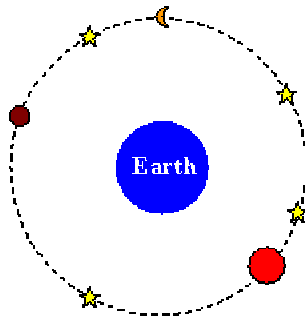


**AIM 1: What are the motions of celestial objects?**

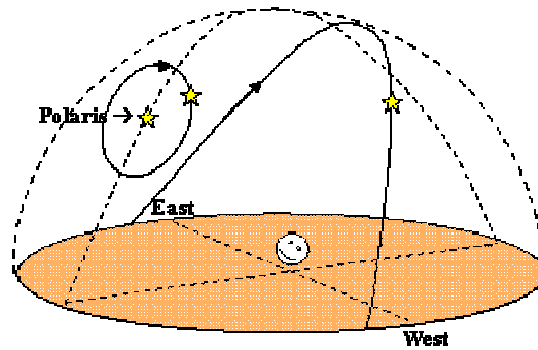
**HW**

- Read “Motion of Celestial Objects” p211-213

A celestial sphere is an imaginary sphere on which all celestial objects in the sky appear such as stars, planets and moon.

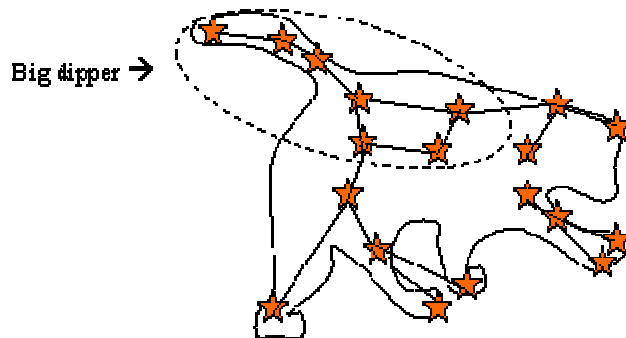


- The celestial North Pole is Polaris.
- Most of the celestial objects appear to move along circular or curved paths from east to west, counterclockwise, motion at an angular rate of  $15^\circ$  per hour.
- Planets are the only celestial objects shifting direction. The word planet means "wanderer."



Constellations are clusters of stars that can be connected with imaginary lines to form imaginary shapes.

Ex: The Great Bear (Ursa Major)



As Earth revolves around the sun, the night side faces toward different part of the celestial sphere therefore different constellations are seen at different time of the year.

## TEST YOUR UNDERSTANDING

8/07

3 In New York State, the constellation Pisces can be seen in the night sky between the middle of summer and the middle of winter. The constellation Scorpio can be seen in the night sky between early spring and early fall. The reason these two constellations can be viewed only at these times is a direct result of Earth's

- (1) spin on its axis   (2) movement around the Sun   (3) axis having a  $23.5^\circ$  tilt   (4) distance from the Sun

8/06

6 In October, observers in New York State looking due south at the night sky would see a different group of constellations than they had seen in March. What is the best explanation for this change in the night sky?

- (1) Constellations revolve around Earth.                      (2) Constellations revolve around the Sun.  
(3) The Sun revolves around the center of our galaxy.        (4) Earth revolves around the Sun.

1/06

7 Which statement provides evidence that Earth revolves around the Sun?

- (1) Winds at different latitudes are curved different amounts by the Coriolis effect.  
(2) Different star constellations are visible from Earth at different seasons of the year.  
(3) The Sun follows an apparent arc across the sky during the day.  
(4) The stars appear to circle Earth during the night.