

Name \_\_\_\_\_

## **Investigating The Weight of Water When it is Hot and Cold**

### **I. Experiment One**

1. Put the hot water color at the top of one of the room temperature water cups.  
Write down what you see happening.

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2. Put the cold-water color at the bottom of one of the room temperature water cups.  
Write down what you see happening.

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### **II. Experiment Two**

1. Put the cold-water color at the bottom of one of the room temperature water cups.
2. Put the hot water color at the top of the same room temperature water cup.
3. Write down what you see happening.

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Write your conclusion of what you discovered after doing experiments 1 and 2.

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### III. Experiment Three

1. Put the hot water color at the bottom of the cup in the room temperature water. Write down what you see happening.

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2. Put the cold-water color at the top of one of the room temperature water cups. Write down what you see happening.

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### IV. Experiment Four

1. Put the hot water color at the bottom of one of the room temperature water cups.
2. Put the cold-water color at the top of the same room temperature water cup.
3. Write down what you see happening.

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Write your conclusion of what you discovered after doing experiments 3 and 4.

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Convection is the transfer of heat by movement of currents within fluids, such as a liquid or gas, causing the fluid matter to move. When heat is transferred by convection, slow-moving molecules in the fluid begin to move faster, and they also move farther apart. As a result, the heated fluid becomes less dense and floats to the top. The more dense fluid then sinks to the bottom. Convection produces global winds that form Earth's weather when air is heated by the 'sun. It also produces the ocean currents when warm water meets the cold.