

EARTH AND SPACE

1. EARTH AND SPACE

Toss Up: Multiple Choice

sex

W) .

X) .

Y) .

Z) .

Toss Up Answer: Z

Bonus: Multiple Choice

penis

W) .

X) .

Y) .

Z) .

Bonus Answer: W

2. EARTH AND SPACE

Toss Up: Short Answer

What is the term for the point at which Earth is closest to the moon?

Bonus Answer: Perigee

Bonus: Short Answer

If planet A is twice as close to the sun as planet B, how many times brighter does the sun appear on planet A than planet B?

Bonus Answer: 4

3. EARTH AND SPACE

Toss Up: Short Answer

what is a front?

Bonus Answer: boundary between two air masses

Bonus: Short Answer

How does a cold front form?

Bonus Answer: w. drop in temperature

x. cold air moves in and replaces warm air

y. warm air moves in and replaces cold air

z. cold and warm air mix :)

4. EARTH AND SPACE

Toss Up: Short Answer

What is the closest star to the solar system, 4.25 light years away from the sun?

Bonus Answer: Proxima Centauri

Bonus: Short Answer

On approximately which two days of the Gregorian calendar do full moons appear?

Bonus Answer: 15th and 16th of each month

5. EARTH AND SPACE

Toss Up: Short Answer

What is the speed of light in km/hr, in scientific notation, to 2 decimal places?

Bonus Answer: 1.08×10^9

Bonus: Multiple Choice

How many sub levels does Cesium have?

- W) 9
- X) 10
- Y) 11
- Z) 12

Bonus Answer: Z

6. EARTH AND SPACE

Toss Up: Short Answer

In which hemisphere are constellations named after scientific instruments?

Bonus Answer: Southern

Bonus: Short Answer

What is the latin name for the constellation that the big dipper is a part of?

Bonus Answer: Ursa Major

7. EARTH AND SPACE

Toss Up: Short Answer

What is the general name for blood disorders?

Bonus Answer: Thalassemia

Bonus: Multiple Choice

Which of the following is a housekeeping gene?

- W) Ubiquitin
- X) Haemoglobin
- Y) Ovalbumin
- Z) Pyronisin

Bonus Answer: W

8. EARTH AND SPACE

Toss Up: Short Answer

What is the name of the tectonic plate that is currently undergoing subduction under the South American plate, responsible for the Andes mountains?

Bonus Answer: Nazca

Bonus: Multiple Choice

Which of the following has the highest number of cleavage planes?

- W) Muscovite
- X) Halite
- Y) Fluorite
- Z) Mica

Bonus Answer: Y

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9. EARTH AND SPACE

Toss Up: Short Answer

What is the term for the reflection of radiation off Earth's surface?

Bonus Answer: Albedo

Bonus: Short Answer

Which planet is most similar to Earth in size?

Bonus Answer: Venus

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10. EARTH AND SPACE

Toss Up: Multiple Choice

Which type of weather front is represented by alternating purple spikes and semicircles?

W) Cold front

X) Warm front

Y) Occluded front

Z) Stationary front

Toss Up Answer: Y

Bonus: Short Answer

What weather front is formed as a cold air mass pushes under a warm air mass?

Bonus Answer: Cold front

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11. EARTH AND SPACE

Toss Up: Multiple Choice

The San Andreas fault is what specific type of fault line?

W) Transform plate boundary

X) Normal fault

Y) Reverse fault

Z) Strike slip fault

Toss Up Answer: Z

Bonus: Short Answer

There are different types of seismic waves, body waves and surface waves. Name the two different types of body waves.

Bonus Answer: P waves and S waves

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12. EARTH AND SPACE

Toss Up: Multiple Choice

What is the name of the igneous rock that is a porous volcanic glass formed by rapidly cooling lava?

W) Obsidian

X) Gabbro

Y) Basalt

Z) Pumice

Toss Up Answer: Z

Bonus: Short Answer

What are the three general types of magma?

Bonus Answer: Basaltic magma, Andesitic magma, and Rhyolitic magma

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13. EARTH AND SPACE

Toss Up: Multiple Choice

Glaciers effect the land through glacial erosion. Different geographies are formed but what is the specific name of the long narrow ridges that show where the glacier was once present?

W) Glacial retreat

X) Drumlins

Y) Glacial errotics

Z) Morianes

Toss Up Answer: Z

Bonus: Short Answer

Ice sheets and glaciers expanded to cover large areas of land during the last major glacial epoch. During which time period did this take place?

Bonus Answer: Quaternary

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14. EARTH AND SPACE

Toss Up: Multiple Choice

Sedimentary rocks are formed from accumulation of different sediments. What is the term for a rock made by living organisms or composed of materials from life forms?

W) Conglomerate

X) Evaporites

Y) Crystalline

Z) Bioclastic

Toss Up Answer: Z

Bonus: Short Answer

Give the following classifications for these sedimentary rocks, breccia, conglomerate, and shale.

Bonus Answer: All Clastic sedimentary rocks.

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15. EARTH AND SPACE

Toss Up: Multiple Choice

What is the closest star to earth

W) Sirius

X) Betelgeuse

Y) Alpha proxima

Z) The sun

Toss Up Answer: Z

Bonus: Short Answer

What is the closest star to the sun

Bonus Answer: Proxima centauri

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16. EARTH AND SPACE

Toss Up: Multiple Choice

How many comet-like bodies are estimated to exist in the Oort cloud?

W) a billion

X) a trillion

Y) a quadrillion

Z) a quintillion

Toss Up Answer: X

Bonus: Short Answer

What is the name of the telescope which has produced the most scientific papers out of all telescopes on the ground, located in the Atacama desert?

Bonus Answer: Very Large Telescope

17. EARTH AND SPACE

Toss Up: Short Answer

What compound are most cave stalagmites and stalactites made of?

Bonus Answer: Calcium Carbonate, CaCO₃, limestone, calcite, dolomite, marble, chalk, etc.

Bonus: Multiple Choice

Why do many rivers around the world meander when a straight path would be shorter?

W) curves create eddies, which are more stable configurations

X) a slight curve has faster moving water on the outside, which further erodes and enlargens the curve

Y) there are slightly elevated regions that prevent a straight path

Z) random drift

Bonus Answer: X

18. EARTH AND SPACE

Toss Up: Multiple Choice

Which of the following is NOT true regarding cirrus clouds?

W) They are typically found between 10,000 feet and 15,000 feet above sea level

X) They can be formed from any cloud that goes under glaciation

Y) They cover 25% of the Earth and have a heating effect

Z) They have been seen forming on other planets such as Mars and Jupiter

Toss Up Answer: W

Bonus: Multiple Choice

The most common cloud source for a majority of tornadoes is:

W) Cumulus

X) Nimbostratus

Y) Altostratus

Z) Cumulonimbus

Bonus Answer: Z

19. EARTH AND SPACE

Toss Up: Short Answer

Which planet has the slowest rotation?

Bonus Answer: Venus

Bonus: Multiple Choice

Which planet has the fastest rotation?

W) Jupiter

X) Saturn

- Y) Uranus
- Z) Neptune

Bonus Answer: W

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20. EARTH AND SPACE

Toss Up: Multiple Choice

What is the penultimate spectral type of a star?

- W) F
- X) G
- Y) K
- Z) M

Toss Up Answer: Y

Bonus: Short Answer

What spectral type is the Sun?

Bonus Answer: G

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21. EARTH AND SPACE

Toss Up: Multiple Choice

To the nearest order of magnitude, how thick are Saturn's rings?

- W) 10 m
- X) 100 m
- Y) 1000 m
- Z) 10000 m

Toss Up Answer: W

Bonus: Short Answer

Which planets have active plate tectonics?

Bonus Answer: Earth

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22. EARTH AND SPACE

Toss Up: Short Answer

What is the US state with the most glaciers?

Bonus Answer: Washington

Bonus: Short Answer

How many glaciers are there in Hawaii rounded to the nearest 1000?

Bonus Answer: 0

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23. EARTH AND SPACE

Toss Up: Multiple Choice

What happens as air rises?

- W) It gets warmer
- X) It gets colder
- Y) The temperature fluctuates
- Z) Nothing

Toss Up Answer: X

Bonus: Short Answer

How are winds named?

Bonus Answer: By the direction they are coming in

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24. EARTH AND SPACE

Toss Up: Short Answer

What is the driving force behind all erosion?

Bonus Answer: Gravity

Bonus: Short Answer

What type of body of water does the most erosion?

Bonus Answer: Streams

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25. EARTH AND SPACE

Toss Up: Short Answer

What determines a mineral's properties?

Bonus Answer: The internal arrangement of its atoms.

Bonus: Short Answer

What type of currents cause plates to move in the mantle?

Bonus Answer: Convection currents

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26. EARTH AND SPACE

Toss Up: Multiple Choice

In the Northern Hemisphere, the Coriolis force deflects in which direction?

W) Up

X) Down

Y) Right

Z) Left

Toss Up Answer: Y

Bonus: Short Answer

The altitude of Polaris is equal to...

Bonus Answer: Your latitude

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27. EARTH AND SPACE

Toss Up: Short Answer

In terms of mass, what are the four biggest planets in our solar system?

Bonus Answer: Jupiter, Saturn, Neptune, Uranus

Bonus: Multiple Choice

Dark energy makes up about how much of the energy in the universe?

W) 20%

X) 40%

Y) 70%

Z) 80%

Bonus Answer: Y

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28. EARTH AND SPACE

Toss Up: Multiple Choice

Which of the following statements is FALSE regarding the volcano in each statement?

W) Shield volcanoes can stretch up to 3 or 4 miles in diameter

X) Cinder cone volcanoes rarely rise past 1,000 feet in elevation

Y) Stratovolcanoes are some of the smallest volcanoes in the world

Z) Volcanic domes commonly occur within the craters or on the flanks of large composite volcanoes

Toss Up Answer: Y

Bonus: Multiple Choice

Which of the following statements is true regarding stratovolcanoes?

W) Most commonly occur at subduction zones

X) They produce basaltic magma

Y) Their eruptions are infrequent

Z) They are never dormant

Bonus Answer: W

29. EARTH AND SPACE

Toss Up: Short Answer

What is the average temperature of the universe today to the nearest Kelvin?

Bonus Answer: 3K

Bonus: Short Answer

What is the most common star in the Milky Way Galaxy?

Bonus Answer: Red Dwarf

30. EARTH AND SPACE

Toss Up: Short Answer

What physical quantity is the Schwarzschild radius of a Black Hole most dependent on?

Bonus Answer: Mass

Bonus: Multiple Choice

If the event horizon of a black hole is 10 km, then what is the radius of its photon sphere?

W) 10km

X) 15km

Y) 20km

Z) 25km

Bonus Answer: X

31. EARTH AND SPACE

Toss Up: Short Answer

What phenomena best explains why the sky is blue?

Bonus Answer: Rayleigh Scattering

Bonus: Short Answer

What are the high intensity spots of light at the horizontal points of the 22 degree halo that may form around the sun due to ice crystals in the air called?

Bonus Answer: Parhelia (ALSO ACCEPT: Sun Dogs, Parhelion)

32. EARTH AND SPACE

Toss Up: Short Answer

If we could observe all forms of radiation, what would the brightest star be?

Bonus Answer: Betelgeuse

Bonus: Multiple Choice

In 12000 years, which star will take the place of our North Star?

W) Aldebaran

X) Vega

Y) Sirius

Z) Rigel

Bonus Answer: X

33. EARTH AND SPACE

Toss Up: Short Answer

What spectral type does the star Betelgeuse fall into?

Bonus Answer: M

Bonus: Multiple Choice

When was the last major supernova in the Milky Way detected?

W) 1604

X) 1863

Y) 1973

Z) 1989

Bonus Answer: W

34. EARTH AND SPACE

Toss Up: Short Answer

In which atmospheric level does the "good" ozone reside?

Bonus Answer: Stratosphere

Bonus: Short Answer

In which atmospheric level does the "bad" ozone reside?

Bonus Answer: Troposphere

35. EARTH AND SPACE

Toss Up: Short Answer

Name the soil horizon that contains a mixture of organic matter and highly altered mineral matter and is dark in color.

Bonus Answer: A-horizon

Bonus: Short Answer

By name or number, which of the following phenomena cause acidification in agricultural soils:

1) Leaching of excess nitrate

2) Build-up in mostly plant-based organic matter

3) Removal of plant and animal products

4) Addition of nitrogen based fertilisers

Bonus Answer: All of them (accept 1,2,3,4)

36. EARTH AND SPACE

Toss Up: Short Answer

By name or number, which of the following is not a mineral: diamond, gold, coal, silt

Bonus Answer: Coal and silt (accept 3 and 4)

Bonus: Short Answer

The Mohs scale is used to measure mineral hardness. By name or number order the following minerals in increasing order: Fluorite, Gypsum, Quartz, Talc

Bonus Answer: Talc, Gypsum, Fluorite, Quartz (accept 1 2 3 4, in that order)

37. EARTH AND SPACE

Toss Up: Multiple Choice

Which of the following pairs of minerals share the same cleavage?

W) Fluorite and Calcite

X) Mica and Galena

Y) Cryolite and Fluorite

Z) Halite and Sylvite

Toss Up Answer: Z

Bonus: Short Answer

In how many directions does muscovite break (cleave)?

Bonus Answer: 1 (one)

38. EARTH AND SPACE

Toss Up: Multiple Choice

Which is not a type of rock?

W) sedimentary

X) metamorphic

Y) igneous

Z) elementary

Toss Up Answer: Z

Bonus: Short Answer

Which type of rock is formed from magma?

Bonus Answer: igneous rock
