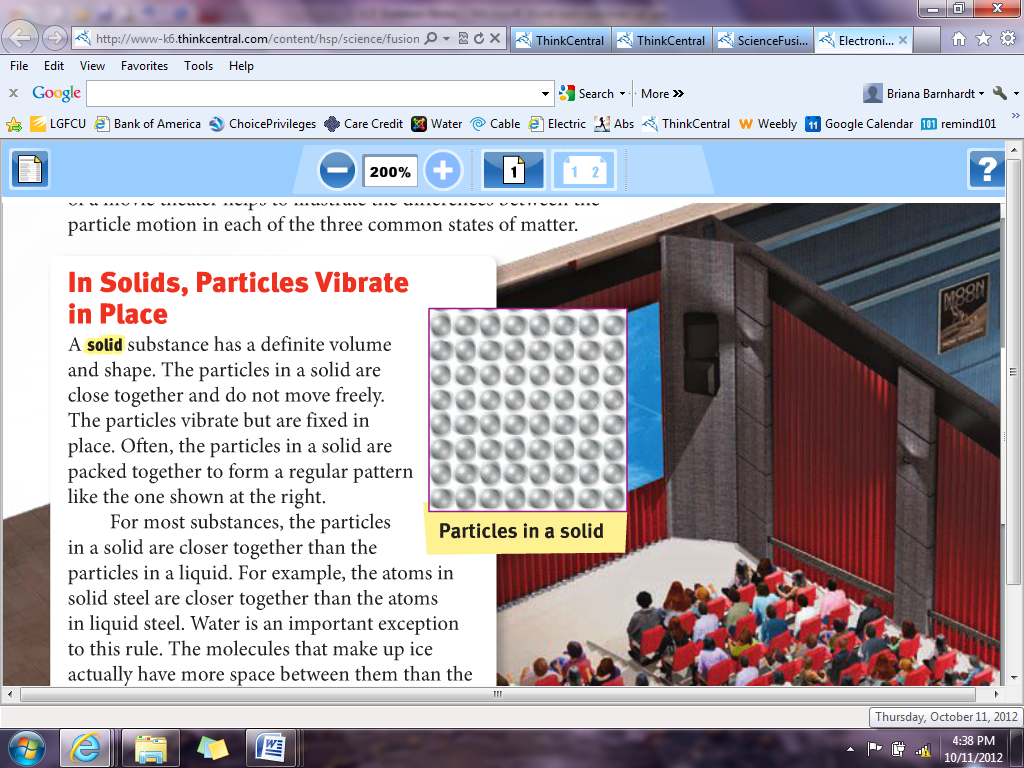
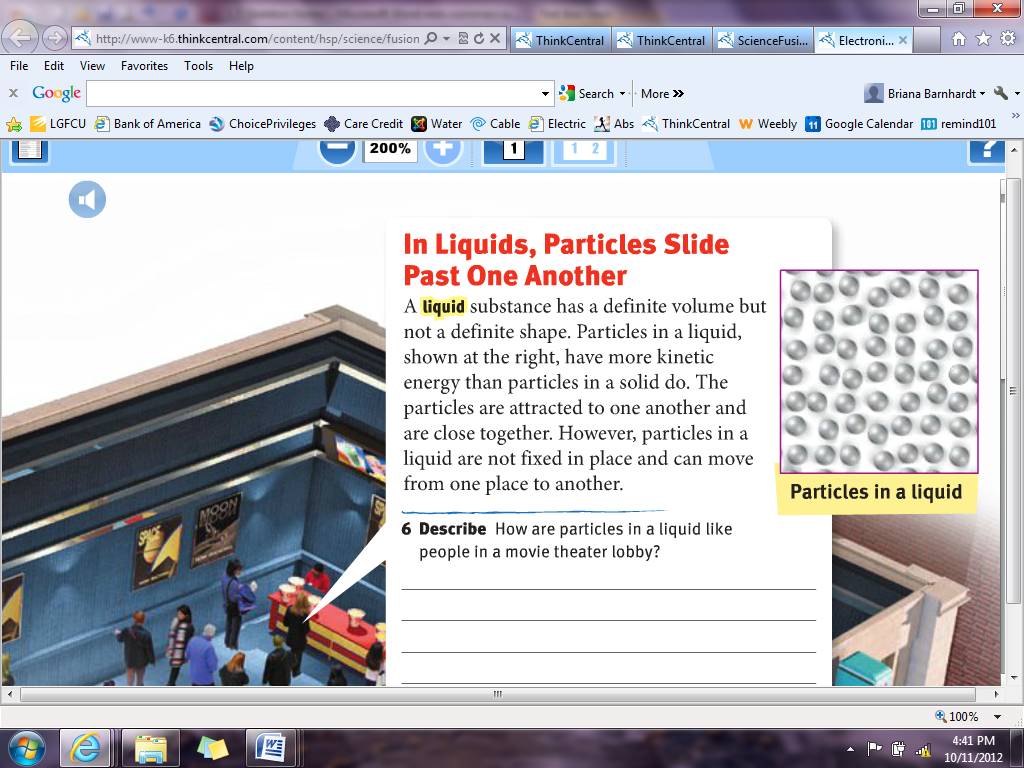
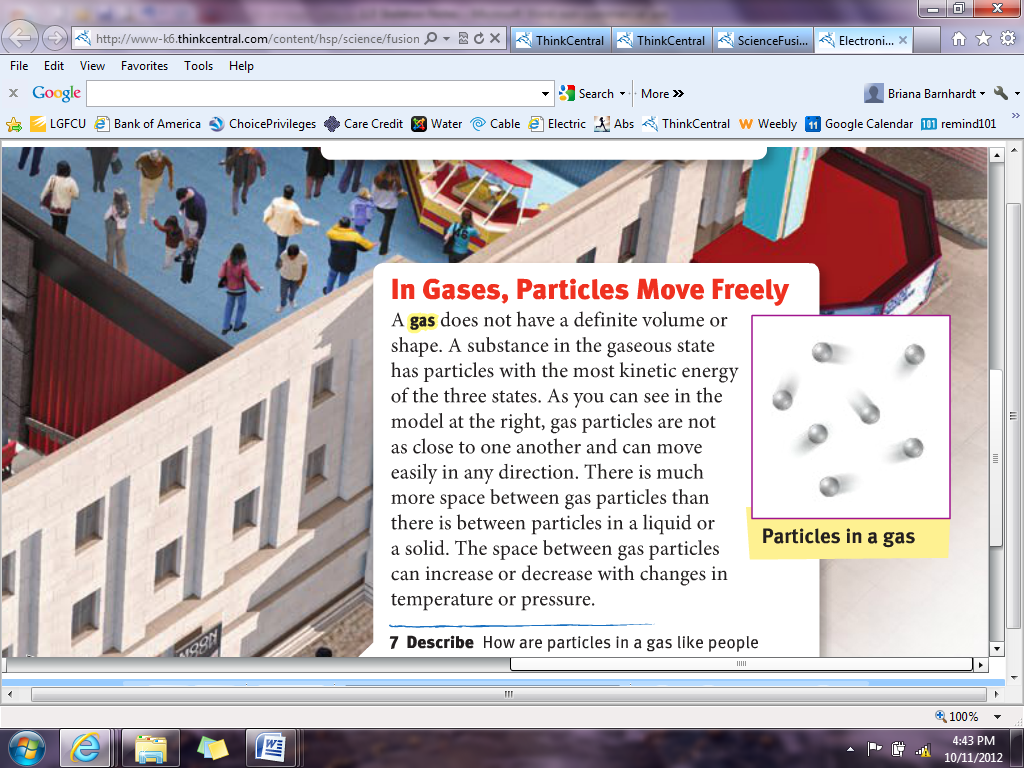
1. How do particles move in solids, liquids, and gases?
   1. The *kinetic theory of matter* states that all matter is made of tiny particles that are in constant motion.
   2. The state of matter is determined by how much particles move and how often they bump into each other.
   3. A **solid** is a substance with a definite volume and shape. Particles are close together and do not move freely.
   4. A **liquid** is a substance with a definite volume but not a definite shape.
   5. A **gas** is a substance that does not have a definite volume or shape.
2. How does particle motion affect the properties of solids, liquids, and gases?
   1. Particles in a solid vibrate but remain in fixed positions.
   2. Solids cannot easily change shape or volume.
   3. Liquids take the shape of their container. Particles in a liquid are close together but not tightly arranged.
   4. Particles in liquids slide past each other, creating flow.
   5. Particles in gases are far apart.
   6. The space between gas particles can change easily.
   7. Gases take on the shape of their container.
   8.  🡨solid 🡨liquid🡨gas
3. What happens when substances change state?
   1. The process in which a solid becomes a liquid is called *melting.*
   2. As a solid is heated, if the vibrations in the particles are fast enough, the particles break loose and slide past one another.
   3. When temperatures of a liquid are lowered, causing a solid to form, it is called *freezing.*
   4. Lower temperatures cause the particles to move slowly enough for the attractions between them to cause the liquid to become a solid.
   5. Water freezes at 0 °C, but other substances can freeze at room temperature.
   6. When substances lose or gain energy, one of two things can happen to the substance: its temperature can change or its state can change.