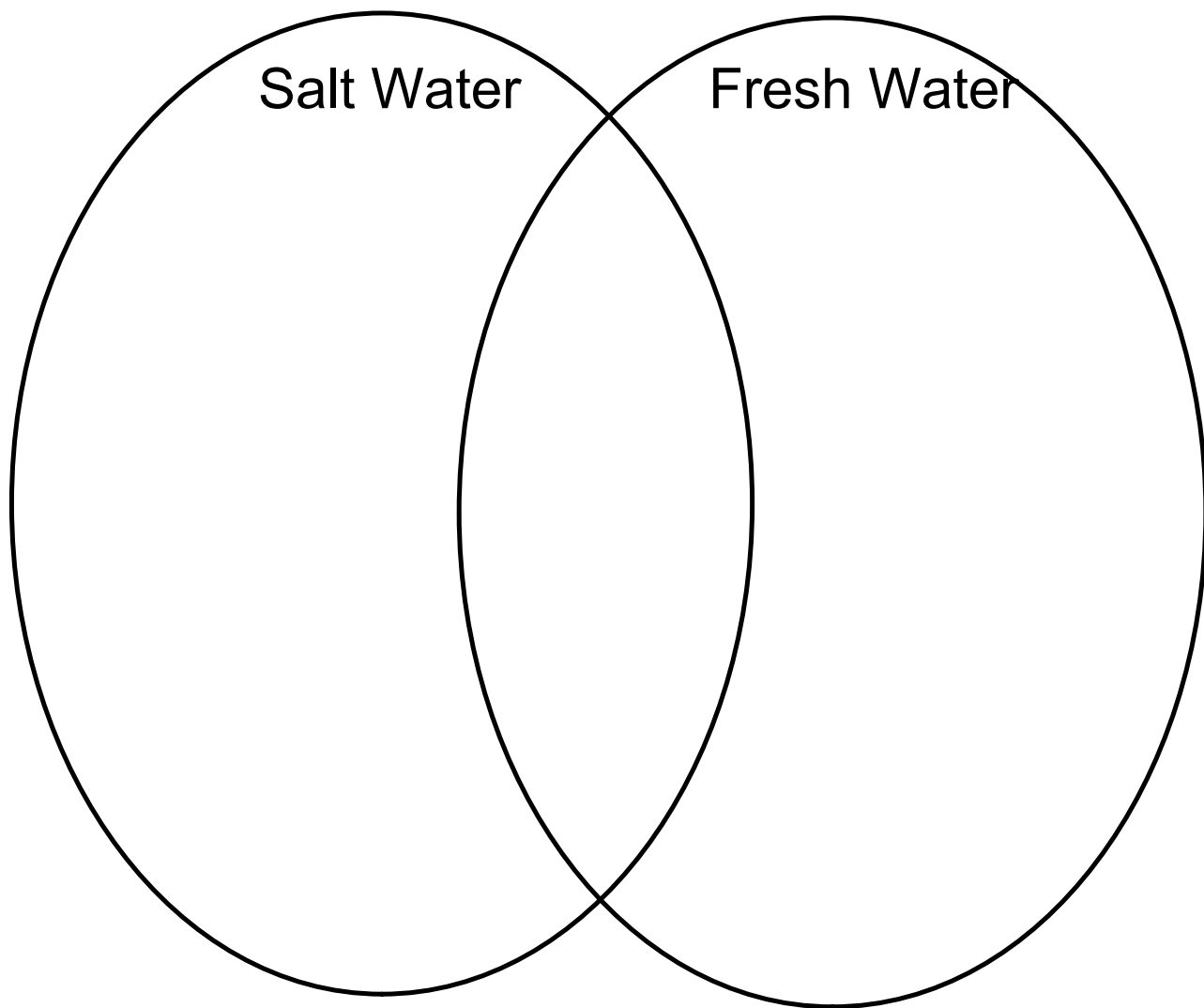


Lesson 2-Salt Water vs Fresh Water



Salt Water vs Fresh Water

Which would allow us to float more easily? Why?

Terms we need to know:

Salinity: the amount of salt in water

Density: mass per volume

example: a paper plate and a glass plate may have the same volume, however the glass plate is more dense because it's mass is more.

Demonstration

Before We Start: Hypothesize

On a piece of paper, answer these questions. Your answers should be three separate sentences and should explain your reasoning.

What do you think would happen if you mixed fresh water with salt water?

Which is more dense, salt water or fresh water?

Which type of water will allow an egg to float more easily? Why?

Demonstration

Part 1: What do you think would happen if you mixed fresh water with salt water?

Part 2: Which is more dense, salt water or fresh water?

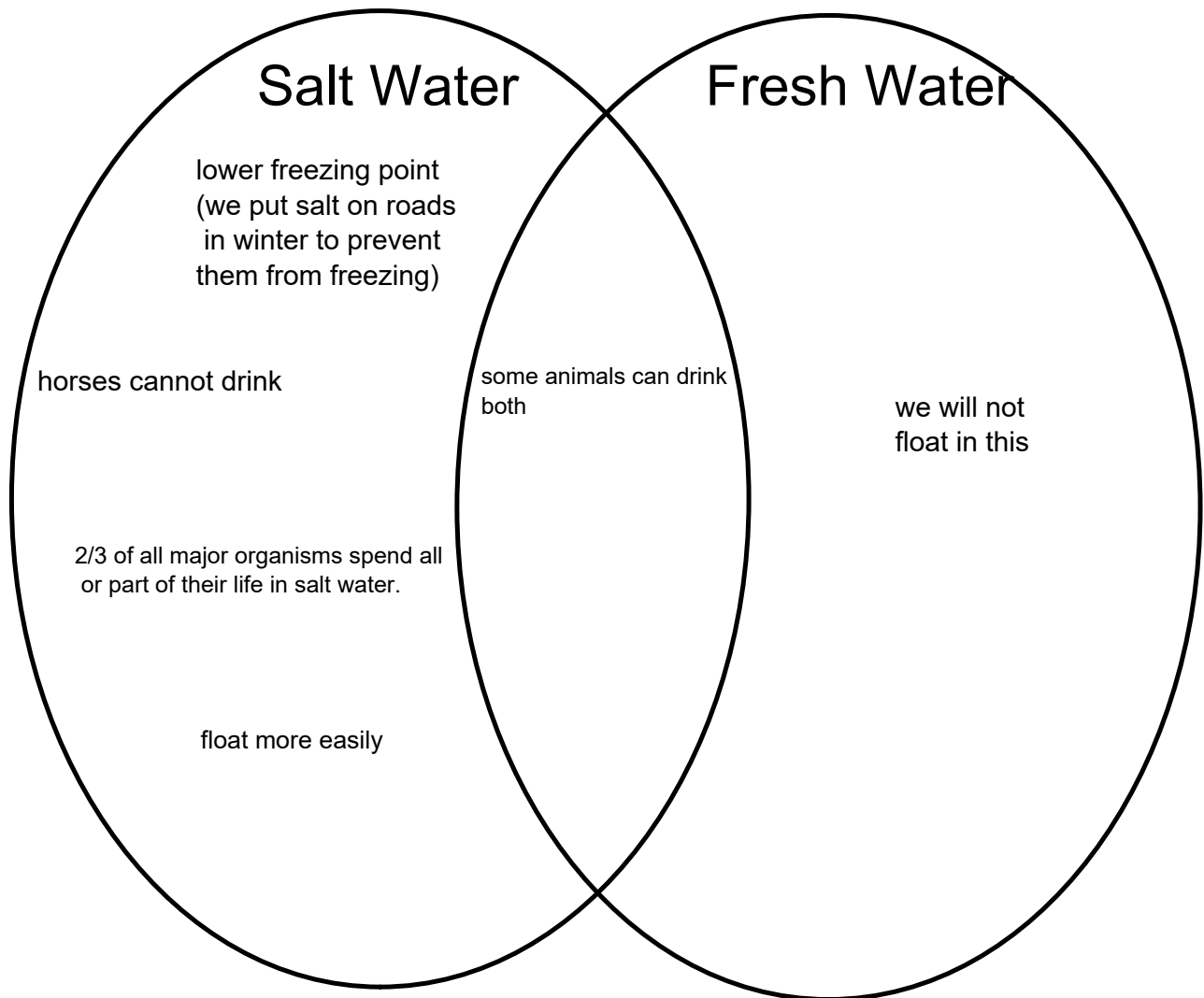
From our demonstration in part 1, can we answer this question?

Demonstration

Part 3: Which type of water will allow an egg to float more easily? Why?

How can we test this?

Lesson 2-Salt Water vs Fresh Water



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Which is more dense, salt water or fresh water?

The Dead Sea

9.6 times as salty as the ocean – and has a density of 1.24 kg/litre, which makes swimming similar to floating.



In Little Manitou Lake, Watrous, Saskatchewan, the water has a salinity of five times that of the ocean (half what the Dead Sea has).

Lesson 2-Salt Water vs Fresh Water

Do you know what "brackish" water is?

This is the water at the point where a river flows into an ocean. (Fresh water mixes with salt water.)

Horses cannot even drink brackish water, their bodies absorb the salt too easily and it harms their organs.

When the fresh water mixes with the salt water, which water flows on top? (Think about our demonstration and the different densities.)

Lesson 2-Salt Water vs Fresh Water

If you are stranded in a boat without any food or water, should you drink sea water to survive?

Lesson 2-Salt Water vs Fresh Water

If you are stranded in a boat without any food or water, should you drink sea water to survive?

You will become just as dehydrated on sea water as you will without any water!

The salt water enters your body, because it's so concentrated in salt, there's less water outside your cells than inside. So, through osmosis, the water moves from your cells (high concentration) to outside your cells (low concentration) and your cells are then dehydrated. Your organs will fail and you will die.

How are rivers formed?

Are rivers salt water or fresh water?

Lesson 2-Salt Water vs Fresh Water



The source or beginning point of a river may be in a glacier. A glacier is a large moving body of ice.

Rivers flow through rocks and soil and the process of erosion wears it down and creates a river bed.

Rain replenishes the freshwater in rivers and streams, so they don't taste salty. Because there's so little salt in river water, we consider rivers as freshwater.

All of the bodies of water on Earth drain into oceans so all the salt accumulates in the oceans. So the oceans are saltwater.

Lesson 2-Salt Water vs Fresh Water

Do you think different types of organisms live in fresh water and salt water? Or can the same organisms live in both?

Salt Water vs. Fresh Water Adaptations Assignment