

Critical Thinking Skills

The Solar System

Skills For Critical Thinking		Reading Comprehension							Hands-on Activities
		Section 1	Section 2	Section 3	Section 4	Section 5	Section 6	Section 7	
LEVEL 1 Knowledge	<ul style="list-style-type: none"> List Details/Facts Recall Information Match Vocab. to Definitions Define Vocabulary Label Diagrams Recognize Validity (T/F) 	✓	✓	✓	✓	✓	✓	✓	✓
LEVEL 2 Comprehension	<ul style="list-style-type: none"> Demonstrate Understanding Explain Scientific Causation Rephrasing Vocab. Meaning Describe Classify into Scientific Groups 	✓	✓	✓	✓	✓	✓	✓	✓
LEVEL 3 Application	<ul style="list-style-type: none"> Application to Own Life Model Scientific Process Organize and Classify Facts Utilize Alternative Research Tools 	✓	✓	✓	✓	✓	✓	✓	✓
LEVEL 4 Analysis	<ul style="list-style-type: none"> Distinguish Roles/Meanings Make Inferences Draw Conclusions Based on Facts Provided Classify Based on Facts Researched 	✓	✓	✓	✓	✓	✓	✓	✓
LEVEL 5 Synthesis	<ul style="list-style-type: none"> Compile Research Information Design and Application Create and Construct Imagine Self in Scientific Role 	✓	✓	✓	✓	✓	✓	✓	✓
LEVEL 6 Evaluation	<ul style="list-style-type: none"> State and Defend an Opinion Justify Choices for Research & Topics Defend Selections and Reasoning 	✓	✓	✓	✓	✓	✓	✓	✓

Based on Bloom's Taxonomy



Asteroids, Meteors and Comets

In addition to the planets, Sun and moons that make up our solar system, there are a lot of other objects floating around out there. Some of these objects are asteroids, comets and meteors.

Asteroids are the thousands of rocky lumps that form a circle around the Sun in a big band between Mars and Jupiter. One of the biggest asteroids, **Ceres**, is about 620 miles across. Others are as small as a grain of sand. More than 3 200 asteroids have been identified so far. Asteroids are leftover rocks from the time when the planets were first formed. The asteroids in the **asteroid belt** never joined in forming the planets because the force of Jupiter's pull kept them where they were. Today, the asteroids continue to remain "stuck" in the asteroid belt.



VISUALIZE: In your notebook, draw a sketch of what you think an asteroid belt looks like in the solar system.



SAMPLE

Meteors start off as lumps of rock in the **asteroid belt** between Mars and Jupiter. The rocks break out of the belt and travel on their own. Once they start flying through space, beyond the asteroid belt, they are called meteors. **Meteors** are also known as **shooting stars**. Rocks that are big enough to fly through the Earth's atmosphere and reach the ground without burning up, are called **meteorites**. When a meteorite hits the Earth it leaves a **crater** (or cavity) from the impact. Scientists think that 50 tons of these space rocks hit the Earth's surface every day!

Comets are different than asteroids and meteors because they are made of dust and ice, like dirty ice-balls. They are just a few miles in diameter. Usually, they just circle the outer edge of the solar system. Sometimes a comet is drawn toward the Sun and so it comes hurtling through the solar system. As it travels, it melts and leaves behind a **tail** of gas. This makes the comet look like it has a head and a tail.



Crossword Puzzle!

Word List

- Asteroid
- Constellation
- Craters
- Geysers
- Gibbous
- Hydrogen
- Luna
- Meteor
- Navigation
- Nebula
- Orbit
- Rings
- Rotate
- Supernova
- Yellow dwarf

**Across**

1. To travel in a circular path around an object
4. To spin around an axis
6. These spring up hot gases from Neptune's moon
7. This moon and Earth are known as "double planets"
8. The surface of the Moon has big holes called _____
9. This is one of the phases of the lunar cycle
11. The Sun is known as this type of star (2 words)
13. A group of stars that make up a picture
14. Stars can be used to help humans with _____

Down

2. A piece of space rock that orbits the Sun
3. One of the gases that the gas planets are made of
5. Saturn is surrounded by _____ made of rock, dust and ice
10. The birth place of a star
12. A star explosion
15. This is also known as a shooting star

Our Solar System

