms from different apple varieties to examine under a magnifying glass and compare
- 🍏 Experiment with apples to see which stays fresher longer- one that is refrigerated or one that is kept at room temperature
- 🍏 Experiment with apple slices to see which substances aid in preservation- lemon juice, salt or baking soda
- 🍏 Experiment with a variety of fruits and vegetables (such as apples and carrots) to see which will sink, which will float and why!

Teacher Ideas by Subject:

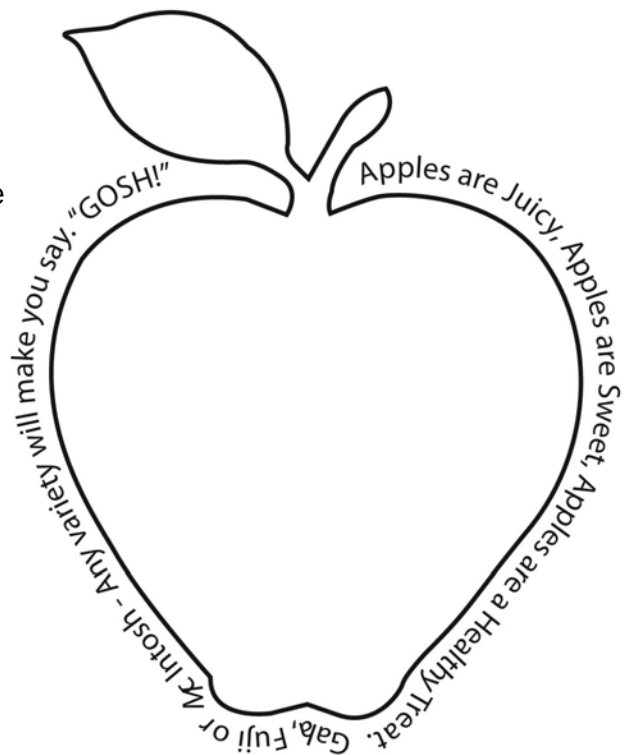


Writing Ideas

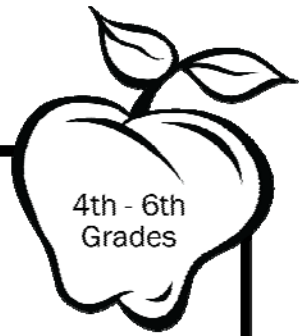
- 🍏 Have students research different apple varieties, then write a persuasive essay to explain which variety is the 'best' and why
- 🍏 Have students research the nutritional benefits of apples, then write a persuasive essay to explain why the apple should be voted as 'food of the month'
- 🍏 Have students examine a fresh apple, then write a sensory poem with the sentence starters: I hear, I taste, I feel, I see, I smell
- 🍏 Discuss or research the following apple sayings and have students write a paragraph to explain their meanings:
 1. An apple a day keeps the doctor away
 2. Don't upset the apple cart
 3. You're the apple of my eye
 4. Rotten to the core
 5. New York City= The Big Apple
 6. The apple never falls far from the tree
- 🍏 Have students write a concrete poem about apples- see the example on the right:

Websites

- 🍏 <http://www.pennsylvaniaapples.org>
- 🍏 <http://www.usapple.org>
- 🍏 <http://www.allaboutapples.com>
- 🍏 <http://www.applejuice.org>



Teacher Ideas by Subject:



Arts and Crafts Ideas

- 🍏 Apple Pomanders- Take a fresh apple and a jar of whole cloves. Stud the apple with cloves by pushing the stems into the apple skin. Students can cover the entire fruit with cloves spaced closely together, or they can make patterns, spirals, letters, etc. When finished, tie a ribbon around the apple to be suspended in a room or closet and enjoy the fresh scent.
- 🍏 Apple Terra Cotta pot- For each student you will need a 3” terra cotta pot and saucer, red and green paint and brush, small wooden spool, acrylic spray. Directions: Paint both the pot and saucer red and the wooden spool green. After paint dries, paint a face on the pot (or apply google eyes) and spray with acrylic sealer. Flip the saucer upside down and glue the wooden spool on the middle of the saucer to look like a stem. Add green leaves made of foam or construction paper if desired.



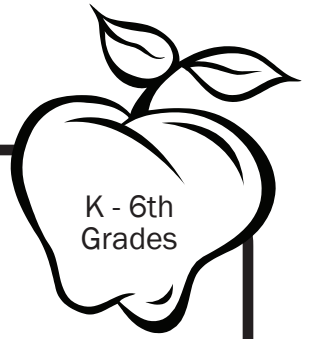
Picture courtesy of www.about.com

Book List

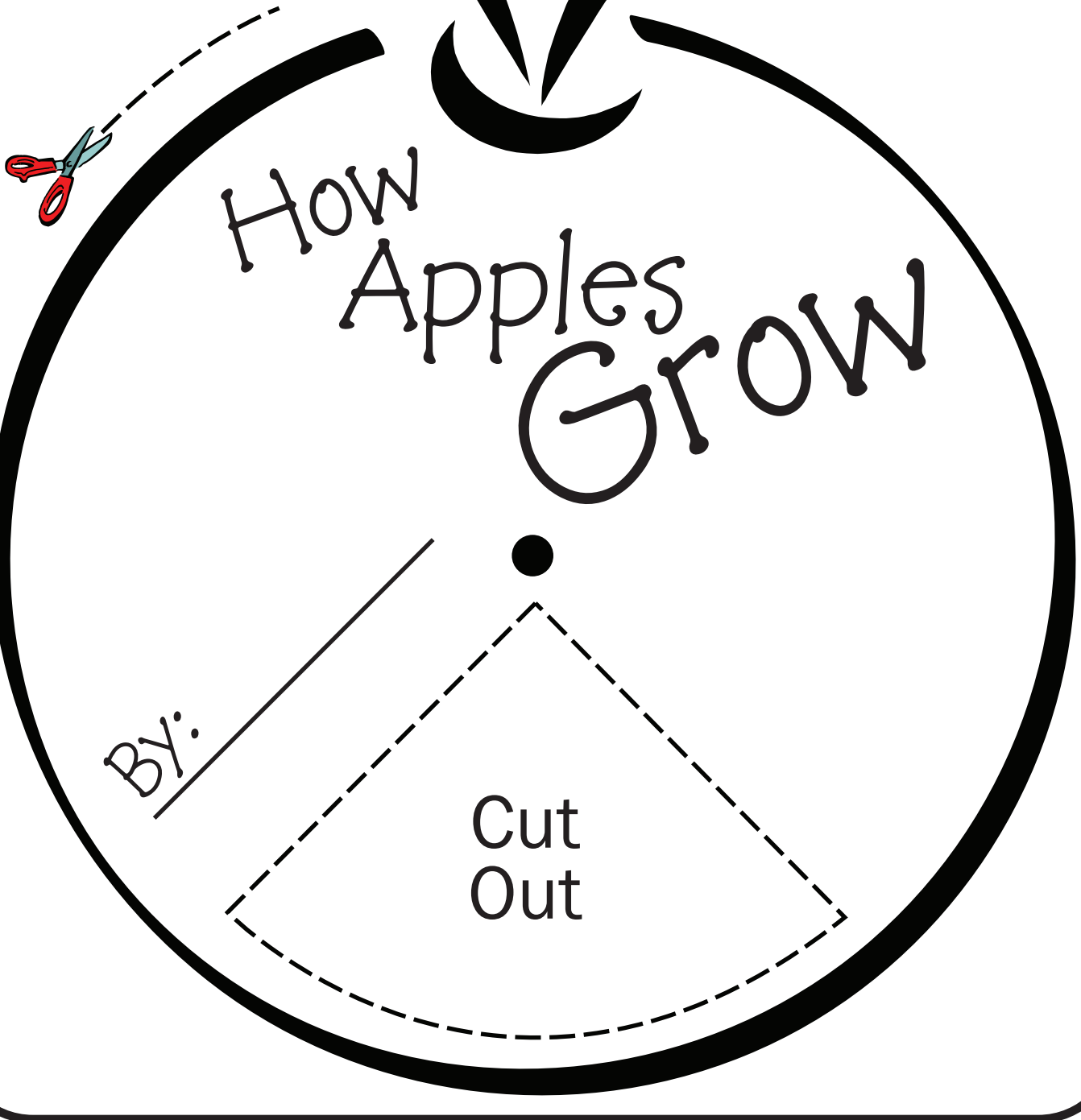
- 🍏 Apple Fractions - by Jerry Pallotta ISBN# 0439389013
- 🍏 Apples to Oregon - by Deborah Hopkinson ISBN# 0689847696
- 🍏 Eating Apples - by Gail Saunders Smith ISBN#1560655828
- 🍏 Apple is My Sign -by Mary Riskind ISBN# 0395308523
- 🍏 A Visit to the Apple Orchard – by Patricia J. Murphy ISBN# 0736825795
- 🍏 An Apple Festival – by Lisa Gabbert ISBN# 0823953424
- 🍏 The Little Apple – by Deborah Smith Ford ISBN# 1425188060
- 🍏 The Apple Gatherer – by Steven Schnur ISBN# 0595335848
- 🍏 Hubert and the Apple Tree– by Bruno Hachler ISBN# 0735820449
- 🍏 Mr. Peabody’s Apples – by Madonna ISBN# 0670058839

Name: _____

Date: _____

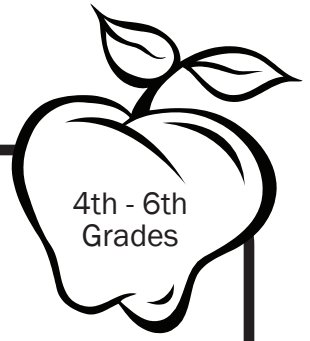


K - 6th
Grades



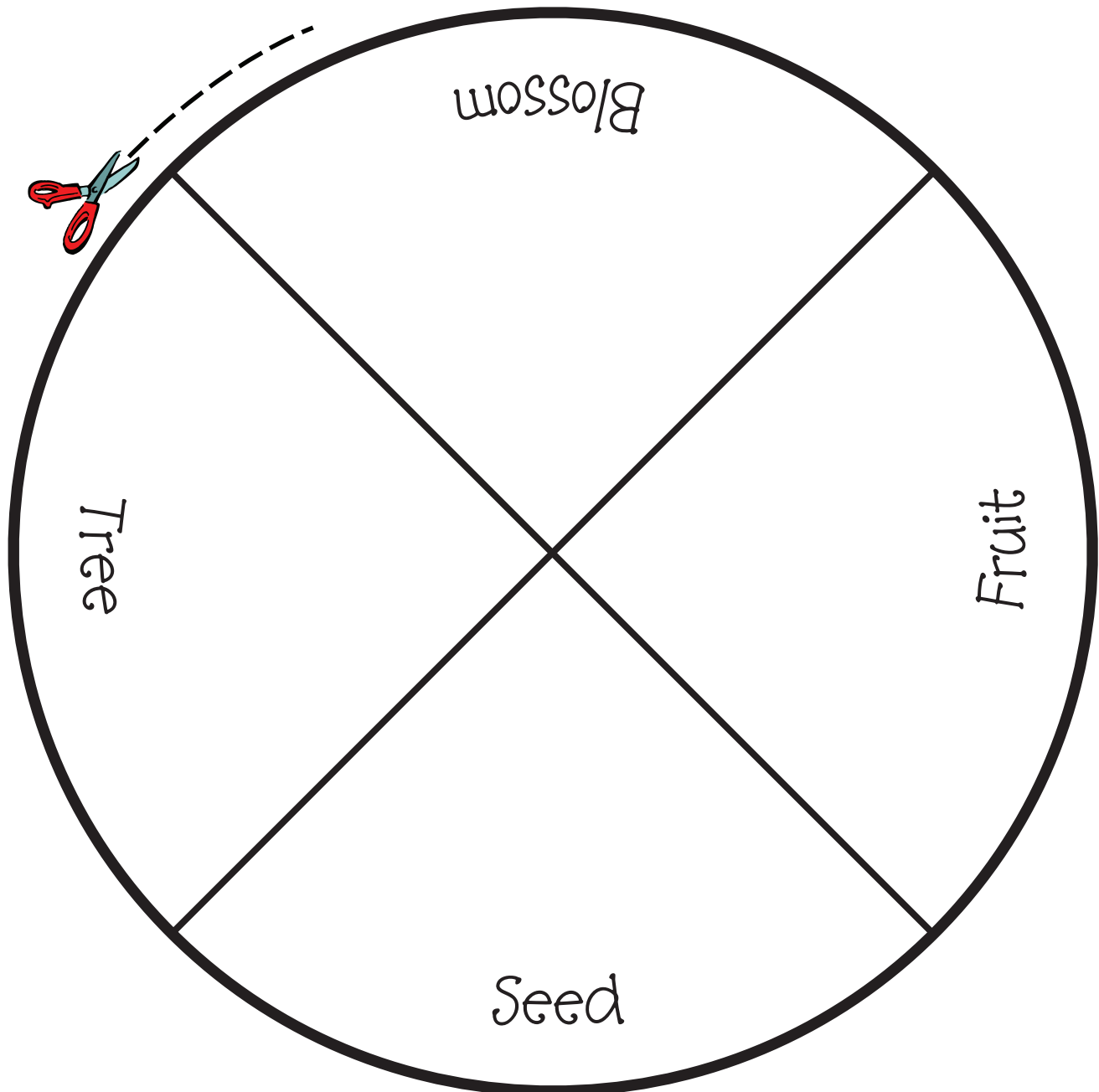
Name: _____

Date: _____



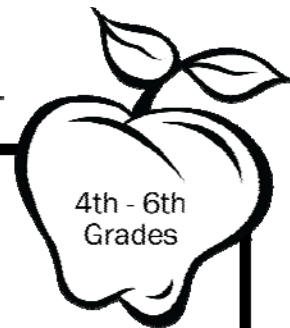
Directions: Create an apple life cycle wheel

1. Draw each stage of the apple growth cycle as labeled.
2. Cut out the apple on the previous page.
3. Cut out the triangle shape to create a viewing window.
4. Cut out the circle below and place it behind the first circle.
5. Attach circles with a brad at the dot in the center.
6. Students can turn the wheel as they explain how an apple grows!



Name: _____

Date: _____



Apple Jobs

There are many people who work hard to provide us with fresh apples and apple products. Who are they? Use the words from the box to fill in the blanks and learn about apple jobs.

Packers
Entomologist

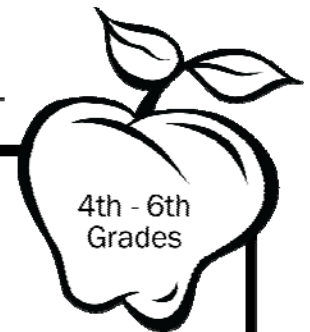
Food Processors
Beekeeper

Pruner
Apple Picker

1. The person who trims branches or limbs from apple trees is called a _____.
2. An _____ helps the farmer determine the best time to spray apples and suggests safe levels of pesticides.
3. A _____ maintains the beehives to help with pollinating the apple trees.
4. Quality, size and varieties of apples are checked by machines and people called _____.
5. The _____'s work is limited to the fall harvest season.
6. Apples are made into other products by _____.

Name: _____

Date: _____



PA Apple Varieties

O S M Z N L A O G Q X G N P P R M R L D F Y C G P
 J E C E Q A Z M W O R M I T O S C R N K H C E N P
 U K I X N X T B Q A L N X M V W I A L G U D J R K
 J O N A G O L D N Y K D E I F S L R Q O T U Q U E
 A K T B J P N N I L U V E P B T F A C U K Q P B R
 W X O B U G Y D A H M I U N R W J B X Y G J R E I
 I I S H Y S R D Y P L C E O D S B S F G E W C A P
 X V H F M Z Y Q U C I B C M O E P J N U F N V R M
 N Z J I J Y J Y N A T T I N S C L O J Q K Y O B E
 P C T W H O K O L K D C I C F M K I J F N Q V H O
 V H Y J S C B H N H Q Z I J E G C G C Y A A G A U
 Y X X V R G K S E A R P O Y K Q G B G I T H Y R J
 D L O G R E G N I G T E V H G E A H R W O X N U M
 S B M S L F L V F N M H W X M U B I E A S U W L K
 Q Y R Q T T I X G A I Q A A A V V N D F M V S S K
 Q G F B J E M L C N A H A N G I I F D W U I Y V B
 W L G C A K M H Z Z A R O F Q T E R E I O J F L R
 W R N M U F Y K U B A M F H E D U B L O H V I Q X
 J O Z P J Q N R C Q H L Y W I J X R I R P U K P Q
 P P L Z B C M N M U T S U A U F O G C B C D G C D
 R T J A A U G S G S Z Q Q F T P N Z I P G P B Y F
 L Z D Z J M U Q T S H R F R N S Z O O F A S L J J
 L X L B V K Y U G Q E T V P I F R P U X L A B L U
 L W W K R O Y A I O G V H Y Q M K Q S T A X A K S
 F T F M S Z V B W E M M V A D I A F I O C A F H Y

BRAEBURN

GALA

JONAGOLD

PINK LADY

CAMEO

GINGERGOLD

JONATHAN

RED DELICIOUS

CORTLAND

GOLDEN DELICIOUS

McINTOSH

ROME

EMPIRE

GRANNY SMITH

MUTSU

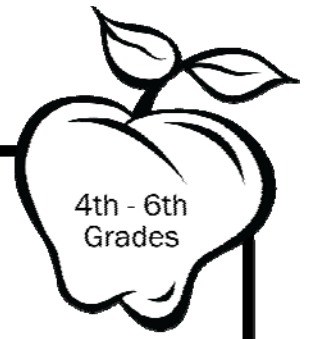
STAYMAN

FUJI

HONEY CRISP

NITTANY

YORK



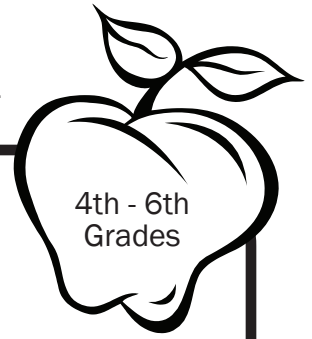
4th - 6th
Grades

Word Search Solution

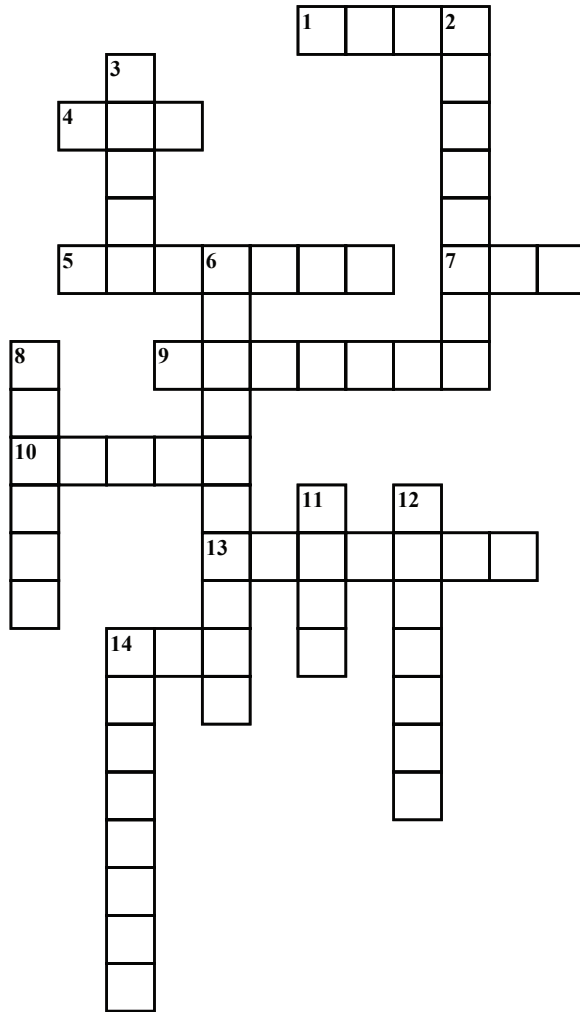
R J O N A T H A N F U J I + + + + + N + +
+ E + + + + + + + + + + + + + + + I + + +
+ + D + + + + + + + + + + + + + + + T + + + +
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+ + + + E + + + + + + + + + + + + A + + + + + +
+ + + + + L + + + + + + + + + + N + + + + + + +
+ + + + + I + M + + + + + + Y + + + + + P + + +
+ + + + + C + C + + + + + + + + + R + I + + +
+ + + + + I + I + + + + + + + + + O + N + + +
+ + + + + G + + + O + N + + + + + + + M + K + + +
+ + + + + R + + + + U + T N A M Y A T S E + L + + +
+ + + + + A + + + + + S + O + + + + + + + A + O + +
G O L D E N D E L I C I O U S + N + + + + + D + E + +
+ + + + + N + + + + + + + + + H + R G E D + Y + M + +
+ + + + + Y P S I R C Y E N O H + I U L R + + + A + + +
+ + + + + S + + + + + + + + + N + O B + I + + C + + +
+ + + + + M + + + + + + + + + G + G + + E + P + + +
+ + + + + I + + + + + + + + + E D A + + + + A + M + + +
+ + + + + T + + + + + + + + + R + N + + + + + R + E + + +
+ + + + + H + + + G + + + G U O A + + + + + + B + + + +
+ + + + + + + + + A + O S J + L + + + + + + + + + + +
+ + + + + + + + + L T + + + T + + + Y + + + + + + + + +
+ + + + + + + + + D U A + + + R + + O + + + + + + + + +
+ + + + + + + + + M + + + + + O + R + + + + + + + + + + +
+ + + + + + + + + + + + + + + C K + + + + + + + + + + +

Name: _____

Date: _____



Apple Orchard Crossword Puzzle



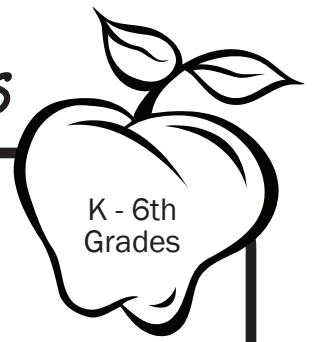
Down

- 2 ___ is used to control harmful insects and diseases.
- 3 The liquid made from freshly pressed apples is called ___.
- 6 In the fall the process of apples being picked from trees is called ___.
- 8 The work at an apple orchard changes with each ___ of the year.
- 11 Paper and plastic ___ are used by people to take fresh apples home.
- 12 After apples are picked, they are placed in refrigerated ___.
- 14 In the spring apple trees produce flowers called ___.

Across

- 1 ___ produce honey from apple blossoms.
- 4 An apple ___ is the result of baking apple slices in a dough crust.
- 5 Apple trees grow in an ___.
- 7 The three letters that stand for "Integrated Pest Management".
- 9 During the cold months, apple trees have their branches trimmed which is called ___.
- 10 The fruit from the apple tree is called an ___.
- 13 Farmers use a ___ to pull wagons, sprayers and tree planters.
- 14 A wooden ___ is used to transport and store apples.





Parts of an Apple

1. core
2. seeds
3. stem
4. flesh
5. skin

Wordfind Solution

```

R J O N A T H A N F U J I + + + + + + + + N + +
+ E + + + + + + + + + + + + + + + + + I + + +
+ + D + + + + + + + + + + + + + + + + T + + + +
+ + + D + + + + + + + + + + + + + + + T + + + +
+ + + + E + + + + + + + + + + + + + + A + + + +
+ + + + L + + + + + + + + + + + + + + N + + + +
+ + + + + I + M + + + + + + + + Y + + + + P + +
+ + + + + + C + C + + + + + + + + + + R + I + +
+ + + + + + + I + I + + + + + + + + + O + N + +
+ + + + G + + + O + N + + + + + + + + M + K + +
+ + + + R + + + U + T N A M Y A T S E + L + +
+ + + + A + + + + S + O + + + + + + + + A + O
G O L D E N D E L I C I O U S + N + + + + D + E
+ + + + N + + + + + + + + H + R G E D + Y + M
+ + + + Y P S I R C Y E N O H + I U L R + + + A
+ + + + S + + + + + + + + + + + N + O B + I + C
+ + + + M + + + + + + + + G + G + E + P + +
+ + + + I + + + + + + + + E D A + + + + A + M +
+ + + + T + + + + + + + + R + N + + + + R + E
+ + + + H + + G + + + G U O A + + + + + B +
+ + + + + + + + + A + O S J + L + + + + + +
+ + + + + + + + + L T + + + T + + + Y + + + +
+ + + + + + + + D U A + + + R + + O + + + + +
+ + + + + + + + M + + + + + O + R + + + + + +
+ + + + + + + + + + + + + + C K + + + + + +
    
```

Apples in the Orchard

1. 4
2. 5
3. 1
4. 9
5. 20
6. 25
7. 5
8. 45

Crossword

Apple Jobs

1. pruner
2. entomologist
3. beekeeper
4. packers
5. apple picker
6. food processor

Across

1. bees
4. pie
5. orchard
7. IPM
9. pruning
10. apple
13. wagon
14. bin

Down

2. spraying
3. cider
6. harvesting
8. season
11. bags
12. storage
14. blossoms