1. What happens when matter changes state?
   1. The three most familiar states of matter are solid, liquid, and gas.
   2. A change of state is the change of a substance from one physical form of matter to another.
   3. When a substance undergoes a physical change, it does not change its identity, just its appearance.
   4. To change a substance from one state to another, energy must be added or removed.
   5. When a substance gains or loses energy, its temperature changes or its state changes.
   6. All matter is made of tiny particles that are in constant motion. During a change of state, the motion of the particles changes.
   7. Particles can break away from each other and gain more freedom to move, or they may attract each other more strongly and have less freedom to move.
   8. During a change of state, a substance gains energy from or loses energy to the environment, but the total amount of energy is conserved.
   9. Gain energy: evaporation, melting ice from mountain  
      Lose energy: precipitation  
      
2. How do solids and liquids change state?
   1. The change in state in which a liquid becomes a solid is called **freezing**.
   2. When a liquid is cooled, its particles have less energy, they slow down, and they lock into the fixed arrangement of a solid.
   3. The temperature at which a liquid substance changes into a solid is the liquid’s *freezing point*.
   4. When a solid is warmed, its particles gain energy and speed up, and the attraction between them decreases. Eventually they slide past one another.
   5. The change of state from a solid to a liquid is called **melting**.
   6. The temperature at which a substance changes from a solid to a liquid is called its *melting point*.
3. How do liquids and gases change state?
   1. As a liquid is warmed, its particles gain energy.
   2. Some particles gain enough energy that they escape from the surface of the liquid and become a gas. This process is called **evaporation**.
   3. A rapid change from a liquid to a gas, or vapor, is called **boiling**.
   4. This change takes place throughout a liquid, not just at the surface.
   5. The specific temperature at which this occurs in a liquid is called the *boiling point*.
   6. As a gas is cooled, its particles lose energy.
   7. The attraction between particles overcomes the speed of their motion, and a liquid forms.
   8. This change of state from a gas to a liquid is called **condensation**
4. How do solids and gases change state?
   1. Under the right conditions, some solids and gases can change state without ever becoming a liquid.
   2. The change from a solid state directly into a gas is called **sublimation**.
   3. **Deposition** is the change in state from a gas directly to a solid.
5. What happens to matter when a change of state occurs?
   1. When matter changes from one state to another, its physical state changes but its chemical identity does not.
   2. During a change of state, the energy of the particles, their movement, and the distance between them change.
   3. The mass of a substance does not change when its state changes.
   4. Each state contains the same amount of matter.