

Science Bowl Earth Science Questions

TOSS-UP

1) EARTH SCIENCE *Short Answer* About how old do scientists believe the earth is:

ANSWER: 5 BILLION YEARS

BONUS

1) EARTH SCIENCE *Short Answer* Scientists believe the Earth came about with this theory:

ANSWER: BIG BANG THEORY

TOSS-UP

2) EARTH SCIENCE *Short Answer* Name the number of main oceans and the number of continents on the Earth's surface:

ANSWER: 3 MAJOR OCEANS; 7 CONTINENTS

BONUS

2) EARTH SCIENCE *Multiple Choice* Which of the following was NOT one of the three body masses on Earth about 200 million years ago:

- W) Laurasia
- X) Tethys
- Y) Gondawana
- Z) Panthalassa

ANSWER: Z) PANTHALASSA

TOSS-UP

3) EARTH SCIENCE *Short Answer* Name the four major parts of the Earth's inner layers:

ANSWER: CRUST, MANTLE, OUTER CORE, INNER CORE (any order)

BONUS

3) EARTH SCIENCE *Short Answer* What element makes up the majority of the Earth's core:

ANSWER: IRON

TOSS-UP

4) EARTH SCIENCE *Short Answer* How many parts are there for the outer structure of the Earth:

ANSWER: 3

BONUS

4) EARTH SCIENCE *Short Answer* In which of the three "spheres" of the Earth do the continents reside:

ANSWER: LITHOSPHERE

TOSS-UP

5) EARTH SCIENCE *Short Answer* Rounded to the tens digit, how many known plates are there:

ANSWER: 50

BONUS

5) EARTH SCIENCE *Short Answer* This theory is based off of tectonic plates and states that these plates keep the Earth's land masses and water bodies in constant motion:

ANSWER: THEORY OF CONTINENTAL DRIFT

TOSS-UP

6) EARTH SCIENCE *Short Answer* What are the three states of matter that Earth Science deals with:

ANSWER: SOLID, LIQUID, GAS

BONUS

6) EARTH SCIENCE *Short Answer* A change in the state of matter is a _____ change:

ANSWER: PHYSICAL

TOSS-UP

7) EARTH SCIENCE *Short Answer* What is person who studies minerals called:

ANSWER: MINERALOGIST

BONUS

7) EARTH SCIENCE *Short Answer* Name three valuable minerals:

ANSWER: GOLD, SILVER, DIAMOND ETC.

TOSS-UP

8) EARTH SCIENCE *Short Answer* Because a mineral is not formed from living things or anything of the sort, it is classified as...:

ANSWER: INORGANIC

BONUS

8) EARTH SCIENCE *Short Answer* In what state of matter is a mineral always in:

ANSWER: SOLID

TOSS-UP

9) EARTH SCIENCE *Short Answer* How many different arrangements of crystals exist:

ANSWER: 6

BONUS

9) EARTH SCIENCE *Short Answer* Salt has which kind of crystalline arrangement:

ANSWER: CUBIC

TOSS-UP

10) EARTH SCIENCE *Short Answer* Minerals that contain metals and nonmetals that are able to be extracted are known as...:

ANSWER: ORES

BONUS

10) EARTH SCIENCE *Short Answer* By which process are metals removed from ores:

ANSWER: SMELTING

TOSS-UP

11) EARTH SCIENCE *Short Answer* What are rare minerals referred to as:

ANSWER: GEMS

BONUS

11) EARTH SCIENCE *Multiple Choice* Which of the following is NOT a precious stone:

- W) Aquamarine
- X) Sapphire
- Y) Gold
- Z) Emerald

ANSWER: Y) GOLD

TOSS-UP

12) EARTH SCIENCE *Short Answer* What is the name for a characteristic of a mineral on how that mineral reflects light:

ANSWER: LUSTER

BONUS

12) EARTH SCIENCE *Short Answer* What kind of luster does gold have:

ANSWER: METALLIC

TOSS-UP

13) EARTH SCIENCE *Short Answer* What is a porcelain plate better known as:

ANSWER: STREAK PLATE

BONUS

13) EARTH SCIENCE *Short Answer* What is a streak plate used to classify:

ANSWER: DIFFERENT MINERALS; COMPARISON OF MINERALS

TOSS-UP

14) EARTH SCIENCE *Short Answer* What are the three different types of rocks:

ANSWER: IGNEOUS, METAMORPHIC AND SEDIMENTARY (any order)

BONUS

14) EARTH SCIENCE *Short Answer* What are the two distinct types of rocks that are both classified as igneous:

ANSWER: PLUTONIC AND VOLCANIC ROCKS

TOSS-UP

15) EARTH SCIENCE *Short Answer* A rock, classified as igneous and formed from large crystals would be known as:

ANSWER: COARSE GRAINED

BONUS

15) EARTH SCIENCE *Short Answer* An igneous rock in which crystals do not form at all are known as:

ANSWER: OBSIDIAN (accept VOLCANIC GLASS)

TOSS-UP

16) EARTH SCIENCE *Short Answer* What is the entire process of the possibilities in which a rock can change known as:

ANSWER: ROCK CYCLE

BONUS

16) EARTH SCIENCE *Short Answer* A given rock is exposed to extremely high temperatures and melts. It then cools to a solid and is exposed to weathering and erosion from nature. Because of these forces, it is buried and compacted. What kind of rock can it now be classified as:

ANSWER: SEDIMENTARY ROCK

TOSS-UP

17) EARTH SCIENCE *Multiple Choice* Which of the following is NOT an element that is present in the chemical makeup of the Earth's crust:

- W) Oxygen
- X) Calcium
- Y) Carbon
- Z) Silicon

ANSWER: Y) CARBON

BONUS

17) EARTH SCIENCE *Multiple Choice* Which of the following best describes the percentage the mass of the crust of the Earth takes up in direct ratio to the mass of the entire Earth:

- W) less than 1%
- X) 1% - 5%
- Y) 6% - 10%
- Z) more than 10%

ANSWER: W) LESS THAN 1%

TOSS-UP

18) EARTH SCIENCE *Short Answer* Which cycle shows the movement of water:

ANSWER: HYDROLOGIC CYCLE

BONUS

18) EARTH SCIENCE *Short Answer* According to the Hydrologic Cycle, after water returns to the ocean, what process occurs to it

ANSWER: EVAPORATION

TOSS-UP

19) EARTH SCIENCE *Short Answer* In the Hydrologic Cycle, what happens to the water after it precipitates from the cloud:

ANSWER: RUNS OFF; RUNOFF

BONUS

19) EARTH SCIENCE *Short Answer* Which of the following instances CANNOT occur in the Hydrologic Cycle:

- W) Water is evaporated after it reaches the ocean
- X) Immediately after water evaporates, it precipitates
- Y) Water comes to the plants and soil after the runoff
- Z) Immediately after reaching the lakes and streams, water is evaporated

ANSWER: X) IMMEDIATELY AFTER WATER EVAPORATES, IT PRECIPITATES

TOSS-UP

20) EARTH SCIENCE *Short Answer* A material through which water can move at a relatively quick pace is known as:

ANSWER: PERMEABLE

BONUS

20) EARTH SCIENCE *Multiple Choice* What is the SI unit of permeability, which was named after the scientist who also developed a law regarding permeability:

ANSWER: DARCY (accept MILLIDARCY)

TOSS-UP

21) EARTH SCIENCE *Short Answer* Thick sheets of ice in polar regions can be classified as:

ANSWER: CONTINENTAL GLACIERS

BONUS

21) EARTH SCIENCE *Short Answer* What are two major continental glaciers:

ANSWER: GREENLAND AND ANTARTICA

TOSS-UP

22) EARTH SCIENCE *Short Answer* What is the term used to describe scientists who study the seas:

ANSWER: OCEANOGRAPHERS

BONUS

22) EARTH SCIENCE *Multiple Choice* Which of the following boundaries best describes the salinity of ocean water:

- W) 13-17 parts per thousand
- X) 23-27 parts per thousand
- Y) 33-37 parts per thousand
- Z) 43-47 parts per thousand

ANSWER: Y) 33-37 PARTS PER THOUSAND

TOSS-UP

23) EARTH SCIENCE *Short Answer* In which part of the atmosphere is ozone, a form of oxygen, present:

ANSWER: STRATOSPHERE

BONUS

23) EARTH SCIENCE *Short Answer* What is the upper part of the thermosphere known as:

ANSWER: EXOSPHERE

TOSS-UP

24) EARTH SCIENCE *Short Answer* The part of the area around Earth that extends beyond the atmosphere is known as:

ANSWER: MAGNETOSPHERE

BONUS

24) EARTH SCIENCE *Short Answer* The magnetosphere consists of protons and electrons which both contain high radiation. These two separate belts of high radiation are known as:

ANSWER: VAN ALLEN RADIATION BELTS

TOSS-UP

25) EARTH SCIENCE *Short Answer* What instrument is used to measure air pressure:

ANSWER: BAROMETER

BONUS

25) EARTH SCIENCE *Short Answer* You do not notice the air pressure that is present everywhere on Earth because the pressure of the air outside is equal to:

ANSWER: THE PRESSURE INSIDE YOUR BODY (accept variations)