

## A Model of Earth's Atmosphere

### Purpose:

The purpose of this activity is to draw a model of the four layers of Earth's Atmosphere.

### Objectives:

Students will be able to describe the four layers of Earth's atmosphere and the characteristics of each.

### Materials:

- white paper
- metric ruler
- pencil
- colored pencils
- a round object such as a penny

### Procedure:

Check off each task as you do it.

1. Obtain a piece of white paper.
2. Draw the Earth
  - a. Use a pencil to trace a round object in the middle of the paper.
  - b. Color Earth blue and green to represent oceans and continents.
3. Draw the **troposphere**.

The first layer of Earth's atmosphere, the **troposphere**, extends 16 km above Earth.

  - a. Using a scale of 1mm for 1 km, place a series of dots around Earth, 16 mm from the planet's surface.
  - b. Connect the dots to form a circle around Earth.
  - c. Label the inside of this circle 'troposphere.'
  - d. Color this area orange.
  - e. Draw pictures to indicate that this is the area in which airplanes fly and weather happens.
4. Draw the **stratosphere**.

The second atmospheric layer, the **stratosphere**, extends 48 km above Earth's surface.

  - a. Measure and draw a circle 48 mm **from Earth's surface**.
  - b. Label this layer 'stratosphere.'
  - c. Color this area yellow.
  - d. The jet stream occurs between the troposphere and the stratosphere, so draw arrows to represent this fast moving current of air on the borderline between the two layers.
5. Draw the **mesosphere**.

The third layer of the atmosphere, the **mesosphere**, extends 80 km from Earth's surface.