

# Air **PRESSURE** and Density

## ACTIVITY 1 - TEA BAG PHENOMENON

What do you think caused the phenomenon to occur?	Draw a diagram showing what you think is happening, make sure to add labels and descriptions
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## ACTIVITY 2 - PRESSURE AND DENSITY OF THE ATMOSPHERE

Read the article from the Class Craft Quest to answer the following questions

1. What is air density?
2. Why does the density of air change with altitude changes?
3. What are 2 factors acting on air pressure?
4. Why are we not crushed by air surrounding us?
5. What causes our ears to pop?
6. How is the air pressure at sea level different than air pressure at 50,000 feet

## ACTIVITY 3 - HISTORY OF THE BAROMETER VIDEO

Answer the following questions while observing the following TedEd video found in the Class Craft Quest.

1. What can happen if there is a sudden shift in air pressure?
2. How was the first vacuum created?

3. Explain some of the difficulties early scientists, like Galileo, had to overcome to create the first barometer.
4. How does a barometer work?
5. Why do you think it took many trials to make the first barometer?

#### **ACTIVITY 4 - INTERACTIVE WEBSITE**

Use the link in Class Craft to fill out the data table. Click on the pink arrow on the left to increase or decrease the altitude and then launch to gather the data for that altitude to complete the following data table.

Altitude	Density	Pressure	Temperature
0 km			
10 km			
25 km			
50 km			
60 km			
75 km			
100 km			
150 km			
200 km			
400 km			

#### **ANALYSIS QUESTIONS**

1. What pattern do you notice with the temperature as altitude increased?
2. What pattern do you notice with the pressure as altitude increased?
3. What pattern do you notice with the density as altitude increased?