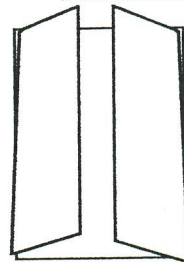


Layers of the Atmosphere Foldable

Name _____

Class _____

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.



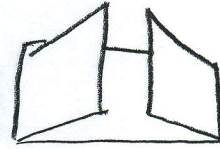
3. Color the long dark lines that represent temperatures changes: from the bottom -- blue, red, blue, red, representing decreasing, increasing, decreasing, increasing temperatures.
4. Carefully cut out the diagram of the atmosphere. Fold in half lengthwise and cut apart. Paste each half onto the front 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:**

1. List the four main layers.
2. List the four 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?
9. What runs along the top of the troposphere?
10. What attaches itself to this jet stream and, in a sense, tells you where the stratosphere begins?

Layers of the Atmosphere Foldable

1. Fold a blue sheet of paper in half. Open up and fold each side in to the fold mark at the middle to look like this:



2. On the graph of the layers of the atmosphere. Color the long dark lines that represent temperature changes as follows:

- a. Troposphere: Red: Temp increasing
- b. Stratosphere: Blue: Temp decreasing
- c. Mesosphere: Red: Temp increasing
- d. Thermosphere: Blue: Temp decreasing
- e. Magnetosphere: Blue: Temp decreasing

3. Cut out the graph and then cut in half at the dotted line. Paste each half towards the bottom of each shutter on the edge of the shutters. Glue down with glue stick being careful to match up each side.

4. Cut out the title boxes and paste one on each side

5. Cut flaps for each layer on both shutters starting at the center and end at outer edge of graph

6. Cut out each box with name of layer and characteristics one at a time and glue main layers on the inside of left flap before cutting the next box. Use the height in km to help you place in proper place!

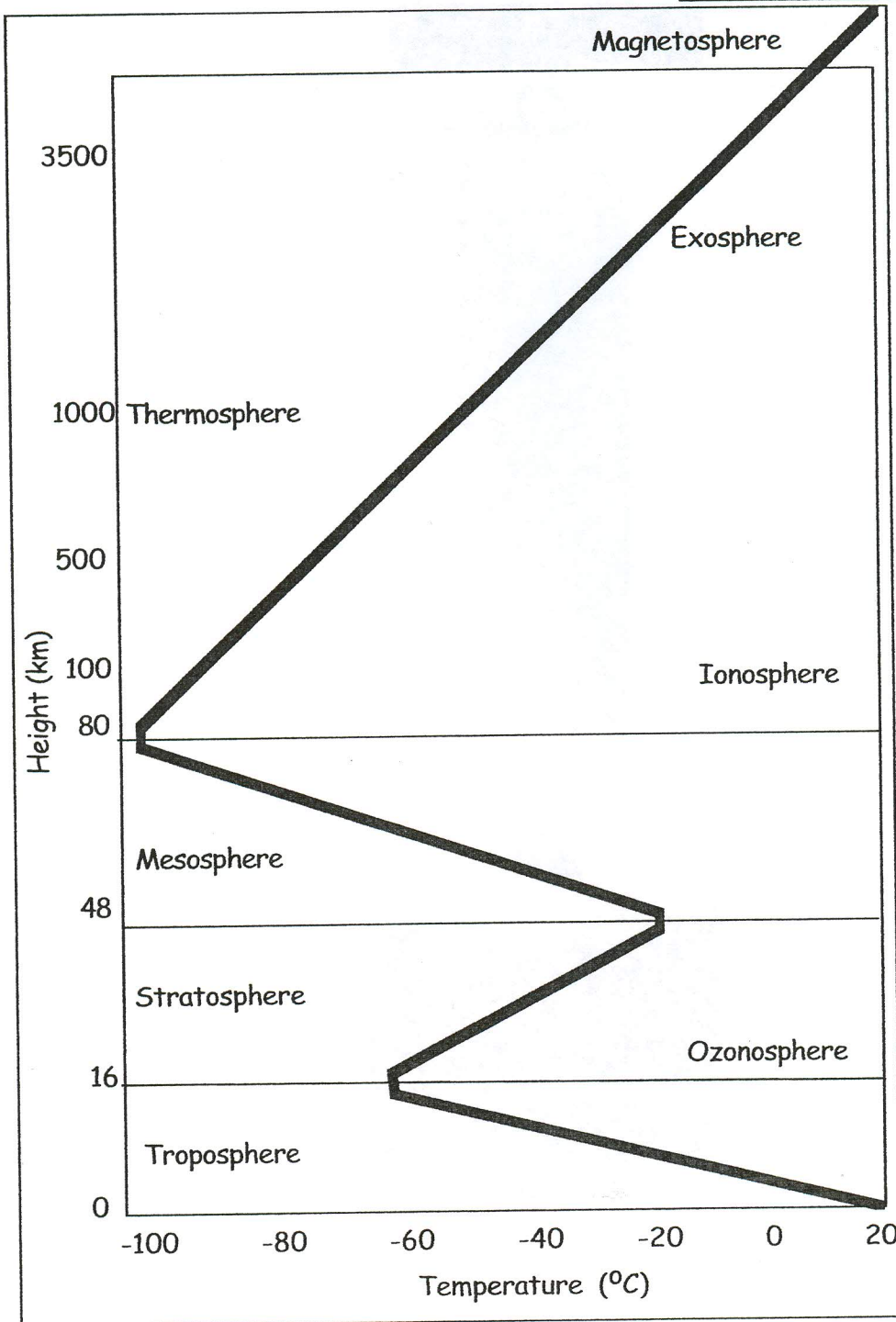
7. Carefully cut out each sketch with words one at a time and use the words and height in km to help find which layer to paste it in. TAKE YOUR TIME!!!!

8. Fill in the name tag and glue on the back of your Foldable.

Answer the following questions using your foldable to finish your assignment

Layers of the Atmosphere

Name _____
Class _____
Date _____



Blackbird SR-70
26 km



Boeing 747
12 km



Balloon
5-7 km



Ozone molecules
20-30 km



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)

Name _____ Date _____

Using your atmosphere foldable answer the following questions.

1. Name the four main layers of the atmosphere: (hint: on the left side of your foldable)

- A.
- B.
- C.
- D.

2. Name the four minor layers: (hint: look on the right side flap)

- A.
- B.
- C.
- D.

3. Which 2 minor layers are parts of a main layer?

- A.
- B.

4. Which layer is most important to you and why?

5. Which two layers protect you?

6. What does air in the troposphere do as it heats up from the sun?

7. Which cloud is at the top of the troposphere?

8. In what layer are the Aurora Borealis found?

extra credit. What is another name for the Aurora Borealis?