

# Unit Test 5/16/2025

Solar System, Scientific Notation, Solutions ,

The respondent's email (**nicolas\_richard31@milton.edu**) was recorded on submission of this form.

What process powers the Sun and other stars by turning hydrogen into helium? \*

- ☐ Combustion
- ✓ ☒ Nuclear fusion
- ☐ Radiation
- ☐ Fission

What is an Astronomical Unit (AU) based on? \*

- ☐ The distance from the Sun to Neptune
- ☐ The radius of Earth
- ✓ ☒ The average distance from Earth to the Sun
- ☐ The orbit of the Moon

What does "axial tilt" affect the most on a planet like Earth? \*

- ☐ Earthquakes
- ☐ Gravity
- ✓ ☒ Seasons
- ☐ Moon phases

What is meant by "rotation" of a planet? \*

- ☐ Movement around the Sun
- ☐ Tilting of the axis
- ✓ ☒ One complete spin on its axis
- ☐ Movement of tectonic plates

What is a revolution in space terms? \*

- ☐ Spinning on an axis
- ✓ ☒ Orbiting around the Sun once
- ☐ Changing seasons
- ☐ Rotation of the Moon

What type of planets are Earth, Mars, Venus, and Mercury? \*

- ☐ Gas giants
- ☐ Ice giants
- ☐ Dwarf planets
- ✓ ☒ Terrestrial planets

What formed the solar system about 4.6 billion years ago? \*

- ☐ A supernova
- ✓ ☒ A solar nebula
- ☐ A galaxy collision
- ☐ A black hole

What is a solute? \*

- ☐ A liquid that dissolves other substances
- ✓ ☒ A substance that is dissolved in a solution
- ☐ A gas that floats in the air
- ☐ A solid that never mixes with anything

In a mixture of salt and water, what is the solute? \*

☐ Water



☒ Salt

☐ Ice

☐ Air

What is the solvent in saltwater? \*



☒ Water

☐ Salt

☐ Sugar

☐ Oil

Which of the following is the best example of a solvent? \*

☐ Sand



☒ Water

☐ Salt

☐ Ice cube

What does "solubility" describe? \*

- ☐ The color of a substance
- ✓ ☒ How much solute can dissolve in a solvent at a certain temperature
- ☐ The size of the container
- ☐ How fast a substance melts

Why does sugar dissolve faster in hot water than in cold water? \*

- ☐ Cold water is more active
- ✓ ☒ Hot water increases the solubility of sugar
- ☐ Sugar is cold
- ☐ Heat changes the color of sugar

What does "concentration" measure? \*

- ☐ The temperature of a solution
- ✓ ☒ The amount of solute in a certain volume of solvent
- ☐ The color of the solution
- ☐ How quickly the solute disappears

If you add more salt to water and it doesn't dissolve, what does that tell you? \*

- ☐ The water is cold
- ☐ The salt is bad
- ✓ ☒ The solution is saturated
- ☐ The salt is heavier than water

What is 5,600,000 written in scientific notation? \*

- ☐  $5.6 \times 10^3$
- ✓ ☒  $5.6 \times 10^6$
- ☐  $56 \times 10^5$
- ☐  $0.56 \times 10^7$

What is 0.00032 written in scientific notation? \*

- ✓ ☒  $3.2 \times 10^{-4}$
- ☐  $3.2 \times 10^4$
- ☐  $32 \times 10^{-5}$
- ☐  $0.32 \times 10^{-3}$

What is  $7.1 \times 10^2$  in standard notation? \*

- ☐ 7100
- ✓ ☒ 710
- ☐ 71
- ☐ 7.01

What is  $4.5 \times 10^{-3}$  in standard notation? \*

- ✓ ☒ 0.0045
- ☐ B) 0.00045
- ☐ C) 4500
- ☐ D) 0.045

**What is an observation?** \*

- ☐ A guess about what will happen
- ☐ A procedure to test a theory
- ✓ ☒ Using your senses to gather information
- ☐ Changing variables in an experiment

**What is a hypothesis? \***

- ☐ A conclusion from an experiment
- ☐ A random idea
- ☐ A tool used in science
- ✓ ☒ An educated guess that can be tested

**What is an experiment? \***

- ☐ A way to guess the outcome
- ☐ A summary of results
- ✓ ☒ A procedure to test a hypothesis
- ☐ A chart to display data

**Which of the following best describes a variable? \***

- ☐ A constant in the experiment
- ☐ The last step of the scientific method
- ✓ ☒ Anything that can change or be changed
- ☐ A type of scientific tool



**What is the independent variable in an experiment? \***



- ☐ The variable that you measure
- ☐ The variable kept the same
- ☒ The variable you change on purpose
- ☐ The variable that is never used

**Which variable do you measure or observe in an experiment? \***



- ☐ Independent variable
- ☐ Control variable
- ☐ Unstable variable
- ☒ Dependent variable

**What are control variables? \***



- ☐ The variable being measured
- ☒ Things that are kept the same during an experiment
- ☐ The result of the hypothesis
- ☐ A type of graph

**What is data in a scientific experiment? \***

- ☐ The final guess
- ☐ The hypothesis
- ✓ ☒ Information gathered during the experiment
- ☐ The materials li

**What is a conclusion? \***

- ☐ A guess at the start of an experiment
- ☐ A list of supplies
- ✓ ☒ A summary of what was learned from an experiment
- ☐ The first step of the scientific method

This form was created inside of Milton Academy.

Google Forms