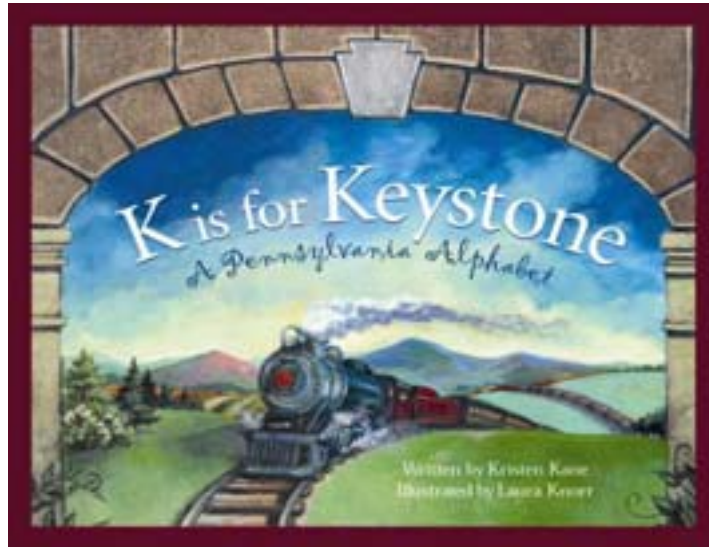


A TEACHER'S GUIDE



K is for Keystone A Pennsylvania Alphabet

Guide written by
Patricia Pierce

Portions may be reproduced for use in the classroom with
this express written consent of Sleeping Bear Press

Published by Sleeping Bear Press
310 North Main
Chelsea, MI 48118
800-487-2323
www.sleepingbearpress.com

Pennsylvania Key Facts

Pennsylvania

Flower

Animal

Insect

Beverage

Tree

Fish

Dog

Bird

Directions

Cut out both keystone shapes. On the keystone labeled Pennsylvania, cut along the dotted lines of each state symbol box and fold along the black lines to create a flip window. Glue the Pennsylvania keystone on top of the second keystone providing the answers for each state symbol.

Quiz yourself and check your answers by lifting the tab/flip window.

**Mountain
Laurel**

**Whitetail
Deer**

Firefly

Milk

Hemlock

**Brook
Trout**

**Great
Dane**

**Ruffed
Grouse**

Horse-Drawn and Horseless Carriages

Consider these possible answers and discuss additional ideas.

Similarities

Both are means of transportation.
Both need to obey traffic laws such as stop signs.
Both need a driver and carry passengers.
Both have four wheels.

Differences

Horse-Drawn Buggy - Powered by horse
Slower moving
Clip-clop sounds of hooves
Limited shelter from weather

Horseless Carriage - Powered by an engine
Faster moving
Radio, air-conditioning
Protected from weather

Additional discussion questions

1. Which mode of transportation creates more pollution?
2. Which mode of transportation is more comfortable?
3. Which mode of transportation is better on icy roads?
4. Why is there a triangle sign on the back of the buggies?

Read page A of *K is for Keystone* to learn more interesting facts about the close-knit community of the Old Order Amish.



Put your thoughts into writing.

Write an essay comparing and contrasting both means of transportation.



Mmmmm ~ Mmmmm

Kids Love Pudding

Read about Pennsylvania's famous son, Bill Cosby on page B of *K is for Keystone*.

Added to his list of achievements, talented Bill Cosby is well-known for his pudding commercials. Shake up some classroom fun while using reading and math skills by making Shaker Pudding!

Materials Needed

Stopwatch	Measuring cups
Instant pudding	Bowls with seal-tight lids
Milk	Spoons and serving cups

Directions

Divide students into groups of four. Inform students that they will be making the pudding by shaking it in a seal-tight bowl. Have students predict necessary shaking time. Record predictions.

Provide each group with necessary materials and the following recipe card and recording sheet. Using the stopwatch, instruct individuals in each group to shake the pudding for 30 seconds. Check pudding after each 30-second time period. Record each time period and determine final time. Compare with prediction time.

Extension Activities

Depending on grade level and students' ability, cover liquid measuring cup measurements marks, only exposing the one-fourth measurement line. Have students determine how many one-fourth cups are needed to measure a total of two cups. One-third measurements could also be used.

Nutrition

Name the food group categories. In what food group would pudding be placed? Discuss ingredients and nutrition facts listed on the back of the pudding box.

Name _____



Time prediction _____

30-second tallies _____ Total time _____

Shaker Pudding

Ingredients

One box instant pudding (flavor of your choice)
2 cups cold milk

Directions

1. Pour 2 cups cold milk into a container with a seal-tight lid.
2. Add one box instant pudding.
3. Secure lid on container.
4. Shake pudding until soft-set. Check every 30 seconds.
5. Pour into individual serving cups. Enjoy.

Comments

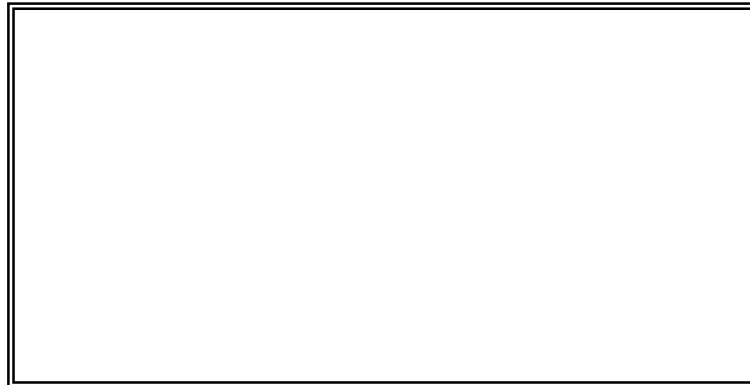


Colorful Fun

Learn about the colorful history of crayons and markers on page E of *K is for Keystone*.

Recall ROY-G-BIV to remember the color order of a rainbow.

- R - red
- O - orange
- Y - yellow
- G - green
- B - blue
- I - indigo
- V - violet



Draw a rainbow in this box. Start with red!

Create Your Own Beautiful Colors

Materials

- Six clear plastic cups
- Red, yellow, and blue food coloring
- Water
- Spoon

Directions

1. Fill plastic cups with water.
2. Place three drops of each red, yellow, and blue food coloring into individual cups. Watch as the food coloring mixes with the water, then stir water with the spoon.
3. Place three drops of each color combination (below) into individual cups. Watch as colors mix together, then stir water with the spoon.

Red + Yellow = Orange
Red + Blue = Purple
Blue + Yellow = Green

Explain that red, yellow and blue are primary colors. Have students predict colors created by combining primary colors.

Happy Groundhog Day!

Why was February 2 chosen as Groundhog Day?

Who brought the Groundhog Day tradition to the United States?

When was the first official Groundhog Day celebrated?

Find the answers to these questions and more interesting facts on page P of *K is for Keystone*.

Make a Groundhog's Day card for a friend. Cut out and fold along dotted line.

WITHOUT
A SHADOW
OF A DOUBT,
IT'LL BE A HAPPY
GROUND HOG DAY!





Benjamin Franklin

Can you name one of Ben Franklin's inventions?

Turn to page I of *K is for Keystone* to read

Invention Time Line

Materials

Invention cards
Tape
String
Clothespins

Directions

Place students into cooperative groups and provide each group with a set of invention cards and ten clothespins. Tape a long piece of string horizontally on the wall for each group. Instruct students to sequence the invention cards in the order they think each one was invented and hang the cards on the string by using the clothespins. After each group has completed their sequence, provide students with dates for each invention. Discuss correct sequence of cards and the importance of each invention.

Bifocal Lens

Telegraph

Telescope

Safety Pin

Pendulum Clock

Lightning Rod

Steamboat

Piano

Microwave Oven

Telephone

Invention Time Line Answers

1. Telescope - 1608
2. Pendulum clock - 1656
3. Piano - 1710
4. Lightning rod - 1752
5. Bifocal lens - 1780
6. Steamboat - 1786
7. Telegraph - 1837
8. Safety pin - 1849
9. Telephone - 1876
10. Microwave oven - 1947

Discussion Questions

Which inventions did Ben Franklin invent?

How many years after the lightning rod did Ben Franklin invent the bifocal lens?

Which of the listed inventions do you think would be of greatest interest to Ben Franklin?

Ben Franklin's Electrifying Discovery



Ben Franklin's famous kite-flying experiment and electrifying discovery was **powerful** and **dangerous!** Ben understood this and created an invention, the lightning rod, to protect people, buildings, and ships from hazardous lightning.

Instruct students to make a safety poster or create role-plays where they need to make a safe decision.

Safety Rules

Never fly a kite near overhead electrical wires.

Never play with electrical cords, wires, or outlets.

Stay away from fallen power lines.

Do not touch electrical appliances when your hands are wet.

Do not climb trees near power lines.

Never overload an electrical outlet.

Do not use hairdryers or radios near a bathtub.

Do not yank a cord from an outlet.

Never climb electrical towers or poles.

Do not play on or near electrical transformers (green boxes).

Role-Play Situations

While you are swimming and a thunderstorm approaches.

You want to listen to the radio while you take a bath.

You are playing baseball and see a lightning flash.

You are walking outside after a storm and see a broken power line.

Spectacular Stalactites and Stalagmites

Cave explorers view spectacular stalactites, hanging like icicles from the roof of a cave, and stalagmites reaching up from the cave floor.

Read about caves on page C of *K is for Keystone*. Try this activity to create your own stalactites and stalagmites.

Materials

Two pieces of yarn 20 inches long
One paper plate
Two plastic cups
Epsom salt
Water
Measuring cups
Spoon

Directions

1. Fill each cup with $\frac{2}{3}$ cup of water.
2. Gradually add $\frac{1}{3}$ cup of Epsom salt to each cup—stir with spoon. The solution will become supersaturated.
3. Dip each string in the solution, soaking the yarn.
4. String the yarn between both cups. Allow the yarn to dip between the cups.
5. Place the paper plate under the two pieces of yarn.
6. Be patient. Allow the cups to set for 3 to 4 days.

The water and salt will slowly drip from the hanging yarn, forming an "icicle." Observe as the salt develops formations on the yarn resembling stalactites and as piles of salt build up on the floor, resembling stalagmites.

Underground Railroad

Read about the secret network of the Underground Railroad on page U of *K is for Keystone*.

Often runaway slaves escaped in the silence and darkness of the night. The success of the Underground Railroad depended on people being extremely careful and secretive.

The "conductors" of the Underground Railroad communicated by means of secret codes or signals. Receiving a message stating that two large hams would be arriving, truly meant two adult runaways were on their way and needing a safe place to hide. Messages were sometimes sent through songs using the words in the song as a secret code. Secret signals included a light in the window or a gourd hanging by the door, meaning it was safe to enter a house.

Crack the Code

Solve the math problems and use the code to solve the missing word puzzle.

Runaway slaves traveling with "conductors" on the Underground Railroad often wore _____ .

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26

Answer

Letter

1. $12 - 8 =$ _____

2. $3 \times 3 =$ _____

3. $39 - 20 =$ _____

4. $13 - 6 =$ _____

5. $3 \times 7 =$ _____

6. $18 - 9 =$ _____

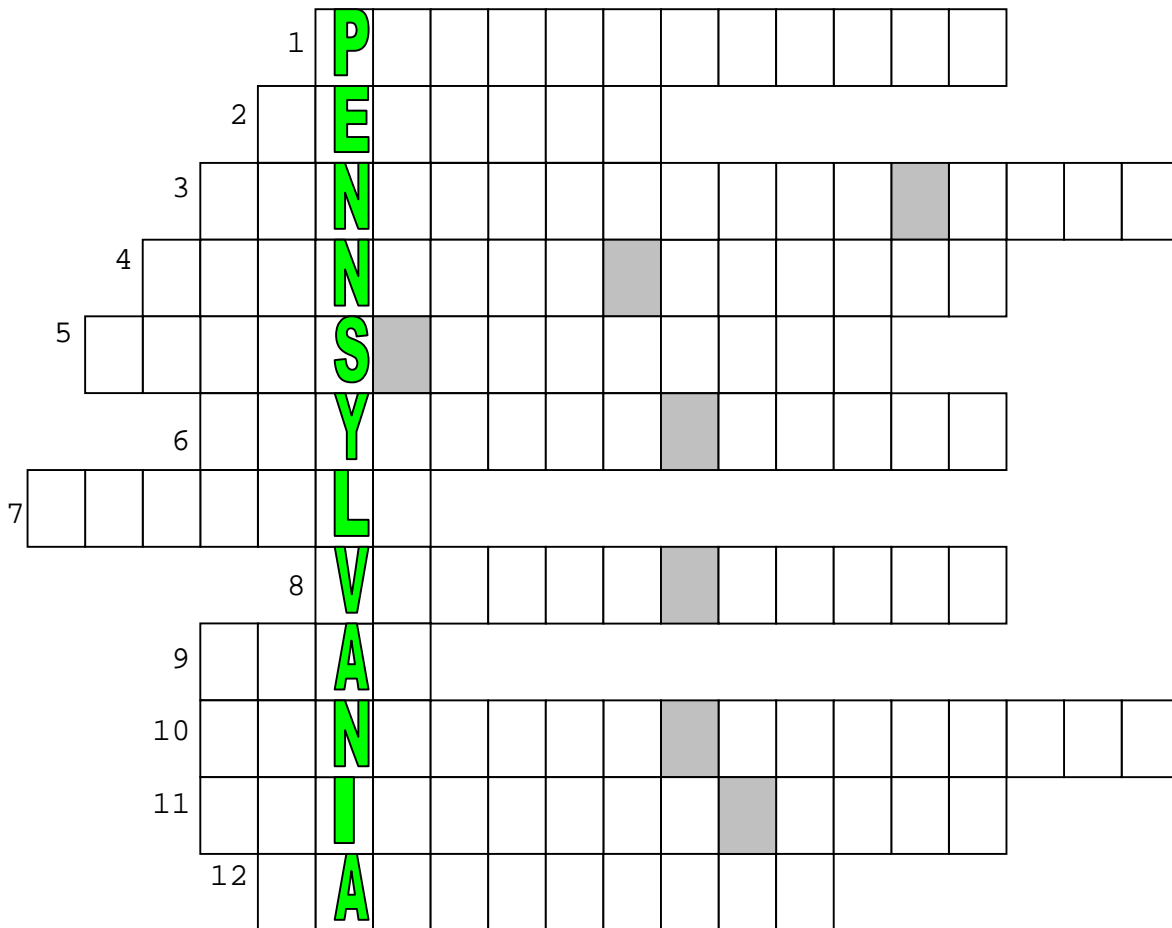
7. $12 + 7 =$ _____

8. $15 - 10 =$ _____

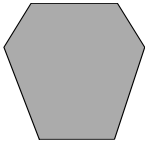
9. $1 \times 19 =$ _____

Pennsylvania Crossword

1. "City of Brotherly Love"
2. Pennsylvania's state tree
3. Famous groundhog of the "Weather Capital of the World"
4. Pennsylvania's state flower
5. 15th president of the United States
6. Pennsylvania's nickname
7. Pennsylvania's state insect
8. Strategic location of the Revolutionary War
9. Pennsylvania's "black gold"
10. Great inventor and one of our nation's founding fathers
11. Pennsylvania's state animal
12. Pennsylvania's capital



Where Am I in the Keystone State?



Read *K is for Keystone - A Pennsylvania Alphabet* and discover interesting places in Pennsylvania. Solve the locations of Where Am I? by reading the following clues.

1. I am at the site of a civil war cemetery in which President Lincoln and Edward Everett delivered speeches in honor of those who lost their lives to save the Union. Where am I?

2. I am at the birthplace of Bill Cosby. Where am I?

3. I am reading the inscription on the Liberty Bell. Where am I?

4. I am coloring a beautiful picture at a factory that makes crayons and markers. Where am I?

5. I am eating a chocolate bar at E. Chocolate Avenue. Where am I?

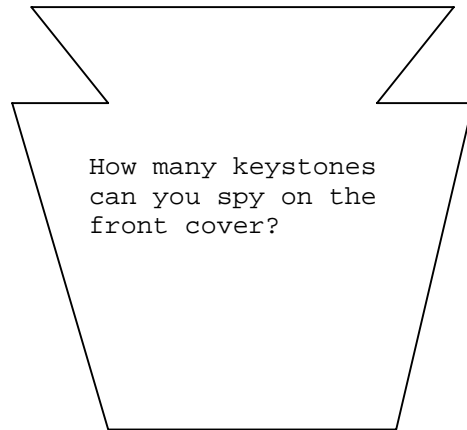
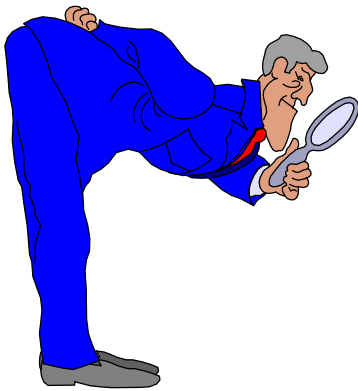
6. It's my turn to bat at the Little League World Series. Where am I?

7. I am at the nation's first zoo watching an orangutan swing from branch to branch. Where am I?

8. It's February 2 and Punxsutawney Phil is making his appearance. Where am I?

I Spy A Keystone

Use *K is for Keystone* and play a game of I spy. Look for the following list of words in the book, then read aloud the passage on the page to your partner.



Purple crayon
Coal miner
Groundhog
Oil well
Cannon
Liberty Bell
Horse-drawn carriage
Canoe
Walrus
Whitetail deer
Waterfall
Lightning
William Penn
Baseball diamond
Pennsylvania's state flag

Famous Pennsylvania People

Match the names of some of Pennsylvania's famous people with the facts about them. Skim and search *K is for Keystone* for information about each person listed below.

- | | |
|-------------------------------------|---------------------------------------------------------|
| 1. James Buchanan _____ | A. Founded Little League Baseball |
| 2. Bill Cosby _____ | B. One of our nation's founding fathers and an inventor |
| 3. William Penn _____ | C. Struck oil in Titusville |
| 4. John Harris _____ | D. 15 th president of the United States |
| 5. Frank Lloyd Wright _____ | E. Founder of "Harris's Ferry" (renamed Harrisburg) |
| 6. Benjamin Franklin _____ | F. Revolutionary War General, Valley Forge |
| 7. Milton S. Hershey _____ | G. Architect - Fallingwater |
| 8. Carl E. Stotz _____ | H. Founder of Pennsylvania |
| 9. Colonel Edwin Drake _____ | I. Comedian and author, "The Cosby Show" |
| 10. General Baron von Steuben _____ | J. "Chocolate King" |

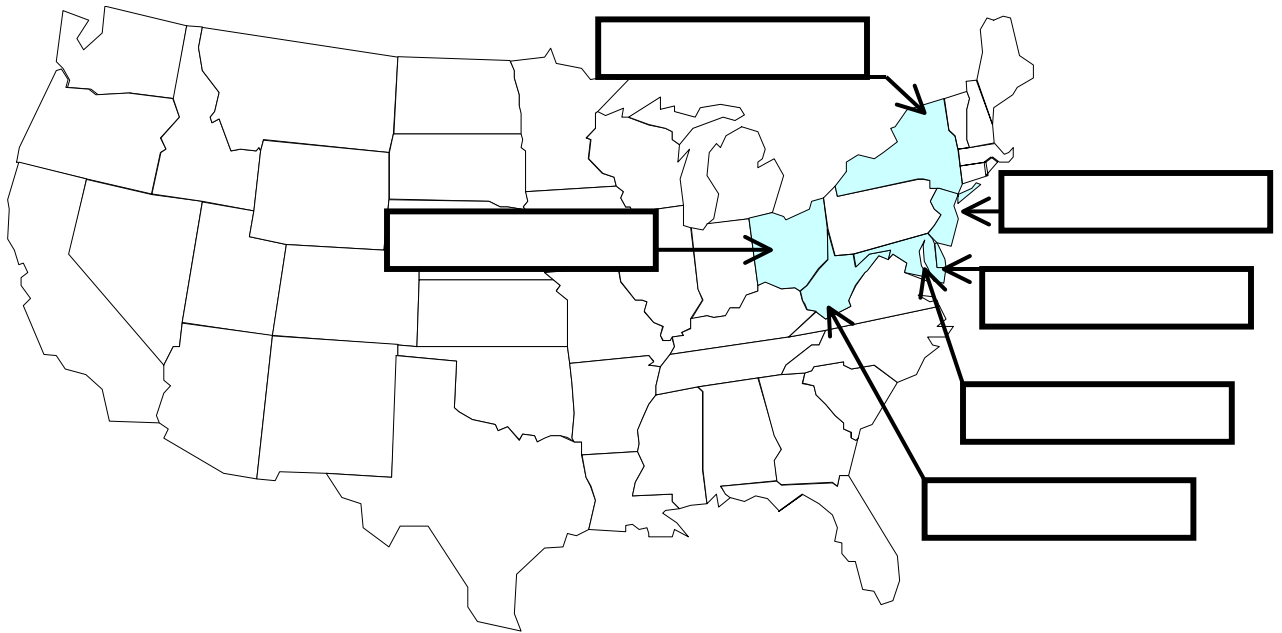
.....

If you could spend one day with one of these people, whom would you choose and why?

Pennsylvania

Pennsylvania, located in the center of the original 13 colonies, is the 2nd state of the United States.

Color in Pennsylvania and label its bordering states. The bordering states are New York, New Jersey, Delaware, Maryland, West Virginia, and Ohio.



Cut out the following cards and try to arrange the states in the order they achieved statehood. Check your answers with the chart on the next page.

New Hampshire	Delaware	New Jersey
Pennsylvania	North Carolina	Rhode Island
Maryland	Massachusetts	Georgia
New York	Virginia	South Carolina
Connecticut		

State	Statehood
Delaware	December 7, 1787
Pennsylvania	December 12, 1787
New Jersey	December 18, 1787
Georgia	January 2, 1788
Connecticut	January 9, 1788
Massachusetts	February 6, 1788
Maryland	April 28, 1788
South Carolina	May 23, 1788
New Hampshire	June 21, 1788
Virginia	June 25, 1788
New York	July 26, 1788
North Carolina	November 21, 1789
Rhode Island	May 29, 1790

Use the chart to answer the following questions.

1. When did Pennsylvania become a state?

2. List the three states that achieved statehood in December of 1787.

3. Which state achieved statehood on January 2, 1788?

4. How many days later did New Jersey achieve statehood after Pennsylvania?

5. When did Maryland achieve statehood?

Pennsylvania

Read the following clues, and then unscramble the Pennsylvania words!

Founder of Pennsylvania

LLWIIAM NNPE

Pennsylvania's Capital

RAHSIRRGBU

"City of Brotherly Love"

AIHPLEDALIHP

Birthplace of Little League Baseball

MAILLIWTROPS

Pennsylvania's Flower

NOUMNIAT RUALEL

Pennsylvania Word Search

Pennsylvania
Harrisburg
Pittsburgh
Fallingwater
Keystone

Philadelphia
caves
milk
hemlock
firefly

Williamsport
Gettysburg
Punxsutawney
Hershey
coal

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

Answer Page

Underground Railroad - Crack the Code

1. 4 - D
2. 9 - I
3. 19 - S
4. 7 - G
5. 21 - U
6. 9 - I
7. 19 - S
8. 5 - E
9. 19 - S

Runaway slaves traveling with "conductors" on the Underground Railroad often wore disguises.

Where Am I in the Keystone State?

- | | | | |
|---------------|-----------------|-----------------|-----------------|
| 1. Gettysburg | 2. Germantown | 3. Philadelphia | 4. Easton |
| 5. Hershey | 6. Williamsport | 7. Philadelphia | 8. Punxsutawney |

Pennsylvania Crossword

1. Philadelphia
2. Hemlock
3. Punxsutawney Phil
4. Mountain laurel
5. James Buchanan
6. Keystone State
7. Firefly
8. Valley Forge
9. Coal
10. Benjamin Franklin
11. Whitetail deer
12. Harrisburg

Famous Pennsylvania People

1. D
2. I
3. H
4. E
5. G
6. B
7. J
8. A
9. C
10. F

Statehood Chart

1. December 12, 1787
2. Delaware, Pennsylvania, and New Jersey
3. Georgia
4. 6 days
5. April 28, 1788

Unscramble Pennsylvania

- | | | | |
|--------------------|---------------|-----------------|-----------------|
| 1. William Penn | 2. Harrisburg | 3. Philadelphia | 4. Williamsport |
| 5. Mountain laurel | | | |

Answers

Pennsylvania Word Search

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