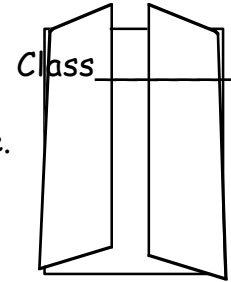


# Layers of the Atmosphere Foldable

Name \_\_\_\_\_



1. Fold a piece of light blue paper in half hamburger bun-style.
2. Open flat and then fold each side toward the center fold - shutter-style.
3. Color the long dark lines that represent temperatures changes: from the bottom -- blue, red, blue, red, representing decreasing, increasing, decreasing, increasing temperatures.
4. Carefully cut out the diagram of the atmosphere. Fold in half lengthwise and cut apart. Paste each half onto the front shutters of the light blue paper. Paste toward the bottom so you have room for a title at the top.
5. Cut the two parts of the title out and paste on the top of the shutters.
6. Cut out the boxes that contain the characteristics of each of the eight layers of the atmosphere. Paste inside the foldable under the correct layer. Be sure to put the main layers on the inside left and the minor layers on the inside right.
7. Cut flaps for each of the layers on the front shutters.
8. Carefully cut out the small sketches **ONE AT A TIME**. Read the words that tell you where to paste the sketch and paste to the front of the foldable on the diagram of the atmosphere. **Do NOT cut out the words that tell you where to paste each sketch!**
9. Fill in the Name Tag and paste on the back.

## **\*\*Answer these questions on a sheet of notebook paper:**

1. List the five main layers.
2. List the three minor layers.
3. Which two minor layers of parts of a main layer?
4. Which layer is the most important to you and why?
5. What two layers protect you?
6. Which layer acts like a giant magnet? What does it attract?
7. What does the air in the troposphere do as it heats up from the sun?
8. What cloud indicates the top of the troposphere?

Blackbird SR-70 26 km



Boeing 747 12 km



Balloon 5-7 km



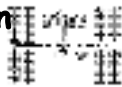
Ozone molecules 20-30 km

O-O-O

Aurora Borealis 100-250 km



Intl. Space Station 300 km



Flock of Geese 6-7 km



Weather near the surface



Cirrus Clouds 16 km



Cumulonimbus up to 16 km



Radio Waves 96-112 km



Meteors 48-80 km



Unmanned Spacecraft 3000 km



### TROPOSPHERE

Temperature: DECREASES, 6.5 °C per km  
Characteristics: to about -60 °C

1. Most weather occurs here where we live
2. Convection Currents

### STRATOSPHERE

Temperature: INCREASES, to about -20 °C  
Characteristics:

1. Contains most of atmosphere's ozone
2. Where jets and manned balloons have gone

### MESOSPHERE

Temperature: DECREASES, -100 °C at top  
Characteristics:

1. Protects Earth from meteors
2. Coldest region of atmosphere

### THERMOSPHERE

Temperature: INCREASES, 2,000 °C at top  
Characteristics:

1. Temps get up to 2000 °C
2. Air molecules are 1 km apart!

### OZONOSPHERE

Characteristics:

1. Ozone is made of 3 oxygen atoms
2. Protects the surface from Sun's UV rays
3. Humans are causing Ozone depletion

### IONOSPHERE

Characteristics:

1. Lower part of Thermosphere
2. Radio waves bounce back to Earth's surface

### EXOSPHERE

Characteristics:

1. Upper part of Thermosphere
2. Artificial Satellites orbit here

### MAGNETOSPHERE

Characteristics:

1. Earth's Magnetic Field
2. Causes Aurora Borealis (Northern Lights)

# Layers of the

# Atmosphere

Name \_\_\_\_\_

Class \_\_\_\_\_

Date \_\_\_\_\_

