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National Standards Correlations

Benchmarks for Science Literacy
(Project 2061 – AAAS) Grades 3–5

The Physical Setting - Processes that Shape the Earth (4C)
By the end of the fifth grade, students should know that:

• Waves, wind, water, and ice shape and reshape the earth’s land surface by eroding rock and soil in some areas and depositing them in other areas, sometimes in seasonal layers.

National Science Education Standards
(Content Standards, National Academy of Sciences, c. 1996)

Earth and Space Science (D) - Structure of the Earth System
As a result of activities in grades 5-8, all students should develop an understanding of:

• Land forms are the result of a combination of constructive and destructive forces. Constructive forces include crustal deformation, volcanic eruption, and deposition of sediment, while destructive forces include weathering and erosion.
Student Learning Objectives

Upon viewing the video and completing the enclosed student activities, students will be able to do the following:

• Define landforms as physical features on Earth’s surface.

• Identify and describe the landform on which they live.

• Describe the general characteristics of a plain.

• Differentiate between an interior plain and a coastal plain, and identify the location of both on a map.

• Explain the general characteristics of a plateau.

• Point out the general location of the Colorado Plateau.

• Compare the characteristics of plains and plateaus.

• Describe mountains as landforms with narrow tops and steep sides.

• Explain the general differences between a mountain and a hill.

• Define a valley as the lowland between hills or mountains.

• Define a canyon as a deep, narrow landform with very steep sides and a flat bottom.

• Create a sketch of a valley and a canyon.

• Understand that beaches are coastal landforms consisting of deposits of sediments that run parallel to the shore.

• Identify a dune as a mound of sand deposited by wind.

• Differentiate between a diagram or picture of a sea cliff and a sea stack.

• Identify and describe the following water features: ocean, bay, lake, river, creek, and stream.
Assessment

Preliminary Test (p. 14–15):

The Preliminary Test is an assessment tool designed to gain an understanding of students’ preexisting knowledge. It can also be used as a benchmark upon which to assess student progress based on the objectives stated on the previous pages.

Post–Test (p. 16–17):

The Post-Test can be utilized as an assessment tool following student completion of the program and student activities. The results of the Post-Test can be compared against the results of the Preliminary Test to assess student progress.

Video Review (p. 18):

The Video Review can be used as an assessment tool or as a student activity. There are two sections. The first part contains questions displayed during the program. The second part consists of a five-question video quiz to be answered at the end of the video.
Introducing the Program

Before showing this program to your students, write the term “landform” on the board. Ask them what two words make up this single term. Reverse the words and ask them to explain what the term means. Next, ask them if the forms of the land are the same everywhere on Earth. Discuss how they would describe the landform on which they live. Write their description of the landform on the board.

Obtain copies of books or magazines that contain pictures of different landforms. Show pictures of various landforms from these publications to your students. Ask students to identify each landform displayed in the picture. Make a list of the different landforms on the board. Tell students to pay close attention to the video to learn more about the landforms listed on the board.

Program Viewing Suggestions

The student master “Video Review” (p. 18) is provided for distribution to students. You may choose to have your students complete this master while viewing the program or do so upon its conclusion.

The program is approximately 14 minutes in length and includes a five-question video quiz. Answers are not provided to the Video Quiz in the video, but are included in this guide on page 12. You may choose to grade student quizzes as an assessment tool or to review the answers in class.

The video is content-rich with numerous vocabulary words. For this reason you may want to periodically stop the video to review and discuss new terminology and concepts.
Video Script

1. Have you ever thought about the shape of the land around your home?
2. Maybe you live in the mountains,...
3. ...or in a place that is relatively flat.
4. ...Or perhaps you live in a valley.
5. What are some of the different shapes of land on Earth’s surface?
6. What is the difference between a valley and a canyon?
7. And what is the difference between a plain and a plateau?
8. During the next few minutes, we are going to try to answer these questions and others as we explore the fascinating characteristics of landforms.
9. And hopefully you will gain a better understanding of the landforms near your home.
10. Graphic Transition - What are Landforms?
11. If you have ever traveled to a different place,...
12. ...even if it was only a few hours away from your home, you may have noticed that the shape, or form, of the land, changed.
13. Landforms refer to the physical features on Earth’s surface.
14. There are many famous landforms, including the Rocky Mountains,...
15. ...the Great Plains,...
16. ...the Grand Canyon,...
17. ...and the Colorado Plateau, to name just a few.
18. You also live on a landform, even though it may not have a recognizable name.
19. Let’s take a closer look at some specific landforms.
20. Graphic Transitions - Plains and Plateaus
21. This field of corn in Iowa is part of a landform called a plain.
22. This grassland, sometimes called a prairie, is also a plain.
23. You Observe! How would you describe a plain?
24. You might describe it as a large, wide, flat area.
25. A plain is a landform with a relatively flat surface and low elevation.
26. Plains have little relief. Relief is the difference in elevation between an area’s highest and lowest points.
27. People generally think of plains as being relatively flat, open, and expansive.
28. The Interior Plains of North America extend throughout the middle part of the United States and into Canada.
29. The Interior Plains once consisted of expansive grasslands on which large herds of bison roamed.
30. Today the Interior Plains support vast agriculture areas of corn, wheat, and other crops.
31. A coastal plain is a relatively flat, low elevation area along the sea coast. Much of the eastern coast of North America is a coastal plain.
32. A plateau is different from a plain. While it is a fairly flat region, a plateau has a much higher elevation than the surrounding area.
33. The Colorado Plateau, for instance, in North America has elevations up to 3,000 meters above sea level. That’s about 11,000 feet above sea level.
Video Script

34. The Grand Canyon is deeply cut from the Colorado Plateau.
35. The Canyon’s rim is considered the top of the Colorado Plateau,...
36. ...with the Colorado River winding far below.
37. The Colorado Plateau is one of the most dramatic plateaus in North America,...
38. ...stretching for hundreds of kilometers.
39. Graphic Transition - Mountains and Hills
40. Perhaps you have hiked on a trail in the mountains,...
41. ...fished in a mountain stream,...
42. ...or skied down a mountain slope.
43. Mountains are landforms with narrow tops and steep sides.
44. They can reach high elevations and are much higher than the surrounding land.
45. There are several different kinds of mountains, which are formed in different ways.
46. Younger mountains, such as these in the Canadian Rockies, tend to be tall and jagged.
47. Whereas older mountains, such as the Appalachians, have lower relief and are more rounded.
48. You Decide! What is the difference between a mountain and a hill?
49. Generally speaking, hills are shorter than mountains.
50. Mountains tend to be at least 600 meters above the surrounding land.
51. Graphic Transition - Valleys and Canyons
52. This beautiful place is called Yosemite Valley, one of the more famous landforms in North America.
53. What is a valley? A valley is the lowland between hills or mountains.
54. Cities and towns are often built in valleys.
55. Streams or rivers quite often run on valley bottoms.
56. You Compare! How does this valley look different from this canyon?
57. While the valley is gently sloping, the canyon is deep and narrow with very steep sides and a flat bottom.
58. Notice the steep canyon walls of Zion Canyon in southern Utah.
59. While canyons may be located in mountainous areas, quite often they are cut from plateaus or plains.
60. Graphic Transition - Coastal Landforms
61. At one time or another, you have probably enjoyed going to the beach for a swim or a walk.
62. Beaches are examples of coastal landforms...
63. ...and consist of deposits of sediments that run parallel to the shore.
64. The type of sediment on beaches can vary greatly. This beach in Iceland is made up of black, volcanic sand.
65. Whereas this sandy beach in Florida is made up of light-colored sand.
66. This beach in Nova Scotia is made up of small pebbles.
67. The large sandy mounds, called dunes, line this beach in Cape Cod, Massachusetts.
Video Script

68. A dune is a mound of sand deposited by the wind.
69. In some cases, dunes can become quite large.
70. Dunes are important landforms that help keep beaches stable by preventing them from washing away.
71. Not all dunes are coastal features though. Some form far inland, such as these dunes in Death Valley.
72. Sometimes the action of sea waves produces a steep face of rock along the coast called sea cliffs.
73. As waves wear away a sea cliff, columns of more resilient rocks are left standing.
74. These columns are called sea stacks. These particularly famous sea stacks are located in New Brunswick, Canada and are referred to as flower pots.

75. **Graphic Transition - Earth’s Water Features**
76. A large amount of Earth’s surface is covered by water. There are many different water features.
77. Oceans are large bodies of water that cover Earth’s surface.
78. **You Compare!** What is the difference between an ocean and a lake?
79. An ocean is much larger than a lake and contains salt water, whereas most lakes contain freshwater.
80. The Great Salt Lake in Utah is one exception. It contains salt water that is several times saltier than normal sea water.
81. Lakes vary in size from very large, such as the Great Lakes,...
82. ...to ones that are quite small.
83. A bay is part of a lake or ocean that extends into land.
84. Rivers are moving bodies of water that flow across land.
85. Rivers eventually empty freshwater into oceans.
86. Creeks and streams are smaller bodies of flowing water that usually feed into lakes or larger rivers.
87. These are just a few examples of Earth’s many water features.

88. **Graphic Transition - Summing Up**
89. During the past few minutes, we have taken a look at the characteristics of some of the basic landforms found on Earth’s surface.
90. We began by comparing relatively low elevation, flat landforms called plains,...
91. ...and flat, high elevation landforms called plateaus.
92. Narrow topped, steep mountains were illustrated,...
93. ...as were smaller hills.
94. Valleys and steep-sided canyons were described.
95. Some of the beautiful coastal features were highlighted, including beaches, dunes, sea cliffs, and sea stacks.
96. Lastly, some of the water features found on Earth were investigated, including oceans, rivers, and lakes.
97. So, the next time you take a drive near your home,...
Video Script

98. ...go on a hike,...
99. ...or visit a different part of the world,...
100. ...think about some of the characteristics of landforms we’ve just discussed.
101. You might just think about Earth and its landforms a little differently.

102. Graphic Transition - Video Assessment
Fill in the correct word to complete the sentence. Good luck and let’s get started.
1. ________ is the difference between high and low points.
2. A plateau has a ________ elevation than a plain.
3. This landform is a ____________.
4. A _____ is a mound of sand deposited by wind.
5. ____ are landforms with narrow tops and steep sides.

Answers can be found on page 12.
**Answer Key to Student Assessments**

### Pre-Test (p. 14–15)
1. d - landforms
2. a - relief
3. a - large, wide, and flat
4. b - higher than surrounding region
5. c - rounded
6. b - steep sides and a flat bottom
7. d - coast
8. a - sea stack
9. c - oceans
10. b - dune
11. true
12. false
13. true
14. false
15. false
16. A landform is a physical feature on Earth’s surface.
17. A plain is a landform with a relatively flat surface and low elevation. A plateau is a fairly flat region with a much higher elevation than the surrounding area.
18. Mountains are landforms that have tall, narrow tops and steep sides. Hills tend to be more rounded and have a lower elevation.
19. Sea stacks are formed when waves erode sea cliffs, leaving behind a column of more resilient rock.
20. Students answers will vary depending on where they live.

### Post-Test (p. 16–17)
1. d - coast
2. b - higher than surrounding region
3. a - sea stack
4. d - landforms
5. b - dune
6. a - large, wide, and flat
7. c - oceans
8. c - rounded
9. a - relief
10. b - steep sides and a flat bottom
11. true
12. false
13. false
14. false
15. true
16. Students answers will vary depending on where they live.
17. A landform is a physical feature on Earth’s surface.
18. Sea stacks are formed when waves erode sea cliffs, leaving behind a column of more resilient rock.
19. Mountains are landforms that have tall, narrow tops and steep sides. Hills tend to be more rounded and have a lower elevation.
20. A plain is a landform with a relatively flat surface and low elevation. A plateau is a fairly flat region with a much higher elevation than the surrounding area.

### Video Review (p. 18)
1. A plain is a landform with a relatively large, wide, flat surface and low elevation.
2. Mountains are landforms with narrow tops, steep sides, and tend to be at least 600 meters above the surrounding land. Hills have many of the same characteristics as mountains, but are not as tall.
3. The valley is gently sloping, while the canyon is deep and narrow with very steep sides.
4. An ocean is much larger than a lake and contains salt water, whereas most lakes contain freshwater.
5. relief
6. higher
7. canyon
8. dune
9. mountains
There are a wide variety of landforms on Earth's surface. Landforms refer to the physical features on Earth's surface. For example, a plain is a landform with a relatively flat surface and low elevation. A plateau is different from a plain in that it is a fairly flat region but is higher than the surrounding area. The Colorado plateau is a famous landform that contains the Grand Canyon. A canyon is a landform with steep sides and a relatively flat bottom. A valley has more gentle sloping sides than a canyon. Beaches are examples of coastal landforms. Dunes are mounds of sand that stabilize beaches. Sometimes waves produce a steep face of rock along the coast called a sea cliff. As waves continue to weather a sea cliff, columns of more resilient rocks, called sea stacks, are sometimes left standing.

The Amazing Colorado Plateau (p. 24–25)

1. The Colorado Plateau is located in Colorado, Utah, Arizona, and New Mexico.
2. The average elevation of the Colorado Plateau is 1,585 meters. It ranges from 914 to 4,267 meters.
3. The Colorado Plateau is made up of sandstone, siltstone, shale, and limestone rocks.
4. The Grand Canyon has been formed by weathering and erosion of the Colorado River.
5. Shallow seas covered the area 600 million years ago, depositing thick layers of sediment.
Circle the best answer for each of the following questions.

1. Physical features on Earth’s surface are referred to as:
   a. clouds  
   b. atoms  
   c. territories  
   d. landforms

2. The difference between an area’s highest and lowest points is referred to as:
   a. relief  
   b. topography  
   c. elevation  
   d. altitude

3. A plain has the following general characteristics:
   a. large, wide, and flat  
   b. steep sides and narrow top  
   c. large, wide, and hilly  
   d. gradual sides and narrow top

4. A plateau is different from a plain in that its elevation is:
   a. lower than surrounding region  
   b. higher than surrounding region  
   c. the same as surrounding region  
   d. beneath surrounding area

5. Older mountains tend to have less relief and are more:
   a. jagged  
   b. uneven  
   c. rounded  
   d. rocky

6. A canyon has:
   a. rounded hills  
   b. steep sides and a flat bottom  
   c. gradual sides and a flat bottom  
   d. gradual sides and rounded hills

7. Beaches are landforms that run parallel to the:
   a. mountains  
   b. interior plains  
   c. valleys  
   d. coast

8. What is the name of a column of more resilient rock that is left behind when a sea cliff is eroded by waves?
   a. sea stack  
   b. volcano  
   c. dune  
   d. ridge

9. Large areas of salt water covering Earth’s surface are called:
   a. ponds  
   b. lakes  
   c. oceans  
   d. rivers

10. A mound of sand deposited by wind is referred to as a:
    a. beach  
    b. dune  
    c. mountain  
    d. hill
Write true or false next to each statement.

11. ___________ A plain is a landform with little relief.
12. ___________ A plateau has a lower elevation than a plain.
13. ___________ Valleys have gentler sloping sides than the walls of a canyon.
14. ___________ Dunes only form on beaches.
15. ___________ Lakes usually contain salt water.

Write a short answer for each of the following.

16. What is a landform?

__________________________________________________________________________
__________________________________________________________________________

17. Compare the characteristics of a plain and a plateau.

__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________

18. What is the difference between a hill and a mountain?

__________________________________________________________________________
__________________________________________________________________________

19. How are sea stacks formed?

__________________________________________________________________________
__________________________________________________________________________

20. Describe the landforms on which you live.

__________________________________________________________________________
__________________________________________________________________________
Post-Test

Circle the best answer for each of the following questions.

1. Beaches are landforms that run parallel to the:
   a. mountains   b. interior plains   c. valleys   d. coast

2. A plateau is different from a plain in that its elevation is:
   a. lower than surrounding region   b. higher than surrounding region   c. the same as surrounding region   d. beneath surrounding area

3. What is the name of a column of more resilient rock that is left behind when a sea cliff is eroded by waves?
   a. sea stack   b. volcano   c. dune   d. ridge

4. Physical features on Earth’s surface are referred to as:
   a. clouds   b. atoms   c. territories   d. landforms

5. A mound of sand deposited by wind is referred to as a:
   a. beach   b. dune   c. mountain   d. hill

6. A plain has the following general characteristics:
   a. large, wide, and flat   b. steep sides and narrow top   c. large, wide, and hilly   d. gradual sloping sides and narrow top

7. Large areas of salt water covering Earth’s surface are called:
   a. ponds   b. lakes   c. oceans   d. rivers

8. Older mountains tend to have less relief and are more:
   a. jagged   b. uneven   c. rounded   d. rocky

9. The difference between an area’s highest and lowest points is referred to as:
   a. relief   b. topography   c. elevation   d. altitude

10. A canyon has:
    a. rounded hills   b. steep sides and a flat bottom   c. gradual sides and a flat bottom   d. gradual sides and rounded hills
Post-Test

Write true or false next to each statement.

11. ________________  Valleys have gentler sloping sides than the walls of a canyon.
12. ________________  Lakes usually contain salt water.
13. ________________  Dunes only form on beaches.
14. ________________  A plateau has a lower elevation than a plain.
15. ________________  A plain is a landform with little relief.

Write a short answer for each of the following.

16. Describe the landform(s) on which you live.

________________________________________________________________________
________________________________________________________________________

17. What is a landform?

________________________________________________________________________
________________________________________________________________________

18. How are sea stacks formed?

________________________________________________________________________
________________________________________________________________________

19. What is the difference between a hill and a mountain?

________________________________________________________________________
________________________________________________________________________

20. Compare the characteristics of a plain and a plateau.

________________________________________________________________________
________________________________________________________________________
Video Review

While you watch the video, answer these questions:

You Observe!
1. How would you describe a plain?

____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________

You Decide!
2. What is the difference between a mountain and a hill?

____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________

You Compare!
3. How does this valley look different from this canyon?

____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________

You Compare!
4. What is the difference between an ocean and a lake?

____________________________________________________________________________________
____________________________________________________________________________________
____________________________________________________________________________________

After you watch the video, test your knowledge with these questions.

1. ________________ is the difference between high and low points.

2. A plateau has a ________________ elevation than a plain.

3. This landform is a ________________.

4. A ____________ is a mound of sand deposited by wind.

5. ________________ are landforms with narrow tops and steep sides.
Use these words to fill in the blanks next to the sentences below.

1. _____________  Physical features on Earth’s surface.

2. _____________  A landform with a relatively flat surface, low elevation, and little relief.

3. _____________  A large, relatively flat region with a much higher elevation than the surrounding area.

4. _____________  This type of landform has a narrow top and steep sides.

5. _____________  The lowland between hills or mountains.

6. _____________  A feature possessing steep sides and flat bottom.

7. _____________  A deposit of sediment running parallel to shore.

8. _____________  A mound of sand most commonly deposited by wind.

9. _____________  A steep face of rock along a coast.

10. _____________  A moving body of water that flows across land.
Use the correct word from above to complete the sentences in the following paragraph.

There are a wide variety of landforms on Earth’s surface. Landforms refer to the _____________ features on Earth’s surface. For example, a _________ ______ is a landform with a relatively flat surface and low elevation. A _________ ______ is different from a plain in that it is a fairly flat region but is higher than the surrounding area. The _____________ plateau is a famous landform that contains the Grand Canyon. A canyon is a landform with _____________ sides and a relatively flat bottom. A _____________ has more gentle sloping sides than a canyon. Beaches are examples of _____________ landforms. _____________ are mounds of sand that stabilize beaches. Sometimes waves produce a steep face of rock along the coast called a sea _____________. As waves continue to weather a sea cliff, columns of more resilient rocks, called sea _____________, are sometimes left standing.

In Your Own Words

1. List a few examples of famous landforms.

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

2. Compare the features of a valley with a canyon.

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

3. Describe three water features on Earth.

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
Salt Dough Landforms

Background:
The mountainous region of Nepal, where the world’s tallest mountain is located, looks very different than the Interior Plains of North America. This is because each area contains different landforms, which are the physical features on Earth’s surface. There are many different types of landforms. Coastal landforms include beaches, dunes, sea cliffs, and sea stacks. Other landforms include mountains, hills, valleys, canyons, plains, and plateaus. There are also different types of water features, including oceans, lakes, rivers, creeks, and streams. Some areas have only a few landforms, while others have many different landforms. In this activity, you are going to use salt dough to make a model of an area containing various landforms.

Materials
- 4 cups flour
- 1 cup salt
- 1.5 cups of hot tap water
- 2 teaspoons vegetable oil
- rolling pins
- objects to cut the dough (plastic utensils, cookie cutters, etc.)
- oven
- food coloring or paint
- aluminum foil
- toothpicks

Salt dough recipe
1. Mix the flour and salt together.
2. Gradually add water until the dough becomes moldable.
3. Add vegetable oil.
4. If the mixture is crumbly, add more water. If it is too sticky, add more flour.

Activity:
1. In this activity, you are going to create a model of an area of land that contains many different landforms. Decide if you want to create a model of a fictitious place, the area where you live, or a well-known area, such as the Grand Canyon.
2. Use the rolling pin to roll out a piece of salt dough.
3. Shape the salt dough to replicate a landform.
4. Once the model has been created, your teacher will bake it in the oven at 200 degrees. The time needed to bake the salt dough model will depend on the thickness of the piece you used. If the surface of the salt dough starts to burn but it is not fully cooked, cover it with a piece of tin foil.
5. There are two ways to color the landforms. You can add food coloring to the dough before putting it in the oven, or paint the dough after it has been baked.
6. Label the landforms in your model using pieces of paper attached to toothpicks.
Landform Identification

Background: The Earth’s surface is covered by many different types of physical features, known as landforms. A plain has a relatively flat surface with a low elevation and little relief. A plateau is also a large, flat area, but it has a high elevation compared to the surrounding area. Mountains have narrow tops and steep sides. Hills can also have steep sides, but they are not as tall as mountains. A valley is a lowland between hills or mountains. Rivers and streams often run through valleys. While a valley is gently sloping, a canyon is deep and narrow with very steep sides and a flat bottom. The coast also has a variety of different landforms. For example, beaches are a common coastal landform consisting of deposits of sediments that run parallel to the shore. A dune is a mound of sand deposited by the wind. Much of Earth is covered by water. An ocean is an immense body of water containing salt water. Lakes are smaller than oceans and commonly contain freshwater. Rivers are moving bodies of water that flow across land and eventually empty freshwater into oceans. Creeks and streams are smaller bodies of flowing water that usually feed into lakes or larger rivers.

Activity (Part I): Identify and label the landforms in the drawing below.
Activity (Part 2): In the boxes below, draw pictures of four landforms that you did not find on the previous page. Below each box, identify the type of landform and write a description. Also give a famous example of each type of landform.

1. Type: ___________________________
   2. Description: ______________________
   __________________________________
   __________________________________
   3. Famous example: _________________

1. Type: ___________________________
   2. Description: ______________________
   __________________________________
   __________________________________
   3. Famous example: _________________

1. Type: ___________________________
   2. Description: ______________________
   __________________________________
   __________________________________
   3. Famous example: _________________

1. Type: ___________________________
   2. Description: ______________________
   __________________________________
   __________________________________
   3. Famous example: _________________
The Amazing Colorado Plateau

Activity: Read the information below and answer the questions on the following page.

Chances are you have seen a picture of the majestic Grand Canyon. Maybe you’ve heard about beautiful Zion Canyon, or seen a picture of the amazing rock formations of Bryce Canyon. All these incredible places are located on the Colorado Plateau. If you live in or have had the opportunity to travel to Colorado, Utah, Arizona, or New Mexico, you may have visited features of the Colorado Plateau. The Colorado Plateau is an immense region with an elevation higher than the area surrounding it. It covers approximately 363,600 square kilometers. The average elevation of the plateau is 1,585 meters, but ranges from 914 meters at its lowest point to 4,267 meters at its highest point.

The Colorado Plateau has a fascinating and complicated geologic story. In fact, scientists are still learning about the geologic history of one of the world’s most famous plateaus. Ancient rocks, some of which are nearly two billions years old, underlie parts of the Colorado Plateau. About 600 million years ago, shallow seas covered the area. For millions of years, seas retreated and invaded the area as they deposited layers and layers of sediment. These sediments later formed layers of yellow, orange, brown, and white sandstone, shale, siltstone, and limestone rocks, which can be seen throughout the Colorado Plateau. The different colored rocks provide clues as to what life and the environment were like millions of years ago. About 40 to 80 million years ago, the entire area was violently uplifted by a series of processes also involved in the formation of the Rocky Mountains. Later, about 10 to 20 million years ago, the Colorado Plateau was lifted still higher. It was at this time that water and rivers started carving canyons in the layers of rock.

It is during this time, about 6 million years ago, that the Colorado River began cutting the Grand Canyon by weathering and eroding the rocks in this area. The Grand Canyon is one of the most spectacular geologic features in North America. It is 446 kilometers long, 1.6 kilometers deep, and ranges from 1.6 to 29 kilometers wide. Zion is another famous canyon that has been carved from the Colorado Plateau. Located in Utah, Zion was formed as the rushing waters of the Virgin River eroded the red and tan Navajo sandstone that forms it walls. Arches National Park in Utah is another unique area located within the Colorado Plateau. The park is home to over 950 natural arches and other geologic formations, most of which are made of soft sandstone deposited over 1.5 million years ago. Each of these locations draws millions of visitors each year.
The Amazing Colorado Plateau

Directions: Use the information on the previous page to answer the questions below.

1. In what state(s) is the Colorado Plateau located?

2. What is the average elevation of the Colorado Plateau?

3. What types of rocks make up the Colorado Plateau?

4. How was the Grand Canyon formed?

5. How were many of the layers of rock in the Colorado Plateau formed?