

# Topic: The Model of the Earth

**Aim:** How does Polaris help locate your position on Earth?

1. What is the definition of altitude?

**Altitude** - the height of an object above the horizon measured in degrees.

2. What is the numerical range of altitudes?

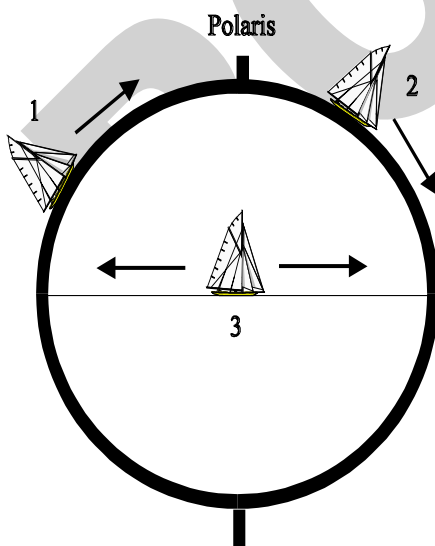
- lowest =  $0^\circ$  – object on horizon
- highest =  $90^\circ$  – object is at observer's **zenith** (point directly above the observer)

3. How does the altitude of Polaris help determine an observer's latitude?

The altitude of Polaris is equal to the latitude of the observer in the Northern Hemisphere.

*Example:*

*If altitude of Polaris is  $41^\circ$ , the observer is standing on  $41^\circ\text{N}$  latitude.*



1 As a moving ship travels **NORTH**, the observed altitude of Polaris will **INCREASE**.

2 As a moving ship travels **SOUTH**, the observed altitude of Polaris will **DECREASE**.

3 As a moving ship travels **DUE (directly) WEST OR EAST**, the observed altitude of Polaris will **REMAIN THE SAME**.