

CHAPTER **3** Mountains and Volcanoes NEW CHAPTER

**the BIG idea**

Mountains and volcanoes form as tectonic plates move.

- 3.1 Movement of rock builds mountains.
- 3.2 Volcanoes form as molten rock erupts.
- 3.3 Volcanoes affect Earth's land, air, and water.


CHAPTER OUTLINE      CHAPTER RESOURCES

CHAPTER HOME

**3.1** KEY CONCEPT Movement of rock builds mountains.

Folded mountains form as plates push together.

**VOCABULARY**  
[folded mountain](#)  
[fault-block mountain](#)



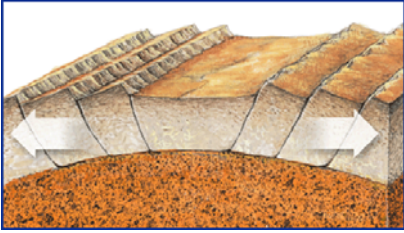
CHAPTER RESOURCES      SECTION OUTLINE

CHAPTER HOME

**3.1** KEY CONCEPT Movement of rock builds mountains.

Folded mountains form as plates push together. Fault-block mountains form as the lithosphere is stretched.

**VOCABULARY**  
[folded mountain](#)  
[fault-block mountain](#)



CHAPTER RESOURCES      SECTION OUTLINE

CHAPTER HOME

**3.1** KEY CONCEPT Movement of rock builds mountains.

**folded mountain**

A mountain that forms as continental crust is compressed and rocks bend into large folds.

**VOCABULARY**  
[folded mountain](#)  
[fault-block mountain](#)

CHAPTER RESOURCES      KEY CONCEPT SUMMARY

CHAPTER HOME

**3.1** KEY CONCEPT Movement of rock builds mountains.

**fault-block mountain**

A mountain that forms as blocks of rock move up or down along normal faults in areas where the lithosphere is being pulled apart.

**VOCABULARY**  
[folded mountain](#)  
[fault-block mountain](#)

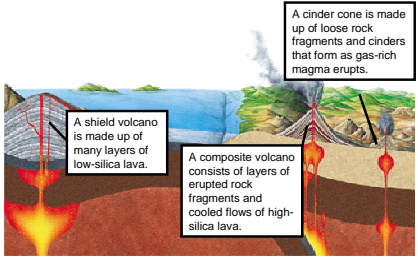
CHAPTER RESOURCES      KEY CONCEPT SUMMARY

CHAPTER HOME

**3.2** KEY CONCEPT Volcanoes form as molten rock erupts.

Volcanoes erupt molten rock, rock fragments, and gases. Different types of erupted materials build up different types of volcanoes.

**VOCABULARY**  
[volcano](#)  
[lava](#)  
[pyroclastic flow](#)



A shield volcano is made up of many layers of low-silica lava.

A composite volcano consists of layers of erupted rock fragments and cooled flows of high-silica lava.

A cinder cone is made up of loose rock fragments and cinders that form as gas-rich magma erupts.

CHAPTER RESOURCES      SECTION OUTLINE

**3.2** KEY CONCEPT CHAPTER HOME  
**Volcanoes form as molten rock erupts.**

Volcanoes erupt molten rock, rock fragments, and gases. Different types of erupted materials build up different types of volcanoes.

**SIMULATION**  
 Make a volcano erupt.

**VOCABULARY**

volcano

lava

pyroclastic flow

CHAPTER RESOURCES

SECTION OUTLINE

**3.2** KEY CONCEPT CHAPTER HOME  
**Volcanoes form as molten rock erupts.**

**volcano**

An opening in the crust through which molten rock, rock fragments, and hot gases erupt; a mountain built up from erupted materials.

**VOCABULARY**

volcano

lava

pyroclastic flow

CHAPTER RESOURCES

KEY CONCEPT SUMMARY

**3.2** KEY CONCEPT CHAPTER HOME  
**Volcanoes form as molten rock erupts.**

**lava**

Molten rock that reaches a planet's surface through a volcano.

**VOCABULARY**

volcano

lava

pyroclastic flow

CHAPTER RESOURCES

KEY CONCEPT SUMMARY

**3.2** KEY CONCEPT CHAPTER HOME  
**Volcanoes form as molten rock erupts.**

**pyroclastic flow**

A dense cloud of superheated gases and rock fragments that moves quickly downhill from an erupting volcano.

**VOCABULARY**

volcano

lava

pyroclastic flow

CHAPTER RESOURCES

KEY CONCEPT SUMMARY

**3.3** KEY CONCEPT CHAPTER HOME  
**Volcanoes affect Earth's land, air, and water.**

Materials erupted from volcanoes, as well as heat from molten rock underground, affect Earth's surface.

Land	Air	Water
<ul style="list-style-type: none"> <li>lava</li> <li>volcanic ash</li> <li>landslides</li> <li>mudflows</li> <li>pyroclastic flows</li> </ul>	<ul style="list-style-type: none"> <li>poisonous gases</li> <li>adds to acid rain</li> <li>haze</li> <li>lower temperatures</li> </ul>	<ul style="list-style-type: none"> <li>hot springs</li> <li>geysers</li> <li>fumaroles</li> <li>deep-sea vents</li> </ul>

**VISUALIZATION**  
 CLASSZONE.COM  
 Watch clips of erupted volcanic material.

**VOCABULARY**

acid rain

geyser

CHAPTER RESOURCES

SECTION OUTLINE

**3.3** KEY CONCEPT CHAPTER HOME  
**Volcanoes affect Earth's land, air, and water.**

**acid rain**

Rain that has become more acidic than normal due to pollution.

**VOCABULARY**

acid rain

geyser

CHAPTER RESOURCES

KEY CONCEPT SUMMARY

**3.3** **KEY CONCEPT** Volcanoes affect Earth's land, air, and water. **CHAPTER HOME**

**geyser**  
A type of hot spring that shoots water into the air.

**VOCABULARY**  
acid rain  
geyser

**CHAPTER RESOURCES**

**KEY CONCEPT SUMMARY**

**3.1** **KEY CONCEPT** Movement of rock builds mountains. **CHAPTER HOME**

I. Movement of rock builds mountains.

A. Most mountains form along plate boundaries.

- Mountain Ranges and Belts
- Mountains, Rocks, and Sediment

B. Mountains can form as rocks fold.

C. Mountains can form as rocks move along faults.

**VOCABULARY**  
folded mountain  
fault-block mountain

**CHAPTER RESOURCES**

**KEY CONCEPT SUMMARY**

**3.2** **KEY CONCEPT** Volcanoes form as molten rock erupts. **CHAPTER HOME**

II. Volcanoes form as molten rock erupts.

A. Volcanoes erupt many types of material.

- Magma
- Rock Fragments
- Volcanic Gases

B. Most volcanoes form along plate boundaries.

C. Volcanoes can be many shapes and sizes.

D. Scientists monitor volcanoes.

**VOCABULARY**  
volcano  
lava  
pyroclastic flow

**CHAPTER RESOURCES**

**KEY CONCEPT SUMMARY**

**3.3** **KEY CONCEPT** Volcanoes affect Earth's land, air, and water. **CHAPTER HOME**

III. Volcanoes affect Earth's land, air, and water.

A. Volcanic eruptions affect the land.

- Immediate Effects
- Long-term Effects

B. Volcanic gases and ash affect the air.

C. Volcanic activity affects water.

- Hot Springs, Geysers, and Fumaroles
- Deep-Sea Vents





**VOCABULARY**  
acid rain  
geyser


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**KEY CONCEPT SUMMARY**


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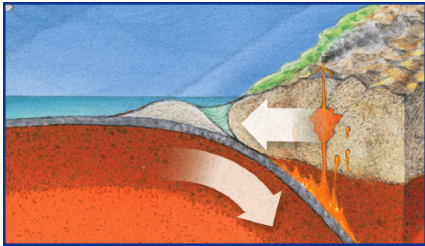


**SIMULATION**  
Make a volcano erupt.




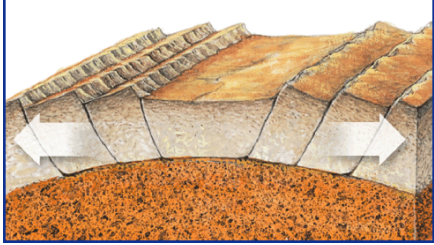
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CLASSZONE.COM  
Watch clips of erupted volcanic material.

**Image Gallery** **CHAPTER HOME**




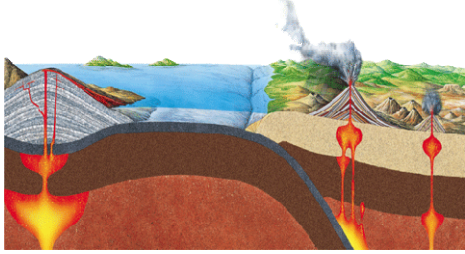
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