

# Activating Strategy

Complete the “Before the Lesson” section of the Comets, Meteors, and Asteroids Anticipation Guide by selecting which object each statement describes based on your prior knowledge.

Before Lesson	Characteristic	After Lesson
Comet   Meteor   Asteroid	Its structure is considered to be like a large dirty snowball.	Comet   Meteor   Asteroid
Comet   Meteor   Asteroid	It is made up of dust and rock that burn up in the Earth's atmosphere.	Comet   Meteor   Asteroid
Comet   Meteor   Asteroid	It is a rock made up of similar material that formed the planets.	Comet   Meteor   Asteroid
Comet   Meteor   Asteroid	It is made of dust and rock mixed with frozen water, methane, & ammonia.	Comet   Meteor   Asteroid
Comet   Meteor   Asteroid	Smaller pieces of rock broken from this object become meteoroids.	Comet   Meteor   Asteroid
Comet   Meteor   Asteroid	It is considered harmless even though they can be observed from Earth.	Comet   Meteor   Asteroid
Comet   Meteor   Asteroid	Most of these are located between the orbits of Mars and Jupiter.	Comet   Meteor   Asteroid

The background is a collage of six images. Top-left: A comet with a bright orange and yellow tail against a dark background. Top-middle: A comet with a long, white, straight tail against a black background. Top-right: A comet with a blue and purple tail against a dark blue background. Middle-right: A detailed image of a galaxy with a complex, irregular shape and many stars. Bottom-left: A comet with a bright white tail against a black background. Bottom-middle: A comet with a multi-colored tail (green, yellow, red, blue) against a black background. Bottom-right: A comet with a bright white head and a long, white tail against a black background.

# Comets

<http://www.creationscience.com/onlinebook/Comets.html>



# Comets

- Comets are composed of dust and rock mixed with frozen water, methane, and ammonia
- Comets are considered to be like a large, dirty snowball



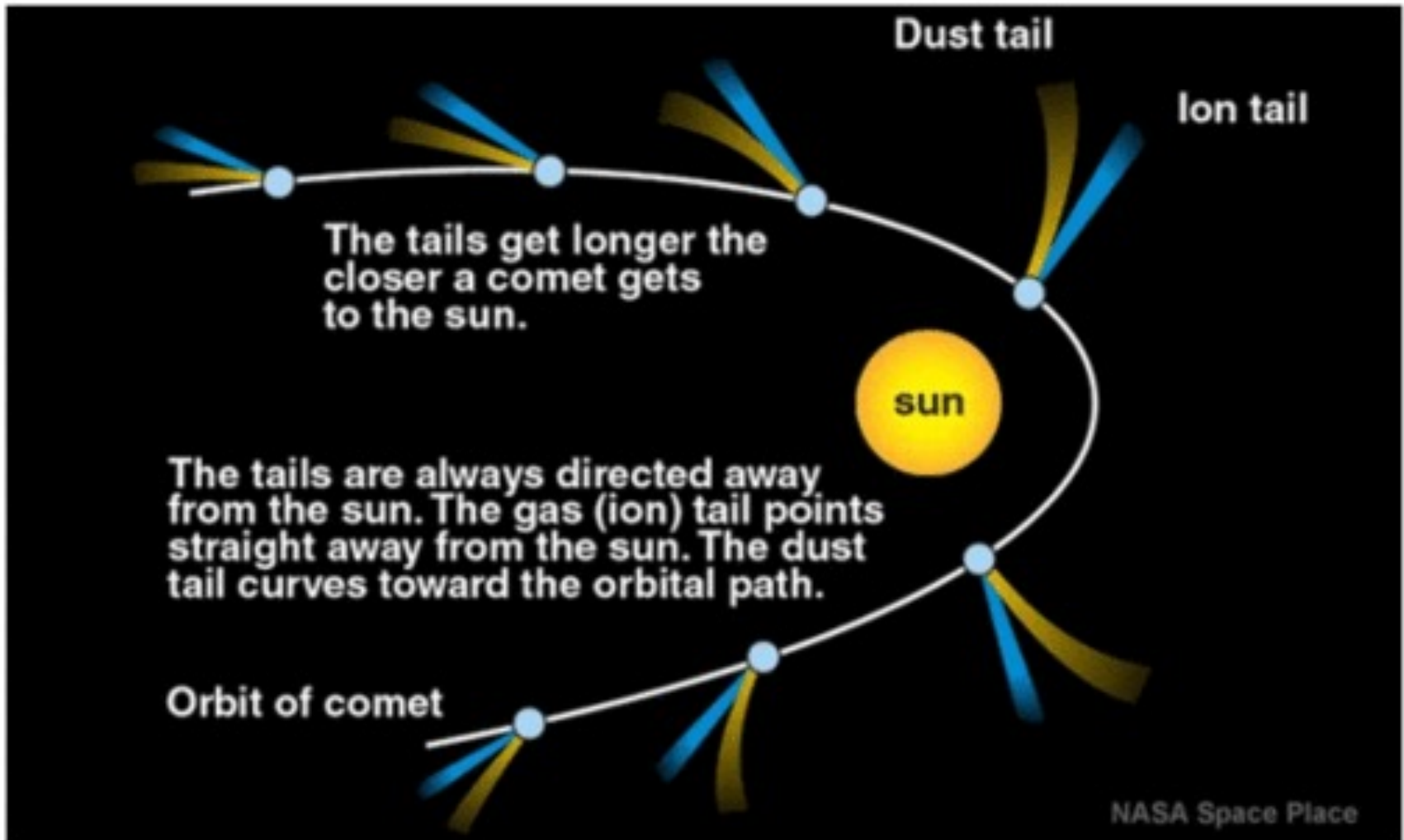


# Comets

- Comets travel around the sun in elliptical orbits
- When a comet nears the sun, some of it melts and forms a long tail (gases in the comet are vaporized by the sun)
- When a comet moves farther away from the sun, the tail disappears



# Comets



After a comet has passed close to the Sun many times, it breaks apart. The small pieces from the comet spread out.

These pieces of dust and rock, along with those coming from other sources, are called Meteoroids.

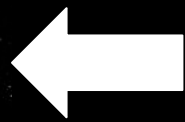


# Meteoroid, Meteor, Meteorite?

The difference is just based on where the rock is located when you are describing it.

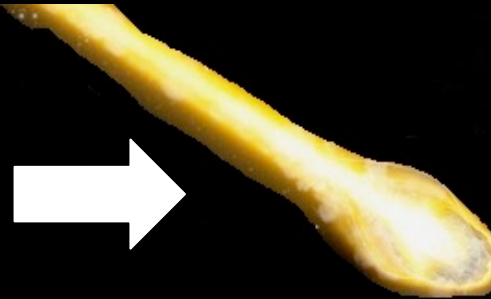




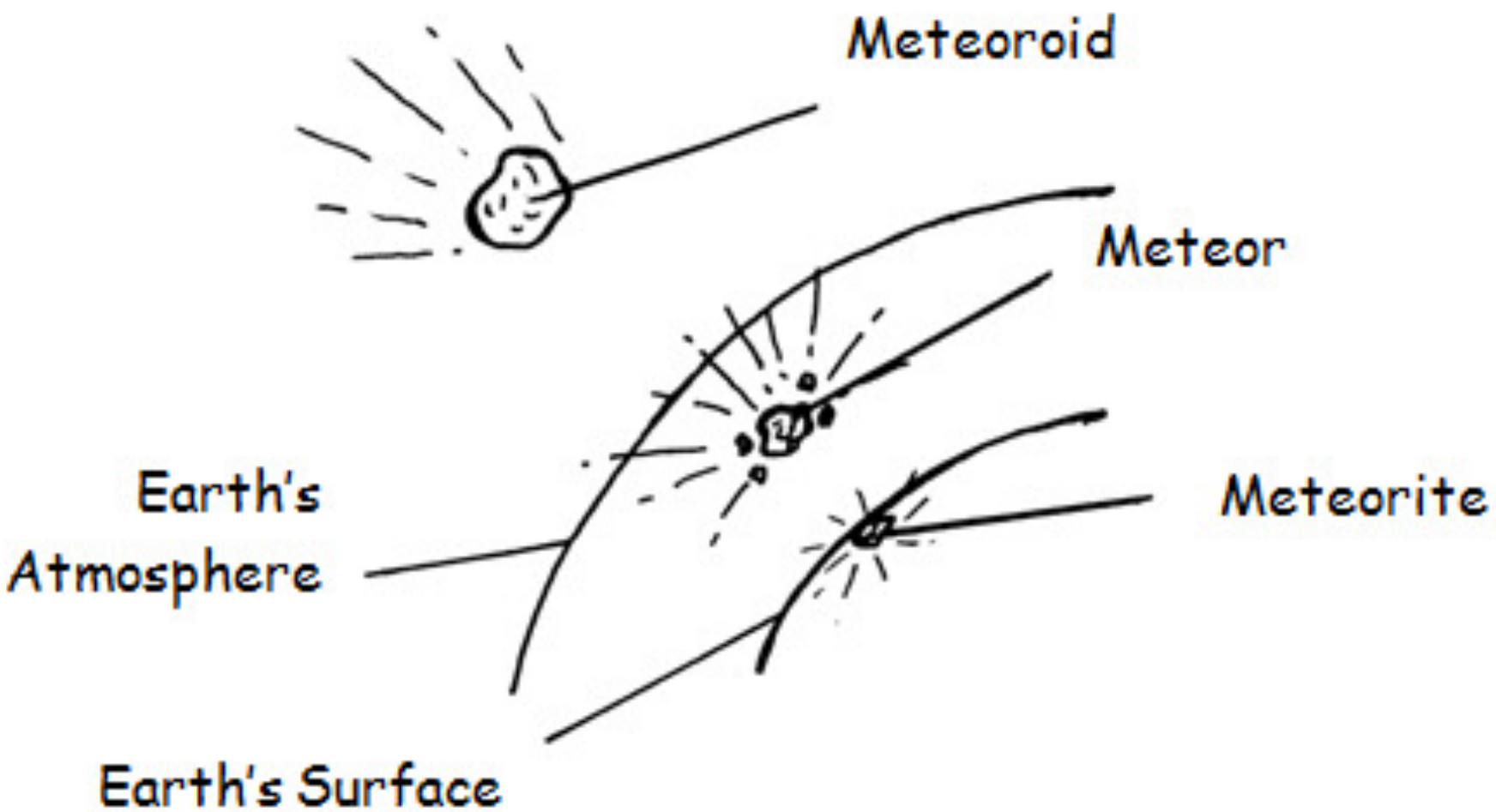


Meteoroid is a “space rock”  
that is still in space

Meteor is a meteoroid  
that burns up in the  
earth’s atmosphere  
(Shooting Star)

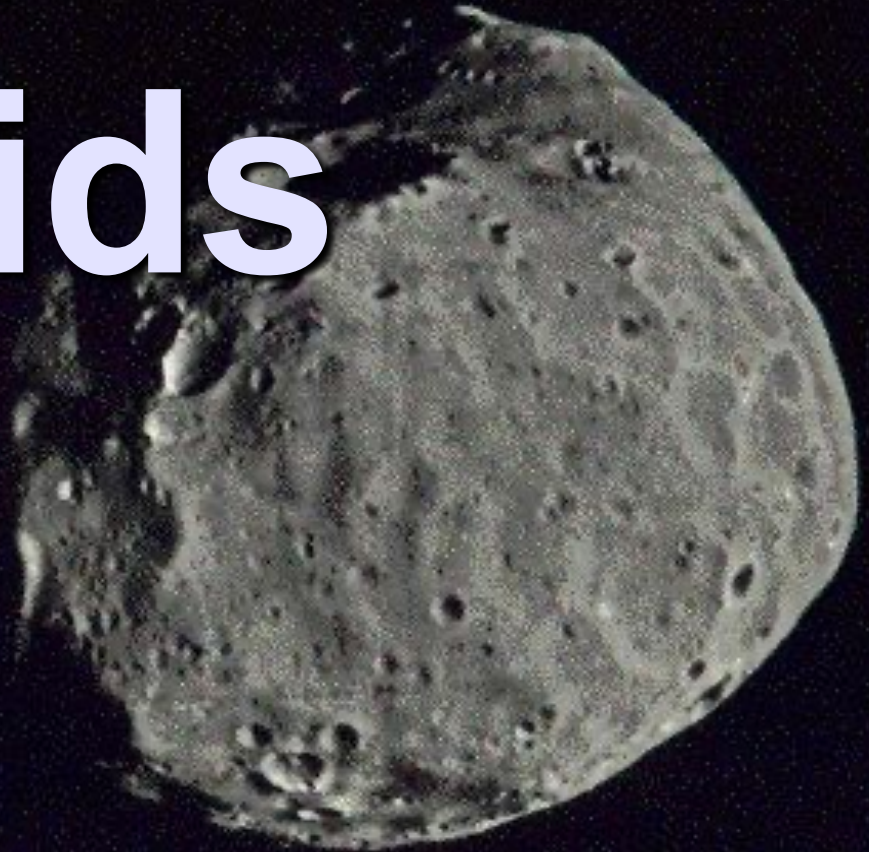


Meteorite is a meteoroid that hits  
the earth’s surface





# Asteroids



# Asteroid

- A piece of rock similar to the material formed into planets.
- An Asteroid is smaller than a planet but larger than a meteoroid

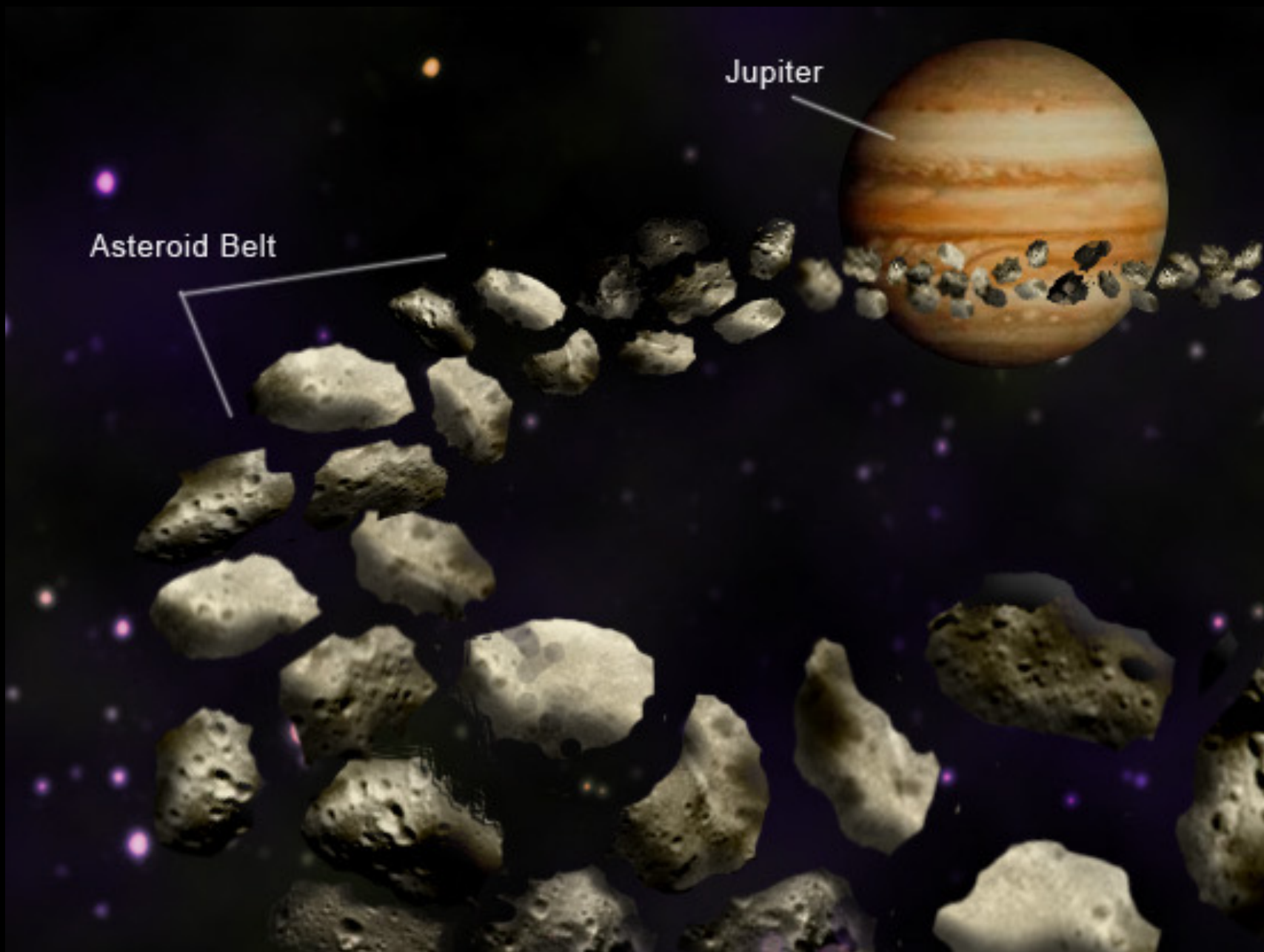


# Asteroid

- Most asteroids are located in an area between the orbits of Mars and Jupiter called the Asteroid Belt.
- Why are they located there?
- The gravity of Jupiter might have kept a planet from forming in the area







# Types of Space Rocks

