

CHAPTER 2	Water Question and Answer Activity Answer Key	BLM 2.1.5A
ANSWER KEY		

1. Hydrogen bonding enables water to dissolve a wide variety of substances. *True*
2. Liquid water is less dense than ice because hydrogen bonds hold molecules apart in an open crystalline structure in this phase. *False*
Ice is less dense than liquid water because hydrogen bonds hold molecules apart in an open crystalline structure in this phase.
3. Water is most dense at 0 °C. *False*
Water is most dense at 4 °C.
4. Cohesion refers to the attraction water molecules have for each other. *True*
 Adhesion refers to the attraction water molecules have for molecules of other substances.
5. Water has a low heat capacity and thus requires large amounts of heat to effect a small change in temperature. *False*
Water has a high heat capacity and thus requires large amounts of heat to effect a small change in temperature.
6. A hydrogen bond occurs between two hydrogen atoms on the same water molecule. *False*
A hydrogen bond occurs between a hydrogen atom and an oxygen atom on different water molecules.
7. Metabolic water is generated by metabolic reactions. *True*
8. Drought decreases plant productivity because plants close their stomata to reduce water loss and can no longer take in carbon dioxide. *True*
9. The hydrologic cycle does not play a role in biogeochemical cycles. *False*
It plays a central role.
10. Unlike carbon dioxide, water vapour is not a greenhouse gas. *False*
Water vapour is a greenhouse gas.