Physical Science
Ms. Reid

Chapter 3 Objectives/DNG

1. Summarize the main points of the kinetic theory of matter.
2. Describe how temperature relates to kinetic energy.
3. Describe four common states of matter.
4. List the different changes of state, and describe how particles behave in each state.
5. State the law of conservation of mass.
6. State the law of conservation of energy.
7. Explain how the law of conservation of mass and the law of conservation of energy apply to changes of state.
8. Describe the buoyant force and explain how it keeps objects afloat.
9. Define Archimedes' principle.
10. Explain the role of density in an object's ability to float.
11. State and apply Pascal's principle.
12. State and apply Bernoulli's principle.
13. Explain how gases differ from solids and liquids.
14. State and explain Boyle's law.
15. State and explain Charle's law.
16. State and explain Gay-Lussac's law.
17. Describe the relationship between gas pressure, temperature, and volume.

Sunshine State Standards Covered:

SCA 1.4.2 The student knows that the vast diversity of the properties of materials is primarily due to variations in the forces that hold molecules together.

SCA 1.4.3 The student knows that a change from one phase of matter to another involves a gain or loss of energy.

SCB 1.4.2 The students understands that there is conservation of mass and energy when matter is transformed.

SCB 1.4.3 The student knows that temperature is a measure of the average translational kinetic energy of motion of the molecules in an object.

SCB 2.4.1 The student knows that the structure of the universe is the result of interactions involving fundamental particles (matter) and basic forces (energy) and that evidence suggests that the universe contains all of the matter and energy that ever existed.