

WARM UP

**WHAT CHARACTERISTICS MUST A
PLANET HAVE TO SUPPORT LIFE?**

9/6/2018

1. HELIOCENTRIC VS. GEOCENTRIC DOUBLE BUBBLE

- Heliocentric
 - Copernicus
 - Sun-centered
 - Discovered after Geocentric
- Geocentric
 - Ptolemy
 - Earth-centered
 - First Model
- Both
 - Observed in the sky
 - Objects were circles on circles in orbit
 - Orbits

2. ACCORDING TO THE BIG BANG THEORY, HOW OLD IS OUR UNIVERSE?

13-15 billion years old

3. WHAT DOES THE BIG BANG THEORY STATE ABOUT OUR UNIVERSE? IS THE UNIVERSE CURRENTLY EXPANDING OR CONTRACTING?

- Universe began with a big explosion
- Expanding

4. LIST IN ORDER FROM SMALLEST TO BIGGEST: EARTH, UNIVERSE, JUPITER, GALAXY, SOLAR SYSTEM, DWARF PLANET, CLUSTER

- Dwarf Planet
- Earth
- Jupiter
- Solar System
- Galaxy
- Cluster
- Universe



PART 2: GALAXIES

1. WHAT IS THE NAME OF OUR GALAXY?

Milky Way



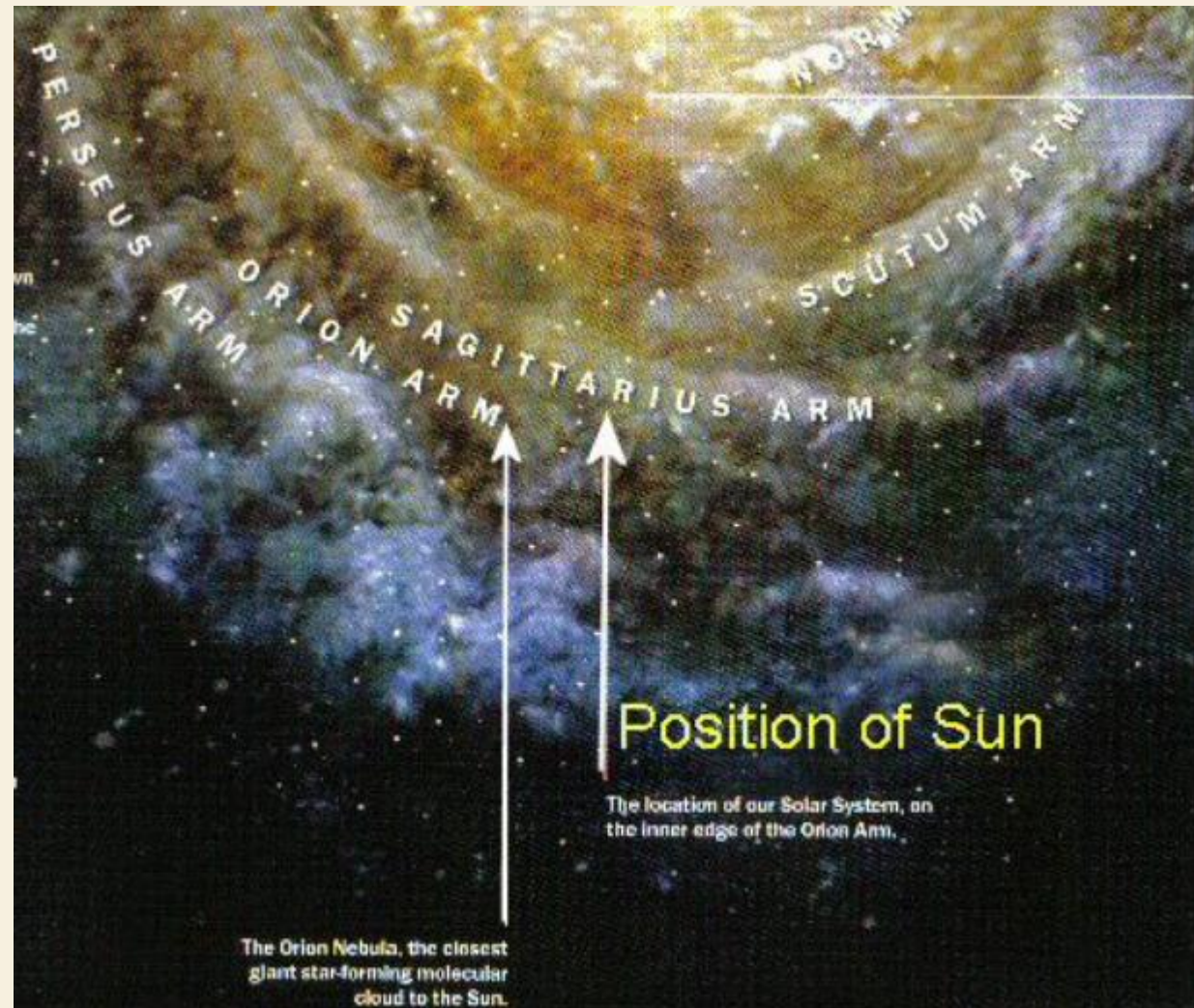
2. WHAT DOES IT LOOK LIKE (SHAPE)?

Spiral



3. WHERE ARE WE LOCATED IN OUR GALAXY?

The Orion Arm



4. WHAT ARE THE SHAPES OF THE OTHER 2 TYPES OF GALAXIES?

- Irregular
- Elliptical

COMPLETE THE TREE MAP TO CLASSIFY THE 3 TYPES OF GALAXIES. MAKE SURE TO DRAW A PICTURE FOR THE GALAXIES

Galaxies

Irregular

Elliptical

Spiral

Usually Young Stars

Usually Old Stars

Our Galaxy





PART 3: PLANETS

1. LIST THE PLANETS IN ORDER, STARTING FROM THE SUN.

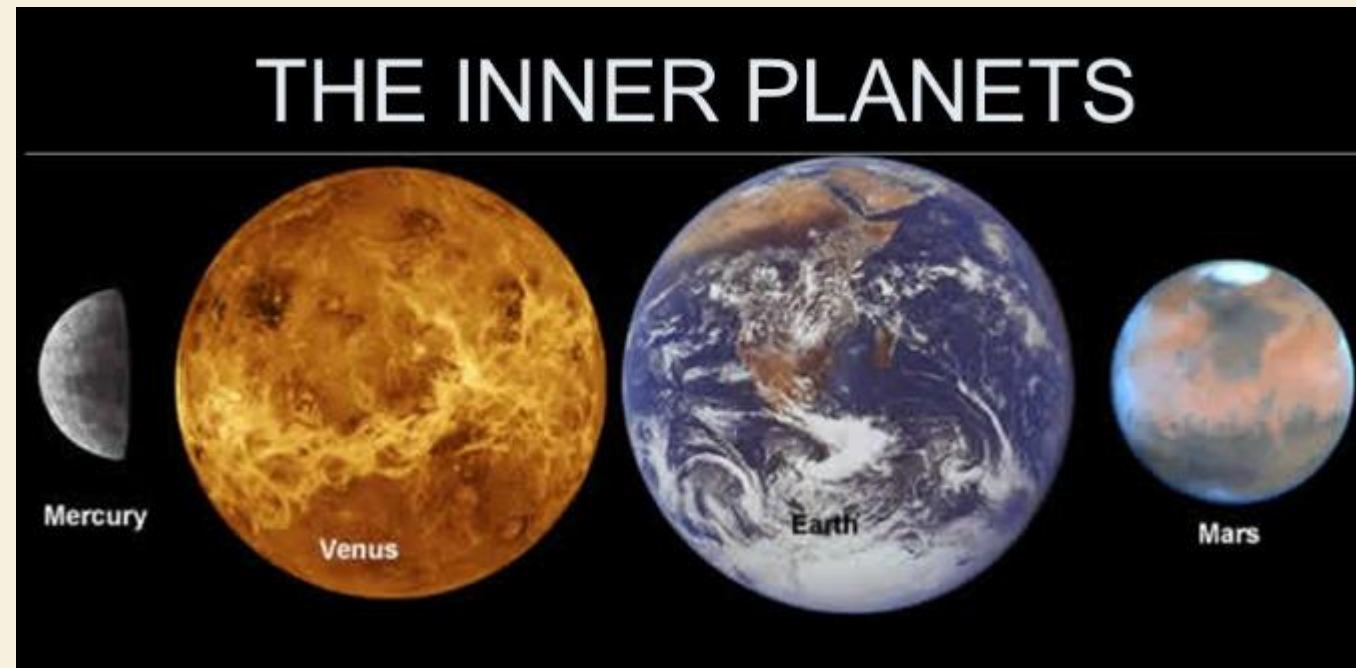
- Mercury
- Venus
- Earth
- Mars
- Jupiter
- Saturn
- Uranus
- Neptune

2. WHAT ARE THE TWO FORCES THAT ALLOW THE PLANETS TO STAY IN THEIR ORBIT?

- Gravity
- Inertia

3. WHAT DO ALL THE INNER PLANETS HAVE IN COMMON?

- Rocky Surfaces (terrestrial planets)



4. WHAT DO ALL OF THE OUTER PLANETS HAVE IN COMMON?

- They are all gas giants.

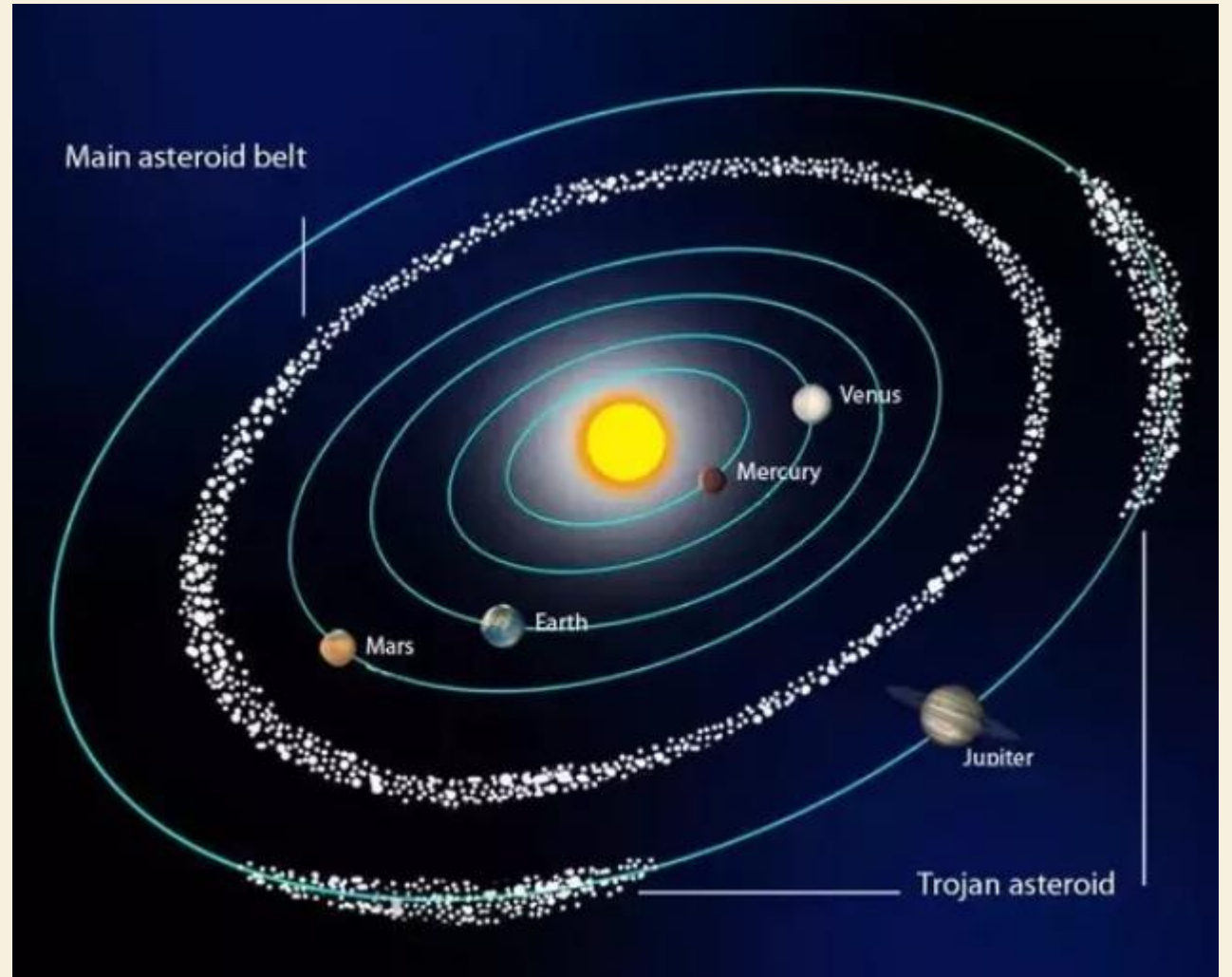



5. LIST THE INNER PLANETS AND GIVE 3 DISTINGUISHING CHARACTERISTICS FOR EACH.

- Mercury – no moons, smallest planet, most temperature changes
- Venus – Earth's twin, hottest planet, longest day
- Earth – life, water, continents move
- Mars – 2 moons, Red planet, 24 hour day

6. WHAT IS LOCATED BETWEEN MARS AND JUPITER?

Asteroid Belt





PART 4: OUTER SOLAR SYSTEM

1. LIST THE OUTER PLANETS AND GIVE 3 DISTINGUISHING CHARACTERISTICS OF EACH.

- Jupiter – largest planet, most moons, strong weather
- Saturn – has largest rings, 2nd largest, 6th planet
- Uranus – blue planet, rotates on side, icy planet
- Neptune – coldest planet, windiest planet, last planet

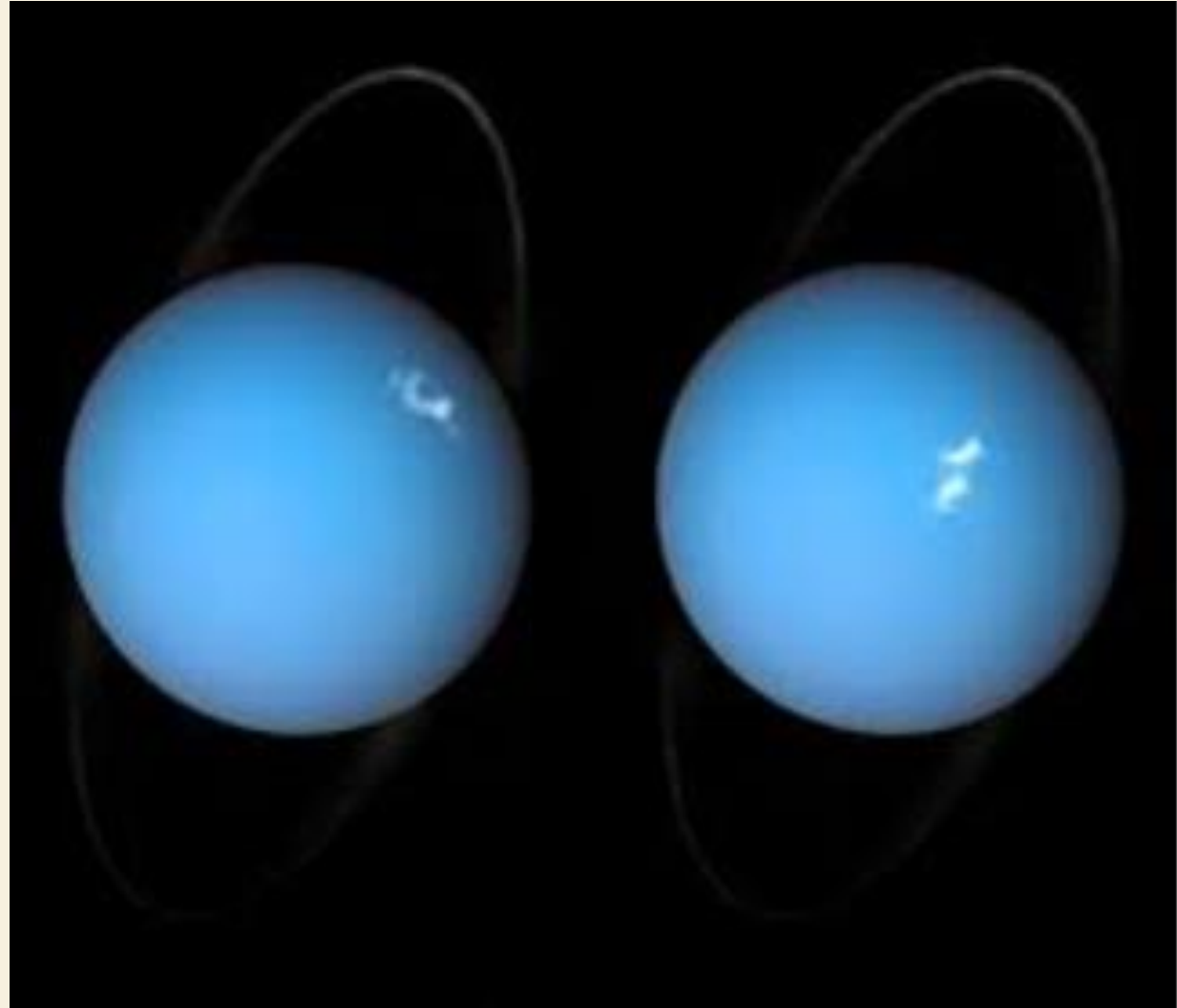
2. WHAT ARE SATURN'S RINGS MADE OF?

Ice, rock, and dust



3. WHAT PLANET ROTATES ON ITS SIDE?

Uranus



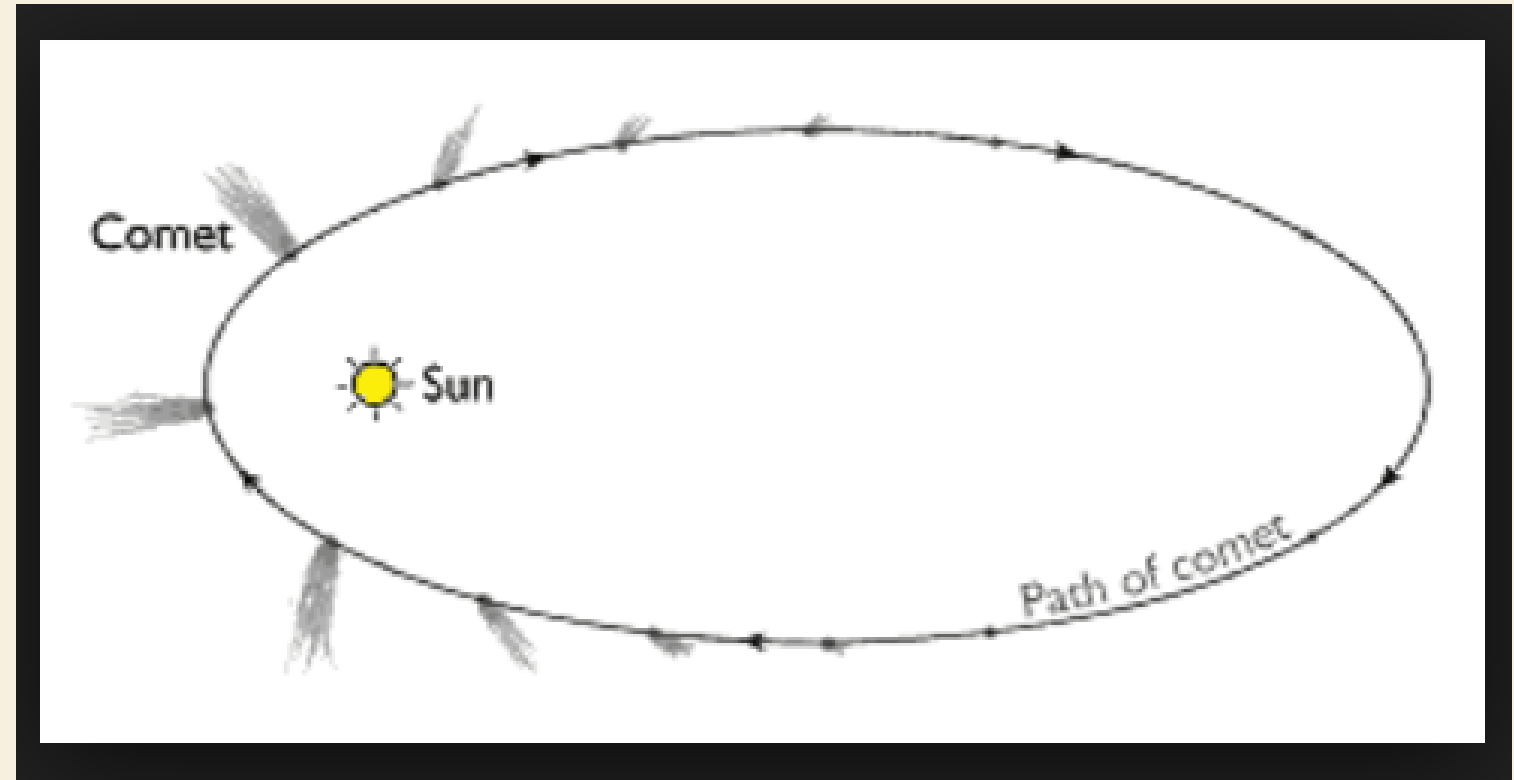
4. WHAT DOES A COMET LOOK LIKE AND HOW DOES IT FORM?

They are made of ice, mixed with dust. These materials came from the time when the Solar System was formed. Comets have an icy center (nucleus) surrounded by a large cloud of gas and dust (called the coma).



5. WHAT IS THE SHAPE OF A COMETS ORBIT?

Highly
Elliptical



6. WHAT CREATES CRATERS?

Asteroids and Meteoroids striking the surface of a planet or other object in the solar system

7. WHAT DOES A METEOR LOOK LIKE, AND HOW DOES IT FORM?

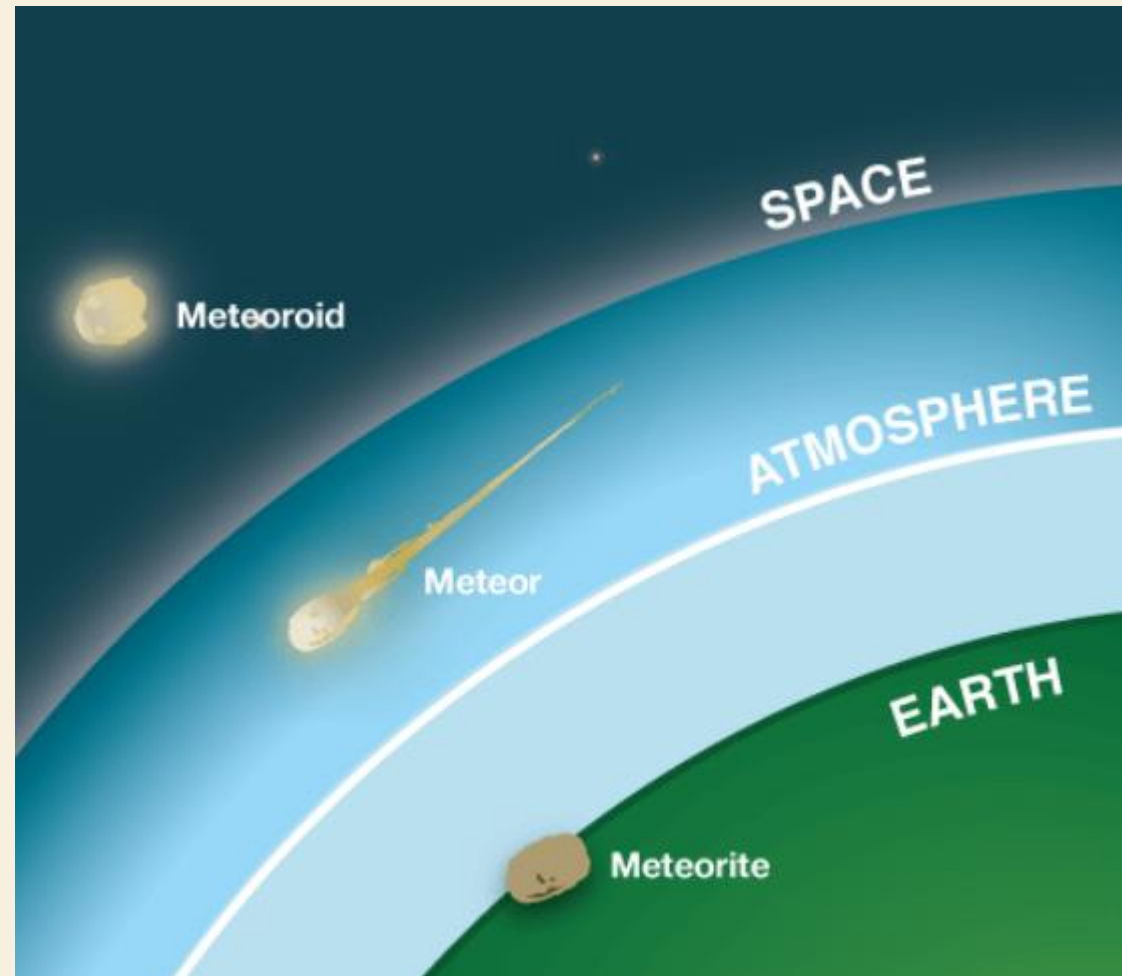
Many meteor are formed from the collision of asteroids, which orbit the Sun between the paths of Mars and Jupiter in a region called the asteroid belt. As asteroids smash into each other, they produce crumbly debris—meteoroids.

8. WHAT ARE ASTEROIDS, AND WHERE ARE MOST FOUND?

Asteroids are small rocky bodies that orbit the sun. Most are found in the Asteroid Belt between Mars and Jupiter.

9. WHAT IS A METEOROID, METEORITE, AND A METEOR?

- Meteoroid – rocks traveling through space
- Meteorite – meteoroid that did not burn up in the atmosphere and landed on the Earth surface
- Meteor – meteoroid burning up in the Earth's atmosphere



10. WHAT IS THE KUIPER BELT?

a region of the solar system beyond the orbit of Neptune, believed to contain many comets, asteroids, and other small bodies made largely of ice.