

*Let's do some thinking about the "celestial sphere". Use pictures to help with your work.*

1) Explain why the *altitude* of the *celestial pole* is the same as the *latitude* of the observer.

How would this be useful to celestial navigation?

2) Explain why when the *declination* of the Sun is south of the celestial equator, the North Pole (of the Earth) is always in the dark.

What happens when the Sun is right on the *celestial equator*? What is the special name for this, and when does this occur? What else can you say about those times?

3) Explain why a *constellation* which rises in the early evening at a given time of year might set in the early evening about 5 months later.

For those who want to delve deeper, what assumption about the *declination* of the constellation is implicit in this question?

