

## 2017-2018 Advanced Earth/Space Science Final Examination Study Guide

Know the goal of science

Know the two words that should not be used in a scientific setting

Know the three necessary features of a hypothesis

Know what science is limited to studying

Know what all scientific knowledge is based on

Be able to identify correct and incorrect descriptions of a scientific theory

Know what an independent variable is and how to identify it in an experiment

Know what a dependent variable is and how to identify it in an experiment

Know what controls are and how to identify them in an experiment

Be able to name and describe the four main layers of the Earth

Know how folded, dome, fault, and fault-block mountains are formed

Be able to identify which layers of rock are the oldest and youngest in a layer of earth (principle of superposition)

Know the difference between weathering, erosion, and deposition

Know and be able to explain the lines of evidence supporting continental drift (rocks, glacial deposits, mountain belts, and fossils).

Know what causes convection currents, where they occur, and what earth processes occur as a result of convection currents

Know how old the Earth is

Be able to explain radiometric dating

Be able to define half-life

Know what weather conditions are associated with tornadoes

Know what weather conditions are associated with hurricanes

Know in which layer of the atmosphere weather occurs

Know in which direction weather fronts move

Know what type of weather is associated with low pressure

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Know what type of weather is associated with high pressure

Know in what directions the Sun rises and sets

Know what percentage of mass the Sun takes up for the entire solar system

Know what percentage of area the Sun takes up for the entire solar system

Be able to draw comparisons of any of the planets in terms of size (diameter)

Be able to draw the Earth, Moon, and satellites to scale in terms of distance and size

Be able to identify what parts of the Earth are illuminated at any given time

Know in what direction the Earth rotates, the Earth revolves around the Sun, and the Moon revolves around the Earth

Be able to explain in detail why we have seasons

Know why the Sun appears to move across the sky during the day.

Be able to explain why the Moon has phases

Be able to identify phases based on pictures of the Moon

Be able to draw the locations of the Earth, Moon, and Sun during solar and lunar eclipses

Know what phase the Moon is in for each type of eclipse

Know what both parts of a shadow are

Know why eclipses do not happen every month

Know which type of eclipse happens more often and why

Know why we experience tides

Be able to label on a diagram of the Earth where high and low tides are

Know how many high tides and low tides there are everyday