

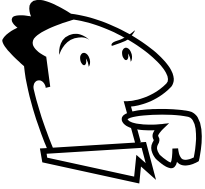
Physical Science

Chapter 22: Earth's Interior

Section 1- Earth's Structure

Pages 660-663

22:1



Examples of scientists 'seeing' the Earth...

Examples of scientists 'hearing' the Earth...

Key Concept #1: What is the science of geology?

Geology: DEFINE- _____

Key Concept #2: What are the characteristics of Earth's principle layers?

- Earth can be divided into _____ main layers

1. _____

2. _____

3. _____

Crust: DEFINE- _____

Mantle: DEFINE- _____

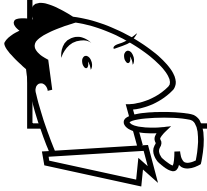
- Scientists divide the mantle into _____ main layers

1. _____ - a layer of relatively cool, rigid rock that includes the uppermost part of the mantle and crust.

2. _____ - a layer of softer, weaker rock that can flow slowly.

3. _____ - stiffer rock that extends all the way down to the upper surface of Earth's core.

Core: DEFINE- _____



Key Concept #1: What is a mineral?

Rock: DEFINE- _____

Mineral: DEFINE- _____

- Are minerals inorganic? _____ Why or why not? _____

Key Concept #2: What are some important properties of minerals?

- The properties by which minerals can be identified include their _____ ,
_____, _____ , _____ , _____ ,
_____, _____ , and _____ .

Property	Explanation
Crystal Structure	
Color	
Streak	
Luster	
Density	
Hardness	
Fracture/Cleavage	
Other	



Physical Science

Chapter 22: Earth's Interior
Section 3- Rocks and the Rock Cycle
Pages 670-675

22:3

Key Concept #1: What are the three major groups of rocks?

- Rocks are classified into 3 major groups: _____, _____ and _____, based on how they form.

Key Concept #2: How do igneous rocks form?

Igneous Rock: DEFINE- _____

Magma: DEFINE- _____

- Igneous rock forms when _____

Key Concept #3: What are sedimentary rocks?

Sediment: DEFINE- _____

Sedimentary Rock: DEFINE- _____

Key Concept #4: How do metamorphic rocks form?

Metamorphic Rock: DEFINE- _____

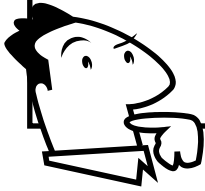
- Metamorphic rock forms when _____

- Most metamorphic rocks form under _____
deep underground.

Key Concept #5: How can one type of rock change into another?

Rock Cycle: DEFINE- _____

- In the rock cycle, forces _____ Earth and _____ cause rocks to change form.



Key Concept #1: What are plate tectonics and continental drift?

Plate Tectonics: DEFINE- _____

- The theory of plate tectonics explains _____

What happened, according to Wegener, to Pangaea, the single supercontinent?

What is this process called?

Key Concept #2: What are the roles of sea-floor spreading and subduction in plate tectonics?

Mid-Ocean Ridge: DEFINE- _____

Sea-floor Spreading: DEFINE- _____

What is subduction? _____

How are trenches formed? _____

Sea-floor spreading creates...

Subduction destroys...

Key Concept #3: Why do tectonic plates move?

- Plate motions are the visible part of the process of _____

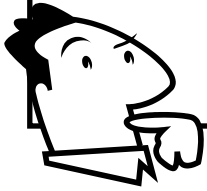
Key Concept #4: What are the types of plate boundaries and what are their characteristics?

- There are 3 types of plate boundaries: _____, _____ and _____

Divergent Boundaries	Convergent Boundaries	Transform Boundaries
DEFINITION:	DEFINITION:	DEFINITION:

Key Concept #5: Where do most mountains form?

Geologists found that most mountains form _____



Key Concept #1: What causes faults and folds?

- As tectonic plates move, they cause _____, which in turn produces _____ and _____

Fault: DEFINE- _____

Fold: DEFINE- _____

Key Concept #2: What causes earthquakes?

Earthquake: DEFINE- _____

- Earthquakes occur because _____

Focus: DEFINE- _____

Epicenter: DEFINE- _____

Seismic Waves: DEFINE- _____

Types of Seismic Waves		
<i>P wave</i>	<i>S wave</i>	<i>Surface waves</i>
DEFINITION:	DEFINITION:	DEFINITION:

Key Concept #3: How are earthquakes measured?

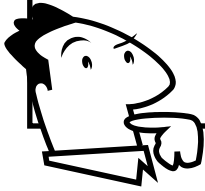
To measure earthquakes and pinpoint their epicenters, geologists _____

Seismograph: DEFINE- _____

Scales	1.	2.	3.
--------	----	----	----

Key Concept #4: Where do most earthquakes occur?

- Most earthquakes are _____, where many _____ are found.



Key Concept #1: How do volcanoes form?

Volcano: DEFINE- _____

- Under certain conditions, small amounts of mantle rock can melt, _____
- The magma rises _____ through the _____, erupting at the surface as a _____

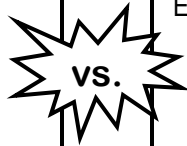
Magma Chamber: DEFINE- _____

Summarize how a volcano erupts in your own words.

Key Concept #2: Why are some volcanic eruptions quiet and others explosive?

- Volcanoes can erupt quietly or explosively depending on _____

Quiet eruptions: DETAILS-



Explosive eruptions: DETAILS-

Key Concept #3: Where are volcanoes found?

- Most volcanoes occur _____

Key Concept #4: What landforms are formed from lava and magma?

Landforms formed by magma:

- 1.
- 2.
- 3.
- 4.

Landforms formed by lava:

- 1.

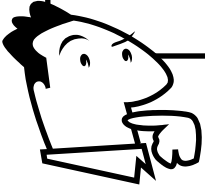
Physical Science

Chapter 23: Earth's Surface

Section 1- Fresh Water

Pages 704-708

23:1



Key Concept #1: What processes are involved in the water cycle?

- The Water Cycle is made up of several processes, including _____ , _____ , _____ and the eventual return of _____

Evaporation: DEFINE- _____

Transpiration: DEFINE- _____

Condensation: DEFINE- _____

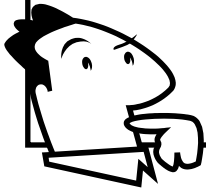
Precipitation: DEFINE- _____

Glacier: DEFINE- _____

- A small portion of Earth's fresh water is located in the _____ , _____ , and _____ . Most is located in _____ and _____ .

Runoff: DEFINE- _____

Watershed: DEFINE- _____



Physical Science

Chapter 23: Earth's Surface
Section 2- Weathering and Mass Movement
Pages 709-712

23:2

Key Concept #1: What are the agents of erosion?

Erosion: DEFINE- _____

- Erosion acts through _____, _____,
and _____

Key Concept #2: What causes mechanical and chemical weathering?

Weathering: DEFINE- _____

- Mechanical and chemical weathering cause _____

Mechanical Weathering: DEFINE- _____

Abrasion: DEFINE- _____

Chemical Weathering: DEFINE- _____

Key Concept #3: What factors affect the rate at which rocks weather?

- The rate at which Mechanical Weathering and Chemical Weathering take place depends on 3 main factors:

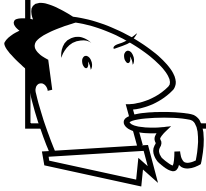
1. _____ 2. _____ 3. _____

Key Concept #4: What force causes mass movement?

Mass Movement: DEFINE- _____

- Through mass movement, gravity _____

Type of Mass Movement	Landslide	Mudflow	Creep	Slumping
Description				



Key Concept #1: What is the most important factor influencing the ability of a stream to cause erosion?

- The primary force of erosion is _____
- Gravity pulls sediment and water _____
- The end result of erosion is _____

Deposition: DEFINE- _____

- Most sediment is moved and deposited by _____
- Flowing water is the major agent of erosion responsible for _____
- Everywhere you look on land, you see features formed by _____ and _____
- A stream's ability to erode depends mainly on it's _____

Key Concept #2: What features are formed by surface water erosion?

- Water erosion forms _____, _____, _____ and _____.

Meanders: DEFINE- _____

Key Concept #3: What features are deposited by running water?

- Features deposited by flowing water include _____ and _____

Delta: DEFINE- _____

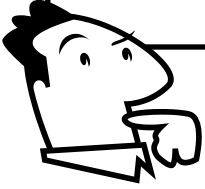
Key Concept #4: What causes groundwater erosion?

- The processes of chemical weathering cause much groundwater erosion, including the _____

Physical Science

Chapter 23: Earth's Surface
Section 4- Glaciers and Wind
Pages 719-724

23:4



Key Concept #1: How do glaciers form?

- Glaciers form in places where _____

Continental Glacier: DEFINE- _____

Valley Glacier: DEFINE- _____

Key Concept #2: What landscape features are created by glacial erosion and deposition?

- Glaciers cause many distinctive features in the landscape, including _____, _____, _____, and _____
- When a glacier melts, it deposits it's load of _____, creating a variety of _____

Till: DEFINE- _____

Moraine: DEFINE- _____

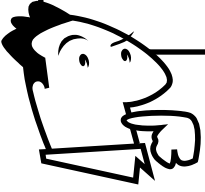
Key Concept #3: What are the effects of wind erosion and deposition?

- Wind erodes the land by _____ and _____
- Features deposited by wind include:
 1. _____
 2. _____

Physical Science

Chapter 23: Earth's Surface
Section 5- The Restless Ocean
Pages 725-729

23:5



Key Concept #1: How do waves erode rock and deposit sediment?

Surface Current: DEFINE- _____

- Winds blowing across the surface of the ocean cause _____
- Two physical processes, _____ and _____ are responsible for much wave erosion.

1. Waves pound of cracks in rocks (hydraulic action)
2. A wave fills a crack with water
3. More water adds to the crack, creating pressure
4. Pressure causes the crack in the rock to get bigger
5. Rock breaks into smaller pieces
6. Abrasion break them down more
7. Sediment carried in waves acts like sandpaper, rubbing away at other rocks.

Summarize in your own words how waves can erode rock and deposit sediment...