

Chapter 8 Review

- Know that liquids and gases are fluids
- Know units of pressure: Pascal, atmosphere, bar, psi
- Know factors that affect fluid pressure
- Understand what causes atmospheric pressure
- Know differences between mercury and aneroid barometers
- Know the difference between gauge pressure and absolute pressure
- Archimedes' principle (know what the buoyant force is equal to)
- Understand how to interpret specific gravity
- Know Pascal's principle
- Understand how a hydraulic lift works
- Know the three factors in Bernoulli's principle
- Use Bernoulli's principle to discuss fluid flow
- Know that fluids flow from high pressure to low, from high elevation to low elevation
- Understand the Coandă effect
- Know Boyle's Law (how gas pressure and volume are related)
- Know Charles' Law (how gas volume and temperature are related)

Formulas:

$$P = \frac{\text{Force}}{\text{Area}}$$

$$\text{Pressure}_1 \times \text{Volume}_1 = \text{Pressure}_2 \times \text{Volume}_2$$

$$\frac{\text{Volume}_1}{\text{Temp}_1} = \frac{\text{Volume}_2}{\text{Temp}_2}$$

Physical Science

Vocabulary

Fluid
Pressure
Pascal
Barometer
Specific Gravity
Viscosity
Kelvin

Chapter 9 Review

- Convert between temperature scales
- Understand how materials change with temperature changes
- Know the three types of heat transfer and an example of each
- Know examples of thermal conductors and insulators

Formulas:

$$C = 5/9(F - 32)$$

$$F = 9/5C + 32$$

$$K = C + 273$$

Vocabulary

Fiducial points
Temperature
Celsius
Fahrenheit
Heat
Conductor
Insulator