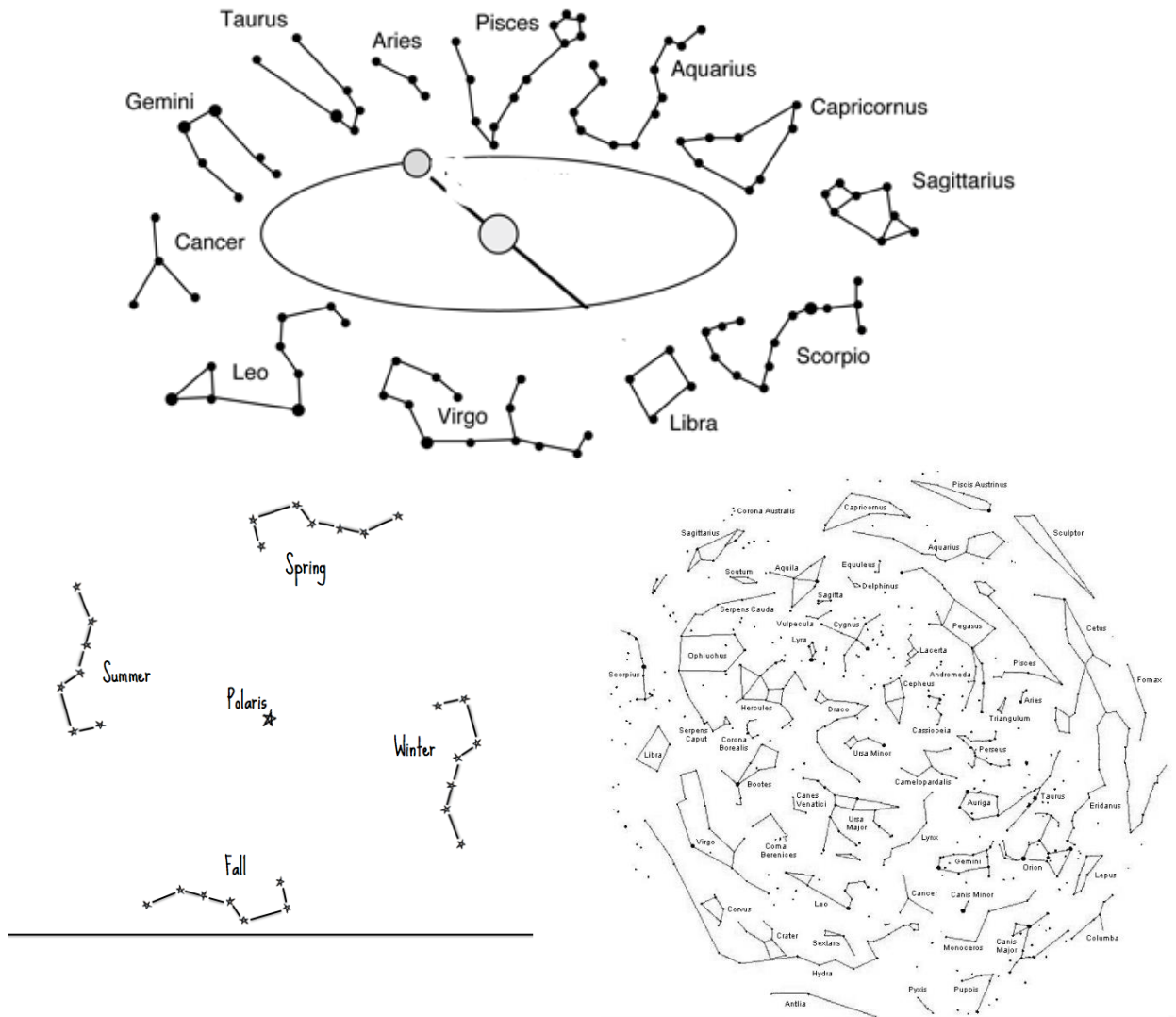


Section 2: Locating Astronomical Objects in the Night Sky



Section 2 Question: How do the positions of astronomical objects in the night sky appear to change over time?

What do you See?
(Picture)

What do you think?

Consider the situation shown below in which the Sun and a group of constellations are shown at sunrise, Figure 4, and then shown again 8 hours later, Figure 5.

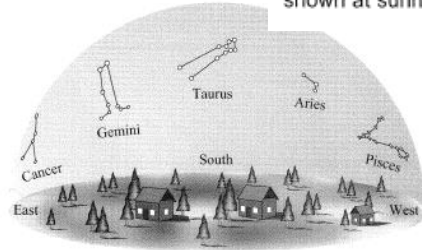


Figure 4

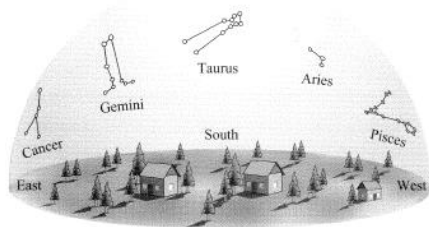


Figure 5

What do you think now?

Focus Question A: What is the most accurate way to locate objects on the surface of Earth?

Predictions:

Observations:

Explanation:

Focus Question B: How are lines of latitude and longitude determined?

Latitude/Longitude of School:

Draw a circle with a 15cm diameter

Observations:

(compare and contrast lines of latitude and lines of longitude)

Explanation:

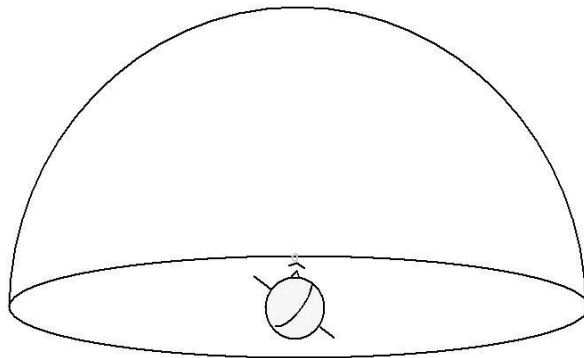
Focus Question C: How can Earth's coordinate system be used to locate celestial objects?

Draw a circle with a 5cm diameter, an equator, and lines of latitude and longitude:

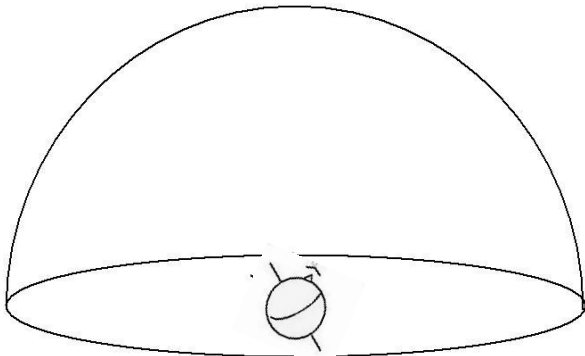
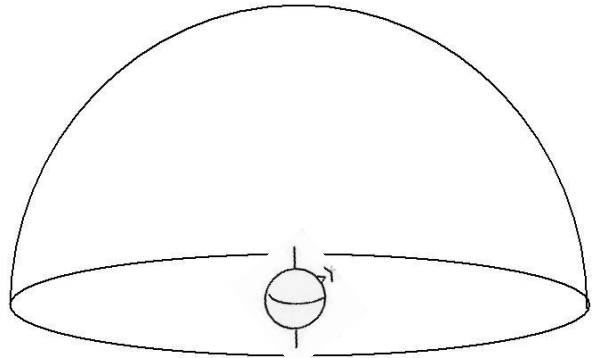
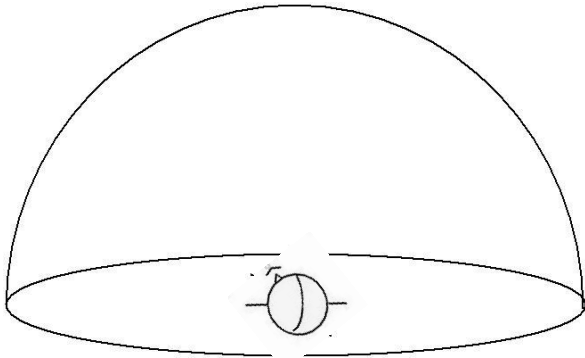
Celestial Sphere

Date	Dec 15, 10pm	Mar 15, 10pm	Jun 15, 10pm	Sep 15, 10pm
Constellation nearest zenith				

On the horizon diagram below, draw the North Star (Polaris) and the approximate locations of any visible constellations from the table above on September 15th.



EXTENSION: How can the North Star be used to aid in navigation?



Claim:

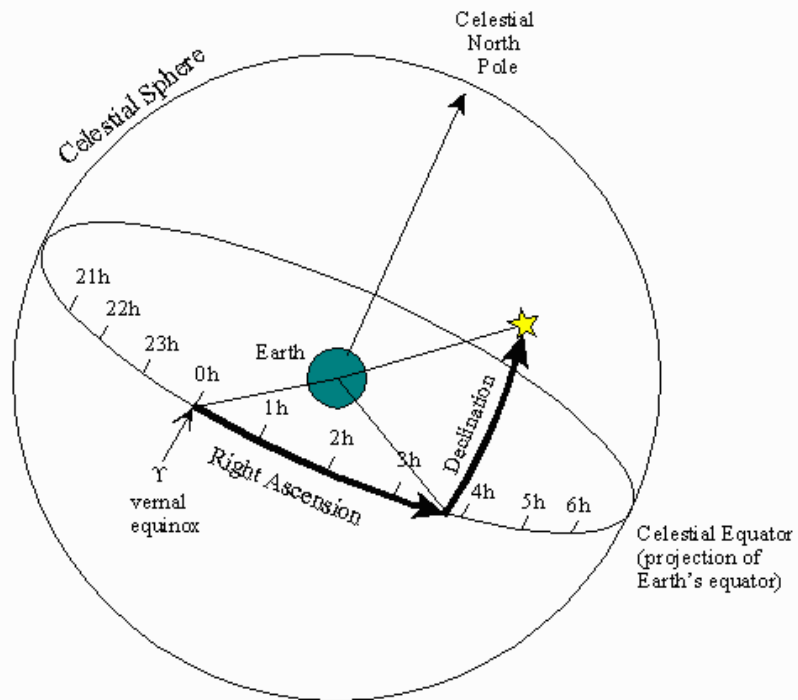
Evidence:

RETURN TO WDYTN

DIGGING DEEPER

Constellations and the Celestial Sphere		
<ul style="list-style-type: none"> • Many ancient civilizations recognized groups of stars which they named and associated with different stories. • Today there are 89 recognized constellations. • The 12 Zodiac constellations lie along the ecliptic. • The celestial sphere is a MODEL that provides a way to locate astronomical objects in the sky. 	How is the celestial sphere similar to Earth's Coordinate system?	How is the celestial sphere different from Earth's Coordinate system?

Label the diagram below as shown in the video



Chapter 1, Section 2 E.B.C.
Locating Astronomical Objects in the Night Sky

Name: _____
Period: _____

Question (2)			
Claim 1 (2)			
A. Supporting Evidence (3)		B. Supporting Evidence (3)	
Claim 2 (2)			
A. Supporting Evidence (3)		B. Supporting Evidence (3)	
Analysis (6)			
	Claim <i>A statement or conclusion that answers the original question/problem.</i>	Evidence <i>Scientific data that supports the claim. The data needs to be appropriate and sufficient to support the claim.</i>	Analysis <i>A justification that connects the evidence to the claims. It shows why the data counts as evidence by using appropriate and sufficient scientific principles and vocabulary.</i>
0	Does not make a claim, or makes an inaccurate claim.	Does not provide evidence, or only provides inaccurate or vague evidence.	Does not provide an analysis, or only provides an irrelevant analysis.
1	Makes an accurate but vague or incomplete claim.	Provides vague evidence and does not include specific data.	Repeats evidence and links it to claim, but does not include specific scientific principles.
2	Makes accurate and complete claim.	Provides correct evidence but does not include specific data.	Connects all evidence to the claims using scientific principles or vocabulary but not both.
3		Provides correct evidence and includes specific data.	Connects all evidence to both claims using scientific principles and vocabulary.

CHECKING UP: Page 27, 1 through 3 (2 points each)

1.

2.

3.

Why is it that new constellations gradually enter our field of view from the east and disappear to the west? (5 points)