Physical Science Midterm Study Guide

If it is summer in the northern hemisphere, what is the southern hemisphere?

How can water be an agent for physical weathering?

A by absorbing gases from the atmosphere and ground to chemically react

with minerals

B by seeping into the soil and dissolving the minerals in rocks

C by absorbing sulfur oxides and creating acid precipitation

D by seeping into the cracks of rocks and freezing

How is climate different from weather?

A company has several factories around the world and has decided to transition from burning fossil fuels to using alternative energy resources. How could a decrease in burning fossil fuels impact the atmosphere?

A It could decrease the oxygen levels of the atmosphere.

B It could increase the nitrogen levels of the atmosphere.

C It could decrease the carbon dioxide levels of the atmosphere.

D It could increase the sulfur dioxide levels of the atmosphere.

Since 1901, global surface temperatures have risen at an average rate of 0.13°F every ten years. In which way could the average increase in global temperatures influence Earth?

A by decreasing erosion within coastal ecosystems

B by decreasing periods of drought in all water systems

C by increasing the amount of flooding because of rising sea levels

D by increasing the formation of sea ice within polar regions

Which of the following is LEAST likely to be an effect of global warming?

A Loss of fertile delta regions for agriculture

B Change in global patterns of precipitation

C Extinction of some species that have narrow temperature requirements

D Decreased rate of photosynthesis in vegetation

The ozone layer protected early evolving organisms from \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ radiation

What is the constant movement of water between the atmosphere and Earth’s surface?

Polar and tropical regions maintain fairly constant average temperatures because \_\_\_\_.

A the Sun always strikes these regions at the same angle

B air masses remain stationary near the poles and equator

C Earth radiates extra energy back into space

D the continual motion of air and water reallocates heat energy throughout Earth

Many clouds have a high albedo. What is albedo?

What can cause an increase in the density of ocean water?

More solar energy reaches the equatorial regions than the polar regions because the equatorial regions \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

The Gulf Stream in the Northern Hemisphere and the Brazilian Current in the Southern Hemisphere move poleward. Compared to inland areas at the same latitude, the coastal areas bordering these currents will

A be warmer.

B have more advection fogs.

C be more arid.

D have shorter growing seasons

Which diagram shows the position of the Earth relative to the sun’s rays on a winter day in the Northern Hemisphere?



If you live in the Southern Hemisphere, during which months does autumn occur?

A. December, January, February

B. June, July, August

C. March, April, May

D. September, October, November

Which sphere of the Earth is *directly* affected by deforestation?

 A. Atmosphere

 B. Biosphere

 C. Geosphere

 D. Hydrosphere

What takes in carbon from the atmosphere?

What type of rock contains fossils?

As time goes by, and water goes through the water cycle again and again, the amount of water on Earth \_\_\_\_\_\_\_.

A. Increases

B. Decreases

C. Stays the same

D. Goes up and down

What would be a consequence of land ice melting at the poles?

Dinosaurs that survived the mass extinction that marked the beginning of the Cenozoic Era are the common ancestors of which organisms?

Is it residential or agricultural land use type results in the most runoff?

How did the evolution of cyanobacteria affect the Earth’s atmosphere?

Hint: what gas did it add?

What is the correct order of Earth’s atmospheric layers from bottom to top?

What causes the Coriolis effect?

The highest temperatures are typically found in the which layer of the atmosphere:

What drives the movement of tectonic plates?

What type of tectonic plate boundary involves two tectonic plates sliding past each other?

Divergent, Convergent/Subduction, Transform

What type of weathering changes the composition of rock?

Assume an element has a half-life of 50 years. The element is naturally found in a living organism and begins decaying at death. If there was 80g of this element present when the organism died, and only 10 grams of the element left when its fossil is tested, how old is the fossil?

What type of tectonic plate boundary involves one tectonic plate sliding underneath another?

Divergent, Convergent/Subduction, Transform

How is rock transformed from one type into another?

Which geologic era did mammals proliferate (flourish)?

Igneous rock can be identified by

1. ribbonlike layers
2. fossils
3. holes in the rock
4. sand or pebbles

Which type of crust is younger oceanic crust or continental crust?