VIDEO GUIDE FOR BOZEMAN BIOLOGY – WATER AS A POLAR MOLECULE

Electronegativity means \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Oxygen is unique because\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Why does water behave like a magnet?

The bond between oxygen and hydrogen **within** a water molecule is a \_\_\_\_\_\_\_\_\_\_\_\_\_ bond

The bond between oxygen and hydrogen on **different** water molecules is a \_\_\_\_\_\_\_\_\_ bond

Draw the hydrogen bonds between the five water molecules show at 3:48 (pause the video here!

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is a polar molecule, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is a nonpolar molecule.

Describe the five properties of water that are due to its polarity

|  |  |  |
| --- | --- | --- |
| Property | Description | “real life” application of this property |
| High specific heat |  |  |
| Solvent |  |  |
| Cohesion |  |  |
| Capillary action |  |  |
| Ice floats |  |  |

Why is Seattle warmer in the winter than Yellowstone, even though both locations are at similar latitudes?

How does water get to the top of a tree?

Why is it “good” for aquatic organisms that live in cold climates that ice floats?