

Natural Science 9: Test Review-Space
Answers

1. pg 434 #2 a – i

- a) Neptune
- b) Jupiter
- c) Mercury

- d) Earth
- e) Pluto
- f) Saturn

- g) Mars
- h) Venus

2. Definitions:

Universe – everything that exists, including all matter and energy everywhere

Astronomy – the study of what is beyond the earth

Solar System – the sun and all the objects that travel around it, including the planets and the moons of those planets

Non-Luminous – not making or emitting its own light, reflects light from other sources

Star – a large collection of matter that emits huge amounts of energy

Planet – a large spherical piece of matter, that revolves around a star

Meteorite – a meteoroid that reaches the ground

Axis – an imaginary straight line between the north and south pole

Orbital period – the period of time required for an orbiting object to complete one revolution

Constellations – a group of stars that forms shapes or patterns

Probe – an unmanned space craft sent into space to obtain data and complete research

Satellite – a large natural object that travels in an orbit around a planet

Asteroids – small rocky objects

Asteroid belt – made up of thousands of asteroids one belt is found between Mars and Jupiter

Meteoroid – a lump of rock or metal trapped by Earth's gravity and pulled down through Earth's atmosphere

Meteor – a bright streak of light across the sky caused by a meteoroid

Comet – a chunk of ice and dust that travels in a very long orbit around the sun

Rotation – the spinning of an object on its axis

Revolution – the movement of one object travelling around another

Terrrestrial Planets- the inner planets closest to the sun made mostly of rock and metal

Gas Giants – the outer planets, furthest from the sun with atmospheres that consist mostly of gases such as hydrogen and helium

Orbit – the path an object takes as it moves around another object i.e. planets orbit around the sun

3. Answer each of the following questions.

a. Put the planets in order starting with the sun and working outwards.

Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus, Neptune

b. What are the two reasons we have seasons here on earth?

The two reasons we have seasons is because of the rotation of the earth on its axis and because the earth revolves around the sun.

c. How long does it take the earth to make one revolution? 1 yr or 265 days rotation? 24 hours or 1 day.

d. What are the major characteristics of the moon?

It has no atmosphere and its surface is filled with craters, hills and valleys. It is non-luminous.

e. What is the scientific term for a shooting star? meteor

- f. What is the difference between natural satellites and artificial satellites?
Natural Satellites – revolve around the planets
Artificial Satellites – put there by humans
- g. What is a comet? **a chunk of frozen matter that travels in an orbit around the sun.** How long does it take for Halley’s comet to make one revolution? **76 years**
- h. Give 5 facts about an inner planet. **Use your notes to study from**
- i. Give 5 facts about an outer planet. **Use your notes to study from**
- j. Briefly describe a probe? **An unmanned space craft sent into space to do research** Why are probes sent to other planets and moons? **to research, look for signs of life, send back data to earth for our use etc.** Why are probes usually unmanned? **Due to the amount of time it takes a probe to get to some of the planets and the length of time they remain in space, it would not be possible to send people on these probes. They are like computers sent to gather data and complete research.**
- k. Which planet is described as the “goldie-locks” planet? **Earth** Explain why? **It’s just right: the right temperature (not too cold, not too hot), the right atmosphere, contains useable water etc.**
- l. Describe the difference between a meteorite and a meteoroid.
A meteoroid is a lump of rock and metal trapped by Earth's gravity and pulled down to earth's atmosphere.

A meteorite occurs when meteoroids are large enough and hit the surface of the Earth.

- m. Describe the difference between a star and a planet.

Star	Planet
Emits its own light	Reflects light
Larger than planets	
Appears to twinkle in the sky	Does not appear to twinkle
Very hot	Usually cold or very cold

- n. Explain why a constellation appears to change position from hour to hour during the night.
A constellation appears to change position form hour to hour during the night because the earth is rotating on its axis and the constellations are not moving. As we rotate on our axis the location of the constellations changes with respect to where we are in the rotation the same as, as we rotate the position of the sun changes creating night and day.
- o. Describe what would happen if a giant meteorite crashed into Earth’s surface on land and on water.
On Land – it would create a crater (hole in the earth), would damage anything it lands on i.e. houses, people, businesses etc. create a huge amount of dust.
On Water- it would create a large wave, may damage the land underneath the water where it lands, and disrupt fish or other organisms near the crash site.

Where would the best place for space debris to land to cause minimum damage? **On Water**

- p. What are the major characteristics of the sun?
- **Brightest star in the sky**
 - **provides the earth with energy, heat and light.**
 - **Contains vitamin D.**

- Gives off harmful UV rays

- q. Name four of the probes that have been sent to the inner planets and give one interesting fact about each.
- r. Name four of the probes that have been sent to the outer planets and give one interesting fact about each.
- Refer to your handouts on the inner and outer probes for this information.