

Astronomy 104 Study Guide

Unit 3: The Solar System

Lesson 1- “And That's the Way it Was...”

Terms

hypothesis	theory	Condensation Theory
Terrestrial Planets	Jovian Planets	Gas Giants
planetesimals	Asteroid	comets
meteors	meteorites	meteoroids
Accretion	nebula	Stony meteorites
Iron meteorites	Stony-irons	nucleus
coma	tail	

Concepts and Ideas

1. How is evidence judged in science?
2. How are ideas tested in science?
3. What observations are used to help explain the origin of the Solar System?
4. Describe the Condensation (Accretion) Theory of the Solar System. What observations does it explain?
5. How are Jovian and Terrestrial Worlds different? Why does Pluto not easily fit these categories?
6. How can craters be used to date surfaces?
7. How are comets and asteroids believed to be connected to the formation of the Solar System?
8. What features do comets have in the inner Solar System?
9. How are comets and meteor showers related/

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Lesson 2- “A Tale of Three Worlds”

Terms

Terrestrial Planets
Mons Olympus

Greenhouse Effect
Mariner Valley

outgassing
carbonates

Concepts and Ideas

1. How are the Terrestrial planets alike and different? What are the causes for the differences?
2. How have the Earth, Mars and Venus changed over time?
3. What are the causes of the differences between the planets?
4. Why does the earth have an atmosphere that is so different from Mars and Venus?
5. How have conditions on Venus changed over time?
6. How have conditions on Mars changed over time?
7. Why is Mars believed to have large amounts of water?
8. What are some of the major features on Mars?

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Lesson 3- *“To the Gas Giants and Beyond”*

Terms

Great Red Spot
Europa
Triton

Great Dark Spot
Ganymede
Roche Limit

Io
Callisto
tidal heating

Concepts and Ideas

1. How do Jovian and Terrestrial planets differ?
2. What is the composition of the Jovian Ring Systems? How may they have formed?
3. What is the cause of Io's volcanic activity?
4. What is the cause of Europa's smooth surface?
5. What are the major features visible on the Jovian planets? What is the origin of these features?
6. Why does Pluto not “fit” as a Jovian planet?