**Science Bowl Questions**

**Round 1**

**TOSS-UP**

1. EARTH SCIENCE *Multiple Choice* What is the name of the current epoch we live in?

W) Holocene

X) Pliocene

Y) Neogene

Z) Miocene

ANSWER: W) HOLOCENE

1. EARTH SCIENCE *Short Answer* What is the name of the period of time in which a large number of impact craters are believed to have formed on the moon?

ANSWER: LATE HEAVY BOMBARDMENT (ACCEPT LUNAR CATACLYSM/LHB)

**TOSS-UP**

1. EARTH SCIENCE *Short Answer* What is the special sub-category name given to igneous rocks that are fine-grained?

ANSWER: EXTRUSIVE

**BONUS**

1. EARTH SCIENCE *Short Answer* What classification of rock is Breccia?

ANSWER: SEDIMENTARY

**TOSS-UP**

1. EARTH SCIENCE *Multiple Choice* When 2 rock units slide past one another, what is the name of the type of fault that is created?

W) Thrust

X) Normal

Y) Strike-Slip

Z) Slip and Slide

ANSWER: Y) STRIKE-SLIP

**BONUS**

1. EARTH SCIENCE *Short Answer* What is the name of the theory created by Henry Hess regarding the formation of oceanic crust through volcanic activity?

ANSWER: SEAFLOOR SPREADING

**TOSS-UP**

1. EARTH SCIENCE *Short Answer* What is the name of the pipe that brings magma up from the large magma chamber, to the crater, and then out through the vent at the top?

ANSWER: CONDUIT

**BONUS**

1. EARTH SCIENCE *Short Answer* Name the type of volcano which is characterized as a flat, linear crack in the Earth, through which lava emerges.

ANSWER: FISSURE VENT

**TOSS-UP**

1. EARTH SCIENCE *Multiple Choice* What is the name given to a boundary in which 2 plates slide towards each other?

W) Transform

X) Divergent

Y) Convergent

Z) Subduction

ANSWER: Y) CONVERGENT

**BONUS**

1. EARTH SCIENCE *Short Answer* What is the name given to waves which are the first to appear on a seismogram?

ANSWER: P- WAVE (ACCEPT PRESSURE/PRIMARY/COPMRESSIONAL WAVE)

**TOSS-UP**

1. EARTH SCIENCE *Short Answer* What is the layer of the Earth directly above the asthenosphere?

ANSWER: LITHOSPHERE

**BONUS**

1. EARTH SCIENCE *Short Answer* A rock that is considered felsic has which element in high concentration?

ANSWER: SILICON

**TOSS-UP**

1. EARTH SCIENCE *Multiple Choice* When work is done on or by a gas, but there is no heat transfer with the environment, then the heating or cooling of the gas is known as:

W) Adiabatic

X) Endothermic

Y) Fluid

Z) Tropical

ANSWER: W) ADIABATIC

**BONUS**

1. EARTH SCIENCE *Short Answer* What is the evolution or functioning of soils know as?

ANSWER: PEDOGENESIS

**TOSS-UP**

1. EARTH SCIENCE *Short Answer* The composition of the Earth is primarily made of what layer, with roughly 2/3 of the Earth composed of it?

ANSWER: MANTLE

**BONUS**

1. EARTH SCIENCE *Short Answer* Which compound constitutes about half of the mantle?

ANSWER: SILICON DIOXIDE (ACCEPT QUARTZ)

**TOSS-UP**

1. EARTH SCIENCE *Multiple Choice* The crust is separated from the mantle by what boundary?

W) Asthenosphere

X) Moho

Y) Gutenberg Dicontinuity

Z) Lehmann Discontinuity

ANSWER: X) MOHO

**BONUS**

1. EARTH SCIENCE *Short Answer* What was the name of the “universal sea” that covered the Earth during the time Pangaea existed?

ANSWER: PANTHALASSA

**TOSS-UP**

1. EARTH SCIENCE *Short Answer* What is the name given to deformed arrangements of stratified rocks on the Earth’s surface?

ANSWER: FOLDS

**BONUS**

1. EARTH SCIENCE *Short Answer* When the 2 sides of a fold angle away from each other, what type is the fold classified as?

ANSWER: ANTICLINE

**TOSS-UP**

1. EARTH SCIENCE *Multiple Choice* Abrupt periods of time during glacial advance when the velocity is increased are known as:

W) Surges

X) Upheavals

Y) Ablations

Z) Creeps

ANSWER: W) SURGES

**BONUS**

1. EARTH SCIENCE *Short Answer* Any glacier that ends in the sea is classified as what type of glacier?

ANSWER: TIDEWATER GLACIER

**TOSS-UP**

1. EARTH SCIENCE *Short Answer* How many more times greater is a magnitude 8 earthquake than a magnitude 5 earthquake?

ANSWER: 1000 (TIMES GREATER)

**BONUS**

1. EARTH SCIENCE *Short Answer* The process known as orogeny refers to the generation of what natural landform?

ANSWER: MOUNTAINS

**TOSS-UP**

1. EARTH SCIENCE *Multiple Choice* A rock that cooled within the Earth, during the rock cycle, is classified as what type of igneous rock?

W) Zeolitic

X) Mafic

Y) Extrusive

Z) Intrusive

ANSWER: Z) INTRUSIVE

**BONUS**

1. EARTH SCIENCE *Short Answer* The core of the Earth is thought to be largely composed of what element?

ANSWER: IRON

**TOSS-UP**

1. EARTH SCIENCE *Short Answer* What layer of the atmosphere shields the Earth from the charged particles of the solar winds, and is created by Earth’s magnetic field?

ANSWER: MAGNETOSPHERE

**BONUS**

1. EARTH SCIENCE *Short Answer* What is the name of the boundary between the atmosphere and outer space?

ANSWER: KARMAN LINE

**TOSS-UP**

1. EARTH SCIENCE *Multiple Choice* The movement of water through the atmosphere is known as what process?

W) Advection

X) Subsurface Flow

Y) Canopy Interception

Z) Evapotranspiration

ANSWER: W) ADVECTION

**BONUS**

1. EARTH SCIENCE *Short Answer* The process of speleogenesis is the creation of what natural landform?

ANSWER: CAVES

**TOSS-UP**

1. EARTH SCIENCE *Short Answer* What is the name of the process that clouds go through when precipitation is created in them?

ANSWER: BERGERON PROCESS

**BONUS**

1. EARTH SCIENCE *Short Answer* A group of clouds in the shape of a leaf or a spoked wheel is defined as what type of common cloud field?

ANSWER: ACTINOFORM

**TOSS-UP**

1. EARTH SCIENCE *Multiple Choice* Which type of cloud is created from the intense heating of the air from the surface?

W) Nimbostratus

X) Stratocumulus

Y) Cirrus

Z) Pyrocumulus

ANSWER: Z) PYROCUMULUS

**BONUS**

1. EARTH SCIENCE *Multiple Choice* Which sedimentary rock is most likely to be changed to slate during regional metamorphism?

W) Breccia

X) Conglomerate

Y) Dolostone

Z) Shale

ANSWER: Z) SHALE

**TOSS-UP**

1. EARTH SCIENCE *Short Answer* What are the 2 most abundant elements found in the Earth by mass?

ANSWER: OXYGEN AND SILICON

**BONUS**

1. EARTH SCIENCE *Short Answer* Name the first eon recorded in Earth’s history.

ANSWER: HADEAN

**TOSS-UP**

1. EARTH SCIENCE *Multiple Choice* Which mineral is white or colorless, has a hardness of 2.5, and splits with cubic cleavage?

W) Calcite

X) Halite

Y) Pyrite

Z) Mica

ANSWER: X) HALITE

**BONUS**

1. EARTH SCIENCE *Short Answer* When rock units undergo horizontal extension, what type of fault is created?

ANSWER: NORMAL

**TOSS-UP**

1. EARTH SCIENCE *Short Answer* What type of rock is schist?

ANSWER: METAMORPHIC

**BONUS**

1. EARTH SCIENCE *Short Answer* What is the layering within metamorphic rocks called?

ANSWER: FOLIATION

**TOSS-UP**

1. EARTH SCIENCE *Multiple Choice* Compared to dull and rough rock surfaces, shiny and smooth rock surfaces are most likely to cause sunlight to:

W) Reflect

X) Refract

Y) Be Absorbed

Z) Scatter

ANSWER: W) REFLECT

**BONUS**

1. EARTH SCIENCE *Short Answer* What mineral characteristic describes how a mineral breaks when broken contrary to its natural cleavage?

ANSWER: FRACTURE

**TOSS-UP**

1. EARTH SCIENCE *Short Answer* Name the area where there is an upwelling of abnormally hot rock within the Earth’s mantle?

ANSWER: MANTLE PLUME

**BONUS**

1. EARTH SCIENCE *Short Answer* What volcanic feature is usually formed after the collapse of land during a volcanic eruption?

ANSWER: CALDERA

**TOSS-UP**

1. EARTH SCIENCE *Multiple Choice* Which factor has the greatest influence on the weathering rate of Earth’s surface bedrock?

W) Local Air Pressure

X) Angle of Insolation

Y) Age of the Bedrock

Z) Regional Climate

ANSWER: Z) REGIONAL CLIMATE

**BONUS**

1. EARTH SCIENCE *Short Answer* What is the geologic era that we live in today?

ANSWER: CENOZOIC

**TOSS-UP**

1. EARTH SCIENCE *Multiple Choice* In general, the probability of flooding decreases when there is an increase in the amount of:

W) Precipitation

X) Infiltration

Y) Run Off

Z) Snow Melt

ANSWER: X) INFLITRATION

**BONUS**

1. EARTH SCIENCE *Short Answer* Name the geologic time period when many coal beds were laid down throughout the Earth.

ANSWER: CARBONIFEROUS

**TOSS-UP**

1. EARTH SCIENCE *Multiple Choice* What is the general name given to fragmental material [produced by a volcanic eruption?

W) Ash

X) Lapili

Y) Tephra

Z) Volcanic Blocks

ANSWER: Y) TEPHRA

**BONUS**

1. EARTH SCIENCE *Short Answer* What is the classification name of a volcano that is tall, conical and layered?

ANSWER: STRATOVOLCANO (ACCEPT COMPOSITE VOLCANO)