four corners

WORKBOOK
The Changing Earth
What do you know about the Earth’s highlands? Complete the chart below.

<table>
<thead>
<tr>
<th>What is a highland?</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>What is the Earth’s surface? Is it a plate or something else?</td>
<td></td>
</tr>
<tr>
<td>What created the highlands?</td>
<td></td>
</tr>
<tr>
<td>What is under the Earth’s surface?</td>
<td></td>
</tr>
</tbody>
</table>

Write a paragraph using the information from the chart you completed above.

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Read the definitions and write the matching words from the Word Bank.

[ Word Bank ]

<table>
<thead>
<tr>
<th>volcano</th>
<th>highlands</th>
<th>plates</th>
<th>collide</th>
</tr>
</thead>
<tbody>
<tr>
<td>erupt</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. the surface of the Earth
2. to burst out, as lava flowing from a volcano
3. parts of an area that are higher than the areas around it
4. a place where hot lava erupts from the Earth
5. large pieces of the top layers of the Earth
6. to hit something or someone that is moving in a different direction from you

Circle the synonyms of the underlined words.

1. Many of the highlands on the Earth’s surface were created millions of years ago.
   1. seen          2. formed          3. looked          4. lost

2. Movement of rock caused the mountains to form.
   1. made          2. went           3. helped          4. erupted
Comprehension | The Earth’s Highlands

Answer the following questions.

1. Which is true about the Earth’s surface?
   - It is flat.
   - It isn’t flat.
   - It is covered with water.
   - It is covered with rocks.

2. What are the parts of an area called that are higher than the areas around it?
   - surface
   - highlands
   - rock
   - lava

Read the passage and answer the questions.

Highlands are formed in different ways. The movement of rock under the Earth’s surface can help create highlands. A volcano can help create a highland when it erupts.

1. What is the main idea of the passage?
   - Highlands are formed in the same way.
   - Highlands are around us.
   - Many highlands were created millions of years ago.
   - Highlands are formed in different ways.

2. Which is not true about the passage?
   - The movement of rock can help create highlands.
   - Highlands are formed in different ways.
   - A volcano can help create a highland when it erupts.
   - Many highlands were created recently.

Comprehension | How Plates Create Highlands

Answer the following questions.

1. Which is not true about the Alps and the Himalayas?
   - Movement of rock below the Earth’s surface caused them to form.
   - They are two of the world’s most famous mountain ranges.
   - Both of them were formed in a similar way.
   - Both of them were formed in the same continent.

2. What does ‘they’ in the box refer to?
   - They are large pieces of the top layers of the Earth.
   - They are always moving.
   - They often push against each other as they move.
   - We cannot feel that they are moving.

Look at the pictures and write the matching sentences from the box.

- Rock pushes up.
- Plates push against each other.

- Plates push against each other. - Rock pushes up.
Complete the word puzzle using the words from the Word Bank.

[ Word Bank ]

volcano
lava
release
ash
melt
magma
spot
erupt
harden
reach

Across
2. to arrive somewhere
5. to let someone go free, after having kept them somewhere
7. to become liquid
9. a place where hot lava erupts from the Earth

Down
1. to burst out
3. tiny pieces of rock and dust released from a volcano
4. to become firm or stiff
6. a particular place or area
7. melted rock from the Earth
8. magma that flows from a volcano when it erupts

Read the passage and answer the questions.

Mount Fuji is a mountain near Tokyo, Japan. It was first formed hundreds of thousands of years ago. It was not formed in the same way as the Alps or Himalayas. Mount Fuji was formed when a volcano erupted.

1. What is the main idea of the passage?
   ① Mount Fuji was formed by moving plates.
   ② Mount Fuji was formed recently.
   ③ Mount Fuji was formed when a volcano erupted.
   ④ Mount Fuji was formed in the same way as the Alps.

2. Where is Mountain Fuji?
   ① near Paris, France
   ② near London, England
   ③ near Toronto, Canada
   ④ near Tokyo, Japan

3. What is the synonym of the underlined word?
   ① made
   ② caused
   ③ melted
   ④ collided

4. What might the next passage be about?
   ① how volcanoes created highlands
   ② when volcanoes created the Alps
   ③ why volcanoes created highlands
   ④ what created highlands

5. What two mountain ranges were formed in the same way?
   the Alps, the Himalayas
Read the passage and answer the questions.

Hot melted rock is found deep inside the Earth. This ________ rock is called magma. Sometimes there is an opening or weak spot in the Earth’s surface. When the fiery magma flows up through the opening the volcano ________.

1. Which is not true about the passage?
   ① Hot melted rock is found deep inside the Earth.
   ② There is an opening or weak spot in the Earth’s surface.
   ③ Fiery magma can flow up through the opening in the surface.
   ④ There is no opening in the Earth’s surface.

2. What word goes in the first blank?
   ① lava
   ② molten
   ③ ash
   ④ surface

3. What word goes in the second blank?
   ① erupts
   ② became
   ③ made
   ④ melted

Reread pages 8 to 9 of the student book and write about how volcanoes create highlands.

When the fiery magma flows up through the opening in the Earth’s surface, the volcano erupts. Once the volcano erupts, it also releases bits of rock and ash. The ash and hardened magma called lava build up into a mountain.

Comprehension | How Volcanoes Created Highlands (2)

Comprehension | How Volcanoes Created Highlands (3)

Read the passage and answer the questions.

Sometimes hardened lava and ash can become a mountain quickly. In 1943 a volcano erupted in a cornfield in Mexico. After just one year, the hardened ________ had formed into a mountain.

1. What is the main idea of the passage?
   ① Many volcanoes erupted in Mexico.
   ② Lava and ash become a mountain very slowly.
   ③ Sometimes lava and ash can become a mountain quickly.
   ④ In 1943, a volcano erupted in a cornfield in Japan.

2. What word goes in the blank?
   ① rock
   ② magma
   ③ lava
   ④ water

Look at the map and answer the questions.

1. What does the map show us?
   ① the ring of fire
   ② the molten rock
   ③ lava and ash
   ④ mountains and islands
Fill in the blanks using the words from the Word Bank.

[Word Bank]

<table>
<thead>
<tr>
<th>changing</th>
<th>Pacific Ocean</th>
<th>mountains</th>
<th>island</th>
</tr>
</thead>
<tbody>
<tr>
<td>formed</td>
<td>covered</td>
<td>erupts</td>
<td>slowly</td>
</tr>
</tbody>
</table>

1. The Hawaiian Islands are in the **Pacific Ocean**.

2. They look like they’re **covered** with mountains.

3. Actually, the islands are **mountains**.

4. They were **formed** when volcanoes on the ocean floor erupted many years ago.

5. The underwater mountain may rise above the surface of the water and form an **island**.

6. When an underwater volcano **erupts**, lava from the volcano hardens into rock.

7. Most changes that build highlands happen so **slowly** that we do not notice them.

8. Over the next million years, the highlands on Earth will keep **changing**.

Read the passage and answer the questions.

The Hawaiian Islands are in the Pacific Ocean. They look like they’re covered with mountains. Actually, the islands are mountains. They were formed when volcanoes on the ocean floor erupted many years ago.

1. Which is not true about the passage?
   - [x] The Hawaiian Islands are in the Atlantic Ocean.
   - The islands are mountains.
   - The Hawaiian Islands look like volcanoes.
   - The Hawaiian Islands are not mountains.

2. What might the next passage be about?
   - [x] why the Hawaiian Islands are called mountains
   - how volcanoes created the islands
   - why volcanoes created the islands
   - how the Hawaiian Islands became mountains

Reread pages 13 to 14 of the student book and write about how volcanoes can create an island in your own words.

When an underwater volcano erupts, lava from the volcano hardens into rock. Then the underwater mountain may rise above the surface of the water and form an island.
1. Which is true about the Earth’s surface?
   ① Most of the Earth’s surface is covered with water.
   ② The Earth’s surface is flat.
   ③ The Earth’s surface isn’t flat.
   ④ Most of the Earth’s surface is covered with lava.

2. How were the Alps and the Himalayas formed?
   ① by magma that flowed up when volcanoes erupted
   ② by hardened lava and ash
   ③ by cool water and water drops
   ④ by movement of rock below the Earth’s surface

3. What is the surface of the Earth called?
   ① crust
   ② lava
   ③ molten rock
   ④ volcano

4. Reread page 4 of the student book and write about two ways that highlands are formed.
   (1) the movement of rock under the Earth’s surface
   (2) a volcano that erupts

5. Reread page 6 of the student book and write about how plates create highlands in your own words.
   Plates often push against each other as they move.
   This can cause the Earth’s surface to lift and fold.
   Rock is slowly pushed up. Highlands can form this way over many years.
1. Which is true about plates?
   ① They are always moving quickly.
   ② They are found deep inside the Earth.
   ③ They are huge rocks in the top layers of the Earth.
   ④ They are molten rocks.

2. What is the molten rock called that is found deep inside the Earth?
   ① ash
   ② mountain
   ③ plate
   ④ magma

3. Once the hot magma reaches the Earth’s surface, what is it called?
   ① lava
   ② molten rock
   ③ plate
   ④ ash

4. What two highlands were formed by moving rocks?
   the Alps, the Himalayas

5. What two highlands were formed when volcanoes erupted?
   Mount Fuji, the Hawaiian Islands

6. What highland is in the Pacific Ocean?
   the Hawaiian Islands

**Circle the correct words to complete each sentence.**

1. It ______ called snow.
   ① am
   ② is
   ③ are

2. They ______ formed recently.
   ① am
   ② is
   ③ were

3. Mountains ______ made of rocks and stones.
   ① am
   ② is
   ③ are

4. Rain ______ formed with tiny water drops.
   ① am
   ② is
   ③ are

**Fill in the blanks using the words from the Word Bank to complete the sentences.**

[ Word Bank ]

made  formed  dotted  found

1. Hot melted rock is ______ deep inside the Earth.

2. The land is ______ with hills, mountains and other highlands.

3. Highlands are ______ in different ways.

4. The Earth’s surface, or crust, and the layer below it are ______ of huge blocks of rock.
Circle the correct words to complete each sentence.

1. They were ________ of wood.
   - made
   - called
   - said

2. The airplane was ________ to have left on time.
   - believed
   - looked
   - formed

3. The highlands were ________ by moving plates.
   - found
   - created
   - flowed

4. Mount Fuji was ________ by lava and ash.
   - erupted
   - looked
   - formed

Fill in the blanks using the words from the Word Bank to complete the sentences.

[ Word Bank ]

- was
- were
- is
- are

1. Hot melted rock ________ found deep inside the Earth.
2. Mount Fuji ________ not formed in the same way as the Alps or Himalayas.
3. They ________ formed when volcanoes on the ocean floor erupted many years ago.
4. These rocks ________ called plates.

There are different ways for highlands to form. Complete the chart below.

What are two ways that highlands can be formed?

How were the Alps and the Himalayas formed?

How was Mount Fuji formed?

How were the Hawaiian Islands formed?

Write a paragraph about Highlands using the information from the chart above.
Listen to the sentence and fill in the blanks.

1. The movement of __rock__ under the Earth’s surface can help create __highlands__.

2. Both __mountain ranges__ were formed in a similar way.

3. __Plates__ often push against each other as they move.

4. Once the hot magma reaches the Earth’s __surface__, it is called __lava__.

5. Lava from the __underwater volcano__ hardens and forms an __island__.

Listen to the paragraph and fill in the blanks.

6. The Earth’s surface, or __crust__, and the __layer__ below it are made of huge blocks of __rocks__. These __rocks__ are called __plates__. __Plates__ are always moving but most of the time you can’t feel it. That’s because they only move a few __centimeters__ each year.

7. __Mount Fuji__ is a mountain near Tokyo, __Japan__. It was first formed __thousands__ of years ago. It was not formed in the same way as the __Alps__ or Himalayas. Mount __Fuji__ was formed when a volcano __erupted__.

8. The lava __cools__ and __hardens__ into rock. A volcano can also __release__ bits of rock and dust called __ash__. The __ash__ falls back to the Earth. Hardened lava and ash can build up into a __mountain__.

9. Many volcanoes __circle__ the __Pacific__ Ocean. They line __eastern__ __Asia__ and the __western__ parts of North and South America. They are also in many Pacific Island nations. There are so many volcanoes around the __Pacific__ __Ocean__, the area is called the __Ring__ of __Fire__.

10. When an __underwater__ volcano erupts, __lava__ from the volcano __hardens__ into rock. The underwater mountain may rise above the __surface__ of the water and form an __island__.