

Atmosphere Collage

Explore the layers of the atmosphere by making a collage!



Earth's atmosphere is a jacket of gases that surround our planet. The atmosphere protects us from the sun's radiation, keeps Earth warm, and gives us oxygen to breathe. It makes life on Earth possible.

Materials Needed:

Paper, scissors, glue or tape, crayons or markers, atmosphere printable (or draw your own), other craft supplies (yarn, tissue paper, paint, cotton balls, ribbons, etc. You can use whatever supplies you have!)

Instructions:

Step 1: Print or trace the atmosphere template on the next page, or draw your own.

Step 2: Decorate the Earth and each layer of the atmosphere. Try using a different material for each layer!

Step 3: Add items like airplanes, clouds, the ozone layer, meteorites, satellites, or the aurora. Be creative! Look at the *What's in the Atmosphere?* information sheet to find out what happens in each layer.



Think and Discuss:

What are the unique features of each layer?

How does each layer of the atmosphere help life survive on Earth?

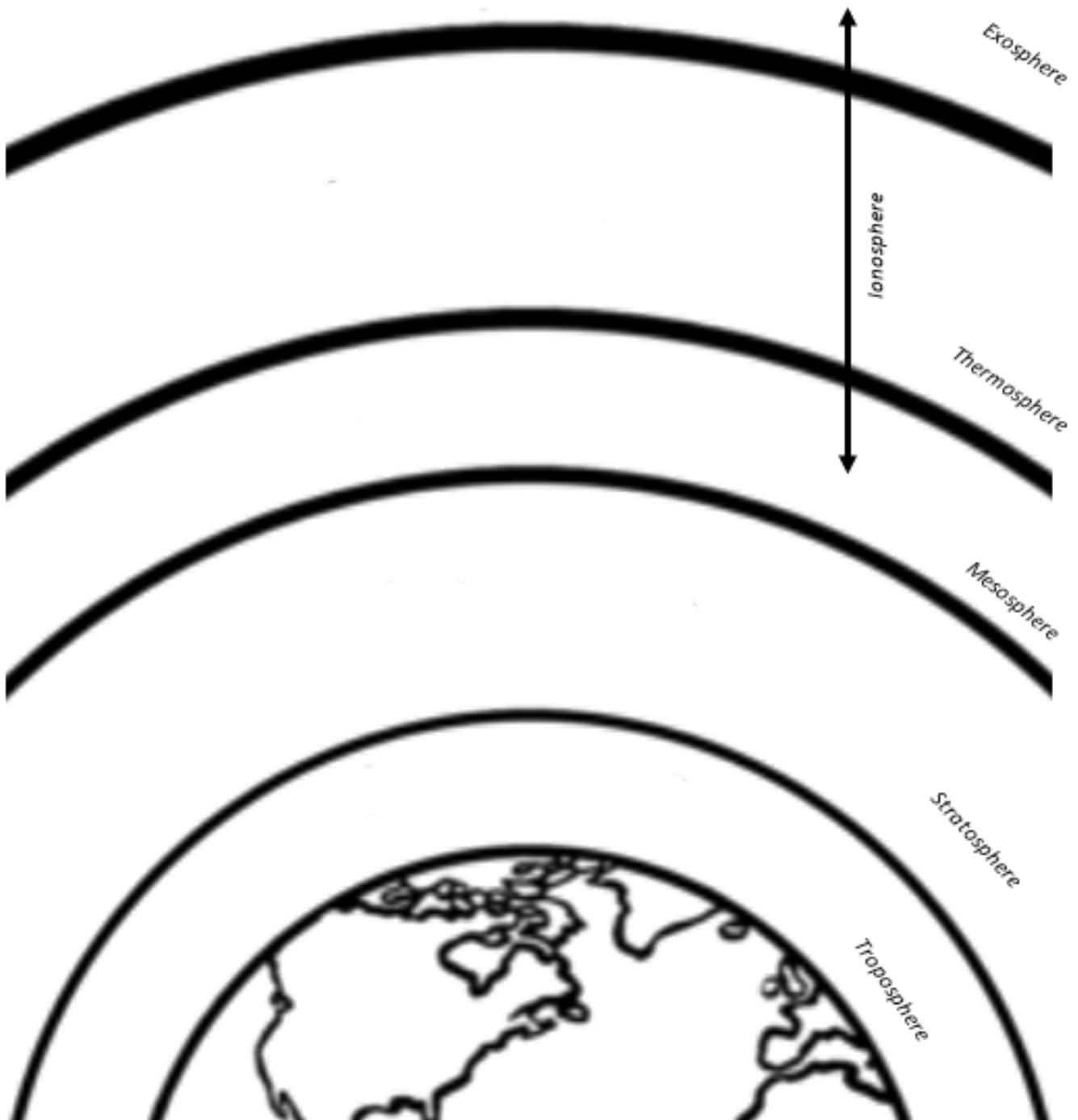
Why is it important to study the atmosphere?

What do YOU want to know about the atmosphere?



Atmosphere Collage Printable

(Not to scale)



What's in the Atmosphere?

Earth's atmosphere is a jacket of gases that surround our planet. It keeps us warm, gives us oxygen to breathe, protects us from the sun's radiation, and helps to form weather patterns. It makes life on Earth possible.

The atmosphere has six layers, which extend from the ground to outer space.

The **exosphere** is the very edge of our atmosphere. It's about 10,000 km (6,200 miles) thick, almost as wide as Earth itself. The exosphere has some gases, but they are very spread out, and it's very cold.

The **thermosphere** is 513 km (319 miles) thick. It can be very hot in this layer. The thermosphere is home to the International Space Station, and many satellites.

The **mesosphere** is 35 km (22 miles) thick. The air is very thin, so you wouldn't be able to breathe here. Most meteors burn up in the mesosphere.

The **stratosphere** is 35 km (22 miles) thick. Weather balloons fly in this layer. It is home to the ozone layer, which helps protect us from the sun's ultraviolet radiation.

The **troposphere** is the innermost layer, 8 to 14 km (5 to 9 miles) thick. It is where weather happens. This layer has the air we breathe, clouds in the sky, and airplanes flying.

The **ionosphere** overlaps with other layers. It grows and shrinks depending on the energy it absorbs from the sun. In this layer, charged particles are affected by the magnetic fields of Earth and the sun. It is where the aurora happens.

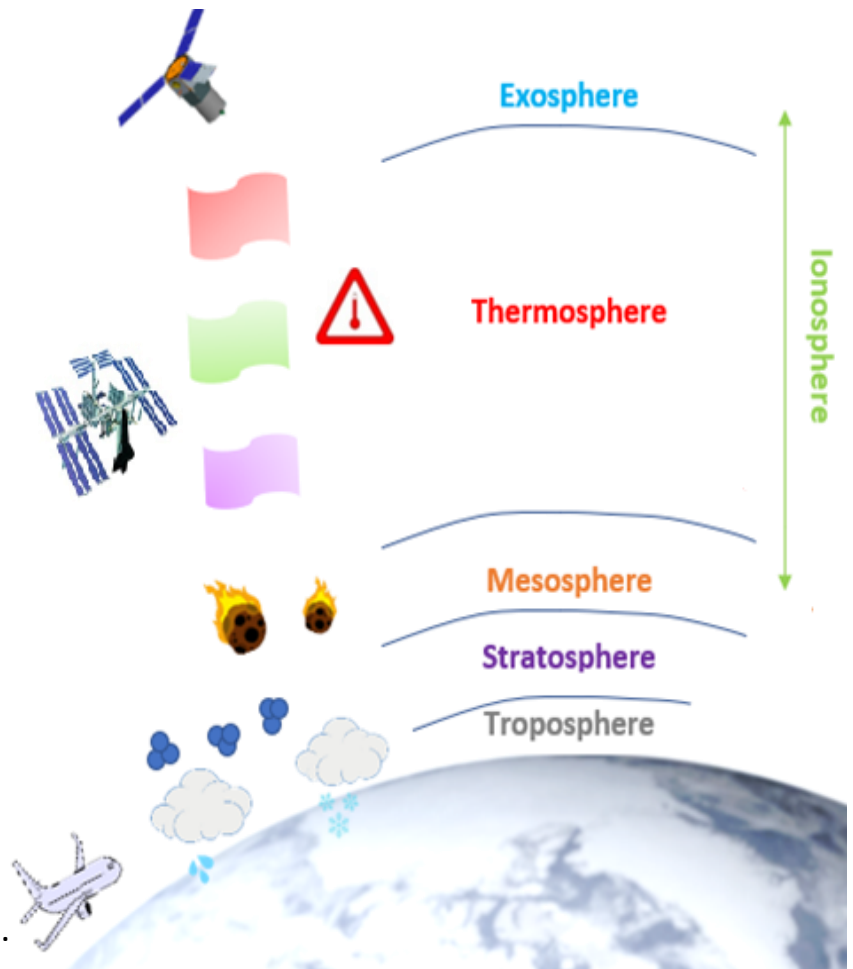


Diagram by Elisabeth Padilla.

Discover more about the atmosphere at
spaceplace.nasa.gov/atmosphere