Science Focus 7

Planet Earth

Pop Quiz Master

(5 – 6 questions) for each Topic

Answer Key

Science Focus 7 Topics	1.	2.	3.	4.	5.	6.
1-Minerals	C	C	A	B	A	
2-Rocks.Rock Cycle	C	D	A	C	A	
3-Erosion	C	C	A	B	A	C
4-Crust	B	C	C	A	D	
5-Earthquakes	A	C	D	A	B	
6-Volcanoes	B	A	D	D	C	
7-Mountains	A	D	B	C	A	
8-Fossils	A	D	C	B	C	
9-Geologic Time	C	D	C	B	C	
10-Fossil Fuels	C	C	A	B	A	

Planet Earth: Topic 1 – Minerals **- Pop Quiz**

Student Name _____ **Class** _____

1. Minerals play an important role in your body's functions. Calcium, from calcite and dolomite, helps to regulate this in the body's cells ...
   - **A** oxygen
   - **B** blood
   - **C** water
   - **D** carbon dioxide

2. An example of growing crystals in your body is ...
   - **A** blood clotting
   - **B** urinalysis
   - **C** kidney stones
   - **D** liver oxygenation

3. Minerals can be identified by certain clues. The clue that identifies the color of the powdered form of the mineral is called its ...
   - **A** streak
   - **B** lustre
   - **C** color
   - **D** cleavage

4. Cubic, tetragonal, hexagonal, orthohombic, monoclinic and triclinic describe systems of ...
   - **A** mineral hardness
   - **B** crystal structure
   - **C** cleavage types
   - **D** synthetic models

5. There is a huge demand for perfect crystals in such things as electronic circuits, credit cards, machines, medicines and communication devices. Synthetic crystals are manufactured because natural crystals ...
   - **A** have impurities
   - **B** are rare
   - **C** are too soft
   - **D** are too expensive

Planet Earth: Topic 2 – Rocks and the Rock Cycle **- Pop Quiz**

Student Name **Class**

1. Igneous rock, can be intrusive rock and extrusive rock. These rocks are all formed from ...
   - **A** crystals
   - **B** sediments
   - **C** magma or lava
   - **D** earth's crust

2. Allison and Rachel were investigating the banks of the river and discovered a large section had been eroded away. They could see layers of different soil types. These visible layers are called ...
   - **A** cementation
   - **B** sedimentation
   - **C** calcification
   - **D** stratification

3. Metamorphic rock is rock that has changed form. It is usually formed ...
   - **A** below the earth's surface
   - **B** on the earth's surface
   - **C** when rock is heated
   - **D** when rock is cooled

4. The formation of different types of rocks is described in the Rock Cycle. An important feature of this cycle is that it ...
   - **A** always forms rocks the same way
   - **B** cannot be reversed
   - **C** does not have a set order
   - **D** doesn't have any shortcuts or detours

5. A fertile soil is one that can supply nutrients for plant growth. To identify the different layers in a particular type of soil, a geologist would look at the ...
   - **A** soil profile
   - **B** parent soil
   - **C** humus content
   - **D** organic components

Planet Earth: Topic 3 - Erosion **- Pop Quiz**

Student Name _____ **Class** _____

1. Tony found that when he poured water into a crack in a rock sample and froze it, then allowed it to thaw, the crack was actually wider. The type of weathering he investigated was classified as ...

A chemical
B biological
C mechanical
D physical

2. Landslides and rock slides can have devastating effects on the landscape. The Frank Slide is one such example. To study these, scientists are using new technology and sound waves. One of the major forces besides an earthquake responsible for these types of sudden changes is ...

A wind
B frost
C gravity
D water

3. André tested the effects of water on the natural rock samples found in his schoolyard. He tested the rock samples with pure water (pH 6.8), rain water (pH 4.5) and tap water (pH 6.7). The type of weathering he investigated was classified as ...

A chemical
B biological
C mechanical
D physical

4. On a field trip to the foothills, the class was amazed, when their teacher pointed out a tree growing in a rock. The roots of the tree had worked their way into the cracks and split the rock in many places. The type of weathering they observed was classified as ...

A chemical
B biological
C mechanical
D physical

5. The field trip included a stop at the 'Big Rock' in Okotoks. This rock was left behind by a receding glacier. It is called ...

A an erratic
B a moraine
C a striation
D an abrasion

6. Allison and Rachel were investigating the effects of abrasion. To slow down the process they ...

A used a stronger fan
B used a sandy surface
C planted grass
D used more water

Planet Earth: Topic 4 - The Moving Crust **- Pop Quiz**

Student Name _____ **Class** _____

1. Compared to the other layers of the Earth, the crust, at a temperature of 5oC is ...

A **thicker than the upper mantle**

B **thinner than all the layers**

C **thicker than the lower mantle**

D **thicker than any other layer**

2. Alfred Wegner determined that the continents at one time all fit together to form one large supercontinent, called Pangaea. Their interlocking shapes and other evidence helped him form the Theory of Continental Drift. The other evidence was ...

A **discovery of land bridges connecting the continents**

B **similar trees on different continents**

C **fossil evidence indicating the continents has been joined**

D **lower ocean level with islands close together**

3. Glaciers once existed in the southern hemisphere. The evidence Wegener found to prove this were the ...

A **morraines found**

B **erratics found**

C **bedrock abrasions**

D **ice caves**

4. Advances in technology helped to prove Wegener's theory long after his death. The patterns of magnetic reversals on the ocean floor lead scientists to the theory of sea-floor spreading. The instrument scientists used to detect the direction and strength of the magnetic field is called ...

A **magnetometer**

B **magnetoscope**

C **radar**

D **sonar**

5. When scientists discovered the ridges along the ocean floor, they also found lava coming out of the cracks in the sea floor. This type of lava is called ...

A **sea-floor lava**

B **ocean lava**

C **salt water lava**

D **pillow lava**

Planet Earth: Topic 5 - Earthquakes **- Pop Quiz**

Student Name _____ **Class** _____

1. It is likely that San Diego is able to get early warnings of possible earthquakes in the area because of this attraction ...
   - **A** San Diego Zoo
   - **B** San Diego Emergency Center
   - **C** San Diego Observatory
   - **D** Pacific Climatology Center

2. Seismologists use a special machine that measures earthquakes. The primary wave is the fastest of all three types of seismic waves and can pass through solids liquids and gases. A p wave effect would be ...
   - **A** buildings toppling
   - **B** overpasses crumbling
   - **C** dishes rattling
   - **D** cracks opening up in the street

3. An earthquake in Japan registers on a seismograph in Winnipeg, Manitoba. This occurs because ...
   - **A** seismographs anywhere will record all earthquakes
   - **B** the earth's crust is solid, allowing the surface waves to be recorded anywhere
   - **C** the inner core of the earth is liquid
   - **D** the outer core of the earth is liquid

4. The source of an earthquake can be determined by recording the interval time between the p waves and s waves. The source deep below the surface in the crust, where the earthquake begin is called the ...
   - **A** focus
   - **B** foci
   - **C** epicenter
   - **D** shadow zone

5. The pressure under the earth's crust can cause it to move in different ways. A fault that is caused by a compression force is called a ...
   - **A** normal fault
   - **B** reverse fault
   - **C** strike-slip fault
   - **D** transform fault

Planet Earth: Topic 6 - Volcanoes **- Pop Quiz**

Student Name _____ **Class** _____

1. Volcanoes erupt when they become active. Until an eruption occurs, volcanoes are described as ...
   - **A** stagnant
   - **B** dormant
   - **C** extinct
   - **D** plugged

2. There are a number of volcanoes that border the pacific ocean. These volcanoes are known as the Ring of Fire. The name comes from the fact that these volcanoes erupt with red hot lava, fire and steam. Most volcanoes in the Ring of fire occur at ...
   - **A** subduction zones
   - **B** abduction zones
   - **C** conduction zones
   - **D** compression zones

3. One of the most dangerous side effects of an erupting volcano is a ...
   - **A** lava flow
   - **B** ash plume
   - **C** ash layer
   - **D** tsunami

4. Vesuvius has been a dormant volcano since 1944, but is due for a major eruption. An added danger, besides the major build-up of magma beneath the peak is the discovery of a rock ...
   - **A** bulge
   - **B** plume
   - **C** vent
   - **D** plug

5. Volcanoes can cool temperatures around the world. Despite the hot temperatures and firey destruction they can create, the lowering of world temperatures can be caused by ...
   - **A** a rapid lava flow into the ocean
   - **B** an ash plume causing mudflows
   - **C** an ash layer in the atmosphere
   - **D** a large number of tsunamis

Planet Earth: Topic 7 - Mountains **- Pop Quiz**

Student Name **Class**

1. Different action acting on the rocks of the Earth's surface can cause different types of mountains to form. Most mountains are large areas that have been ...
   - **A** uplifted
   - **B** compressed
   - **C** folded
   - **D** faulted

2. When older rock ends up on top of younger rock the mountains formed are called ...
   - **A** thrust mountains
   - **B** fault mountains
   - **C** block mountains
   - **D** fault block mountains

3. When sedimentary rock is squeezed from the sides and is too brittle to fold, it can break and form into slabs that move up and over each other. This is an example of ...
   - **A** diverging fault
   - **B** thrust fault
   - **C** sliding fault
   - **D** folded layering

4. This factor might be the best way to determine the age of a mountain.
   - **A** kinds of rocks
   - **B** type of fault
   - **C** shape of peak
   - **D** difference between syncline and anticline

5. Mountain formations that undergo more than one process are called ...
   - **A** complex
   - **B** compound
   - **C** multi-faulted
   - **D** transform

Planet Earth: Topic 8 – Fossils **- Pop Quiz**

Student Name _____ **Class** _____

1. The preserved remains (even the soft parts) of a plant or animal can likely be found in ...
   - **A** amber
   - **B** sediment
   - **C** gemstones
   - **D** Burgess Shale

2. Trilobites are one of the most famous groups of fossils. They are now extinct. They lived in ...
   - **A** Gobi Desert
   - **B** Antarctic Tundra
   - **C** Fresh water lakes
   - **D** Warm ocean water

3. Bambiraptor fossils were discovered by a 14 year-old by in Glacier National park, Montana. This was an important discovery, because it provides evidence that dinosaurs ...
   - **A** were warm blooded
   - **B** became extinct as a result of a comet
   - **C** were related to birds
   - **D** were attentive parents

4. When an organism is buried under many layers of sediment, pressure and heat build up, leaving a thin film of carbon residue on the rock surfaces. This residue forms the outline of the organism and is called ...
   - **A** petrified residue
   - **B** carbonaceous film
   - **C** carbon-dated remains
   - **D** trace fossil residue

5. When an organism falls into soft sediment, like mud, its hard parts dissolve leaving a cavity called a ...
   - **A** trace layer
   - **B** cast
   - **C** mould
   - **D** chamber

Planet Earth: Topic 9 – Geological Time **- Pop Quiz**

Student Name _____ **Class** _____

1. Layers of sedimentary rock stay in their original position, with the newest layers on the top and the older layers on the bottom. These layers of rock are called ...
   - **A** indexing
   - **B** parent rock
   - **C** rock strata
   - **D** superimposed

2. Scientists studying rock layers were mystified to find fossils that helped to determine the relative age of the layer of rock they were studying. These fossils are called ...
   - **A** petrified fossils
   - **B** intensified fossils
   - **C** parent fossils
   - **D** index fossils

3. Daughter material and parent material refer to the half-life parts remaining, in the process of radiometric dating, to calculate the absolute age of rocks. If the daughter material is 87.5% and the parent material is 12.5%, the rock has undergone ...
   - **A** 1 half-life
   - **B** 2 half-lives
   - **C** 3 half-lives
   - **D** 4 half-lives

4. Radiometric dating and radiocarbon dating are related because ...
   - **A** radiometric dating is a form of radiocarbon dating
   - **B** radiocarbon dating is a form of radiometric dating
   - **C** half-life is the same for carbon and uranium
   - **D** traces of carbon-14 can also be found in radiometric dating

5. In the Geologic Time Scale, dinosaurs appeared during this period.
   - **A** Cretaceous
   - **B** Jurassic
   - **C** Triassic
   - **D** Permian

Planet Earth: Topic 10 – Fossil Fuels **- Pop Quiz**

Student Name _____ **Class** _____

1. Bitumen, coal, oil and gas are most often found in sedimentary rock basins. These basins were formed from the sediments of tiny plants and animals deposited in the mud and silt. Naturally occurring mixtures of hydrocarbons are called ...
   - **A** oil sands
   - **B** oil wells
   - **C** petroleum
   - **D** petrochemicals

2. Different locations require different techniques for recovery of Bitumen. In Northern Alberta, the tar sands are scooped up and dumped into large trucks. The oil is separated from the sand using ...
   - **A** a petrochemical filter
   - **B** steam
   - **C** hot water
   - **D** vibroseis

3. A sample of the layers of rock and soil beneath the surface are analyzed in government laboratories. The samples that are analyzed are called ...
   - **A** core samples
   - **B** strata findings
   - **C** bitumen samples
   - **D** till and fault samples

4. Large vibroseis trucks are used along with a satellite-based global positioning system to locate pockets of bitumen. To locate the deposits, the trucks create seismic waves underground by sending ...
   - **A** ventricular oscillations
   - **B** energy waves
   - **C** diamond drills
   - **D** steam

5. Most drilling operations would not be possible unless these types of drills were used.
   - **A** diamond
   - **B** forged steel
   - **C** tungsten
   - **D** carbon