

I. Shape of the Earth

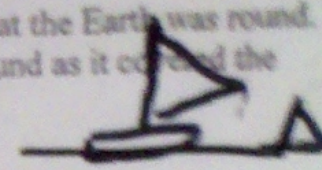
- a. A Model is a representation of an object or a natural event. It acts like the real thing but doesn't have to look like it.
- b. The shape of the Earth is an oblate spheroid.
That means the Earth is flattened at the poles and bulges slightly at the equator.
- c. Even though the Earth is an oblate spheroid, it is very close to being a perfect sphere.
i. So close → the Earth looks like a perfect sphere to your eyes.
- d. The Earth is oblate as a result of forces produced by the Earth's rotation.
- e. rotation - spinning on an axis.
- f. axis - imaginary line around which something spins.
- g. The Earth is very smooth compared to its size.

Model

II. Evidence of the Earth's Shape:

① First Evidence:

- i. Aristotle was one of the first people to believe that the Earth was round.
- ii. He noticed that the Earth's Shadow was round as it covered the moon during a lunar eclipse.



② Another Early Evidence:

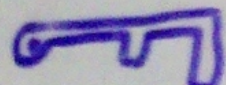
- i. A sailboat's mast appears to sink as it goes out to sea.

③ Best Evidence:

- i. Photographs of the Earth from outer space are the best evidence.

④ The altitude of Polaris changes as we move from the Equator to the North Pole.

- i. The North Pole is aligned with Polaris.
- ii. Polaris - the North Star can be seen at different altitudes in the sky in the Northern Hemisphere.
- iii. Altitude - distance above horizon
- iv. THE LATITUDE of the observer equals the altitude of Polaris.
- v. As a person's latitude increases, the altitude of Polaris increases.
- vi. Why is Polaris a good reference point?
it's on the axis of rotation, it doesn't move in the sky.
- vii. How can you find Polaris in the sky?



III. Structure of the Earth

a. Lithosphere is the dense, solid shell of the Earth composed of rock and soil that surrounds the more fluid inner layers of the Earth.

- It is between 7 and 25 m thick.
- Oxygen and Silicon are the two most abundant elements.
- See page 10 of your reference tables.

b. Hydrosphere is the sum of the waters of the Earth.

- Oceans have an average depth of 3 to 9 km.
- Hydrogen and Oxygen are the two most abundant elements.

c. Atmosphere is the shell of gases that surrounds the Earth.

- It extends out several hundred km into space, sorta fades away.
- It is stratified, layered into zones based on temperature.
- Nitrogen and Oxygen are the two most abundant elements.
- Troposphere:

- Lowest layer
- relatively thin
- It is the only layer to contain water
- All the weather occurs in this layer.

v. Know how to read the chart on Page 14 of your reference tables.

⑤ - Continued from page 30
- Objects weigh more at the poles than they do at the equator.

