

Universe Study Guide

Put these items in order from largest to smallest.

Planet – Universe – Moon – Solar System – Galaxy – Star

Largest						Smallest
	Universe	Galaxy	Solar System	Star	Planet	Moon

Describe the following:

Universe	All of space
Galaxy	Millions of stars with some solar systems
Solar System	a group of planets around a central star

Planets

Planets In Order From Sun	Number in Order of Size	Fact About Planet
Mercury	8	No atmosphere
Venus	6	Hottest
Earth	5	Life
Mars	7	Found Evidence of water
Jupiter	1	Big Red Spot (Storm)
Saturn	2	Most Exquisite Rings
Uranus	3	Spins on its side and backwards
Neptune	4	Sometimes crosses path with Pluto
Pluto	9	Dwarf Planet

List and describe the inner planets.

Mercury Earth
Venus Mars Small and rocky


List and describe the outer planets.

Jupiter Uranus
Saturn Neptune Large, Gas, Rings

Which feature of the planets, moons, and stars determines how much gravity they have?

Mass

What is a rotation? Draw a picture to represent it as well as describe it with words.

Spin on axis 

What is a revolution? Draw a picture to represent it as well as describe it with words.

orbit around sun 

What two forces keep the planets in orbit around the sun? Draw a picture to demonstrate it.

gravity
Forward velocity



Describe the different space rocks.

Planet	orbit sun, clear orbit, spherical
Moon	orbits a planet
Dwarf Planet	orbit sun, spherical, have not cleared orbit
Comet	orbit sun, ice and rock with coma and tail
Asteroid	space rocks mostly located in the asteroid belt
Meteoroid	All space rocks
Meteor	space rock enters atmosphere
Meteorite	s.r. that hits the planet

Where is the asteroid belt located? Mars & Jupiter

Where is the Kuiper belt located? outer parts of solar system

Where do most long period comets originate? Oort Cloud

Describe each technology.

Telescope	see space from Earth
Satellite	orbits a planet
Space Probe	unmanned space explorers
Space Shuttle	manned space craft
Hubble Telescope	telescope in orbit
International Space Station	space lab

Describe each unit of measure and what space distance would be good to measure with it.

Light Year	distance light travels in a year / outside our solar system
Astronomical Unit	distance from Earth to sun / things inside our solar system
Miles	5280 ft / Earth to Moon

What are the two names for the star we use to navigate? Draw a picture of how to find it.

Polaris
North Star



What causes the apparent movement of the stars in the sky?

Rotation of the Earth

How were constellations originally named and identified?

Mythology

Describe the two groups of constellations we talked about. List the constellations we talked about from each group.

Circumpolar Constellations	spin around the North Star see all year	Ursa Major / The big Dipper Ursa Minor / The little Dipper Cepheus Cassiopeia Draco
Winter Constellations	see only in winter	Orion Canis Major Canis Minor Gemini Auriga Taurus