

# Ice Off!

*A lab to understand spring turnover...*



This lab is designed to demonstrate how water moves as the temperature and density changes. During the spring, ice off occurs when warming temperatures melt the ice layer that has formed on the surface of temperate lakes. Using a colored ice cube and a beaker of water, we will observe what happens to the ice-bound water as it begins to melt.

## **Prelab predictions:**

1. What will happen to the ice cube once it placed in the beaker? Will it sink, float, or sit in the middle of the beaker?

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2. What will happen to the colored water as the ice cube melts?

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## **Lab Instructions:**

1. Fill beaker  $\frac{3}{4}$  full of room temperature water
2. Using tongs, gently place the colored ice cube onto the water in the beaker
3. Observe what happens to the colored water as it melts

### **Materials:**

- ▶ 200mL beaker (or larger)
- ▶ water (at room temperature,  $\sim 20^{\circ}\text{C}$ )
- ▶ colored ice cube
- ▶ tongs

Name: \_\_\_\_\_

**Observations during the lab:**

1. What happened to the ice cube once it was placed in the beaker? Did it sink, float, or sit in the middle of the beaker?

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2. What happened to the colored water as the ice cube melted?

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**Discussion questions:**

1. Explain why the colored water behaved the way it did.

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2. What do you think would have happened if the water was warmer than room temperature?

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**Predictions for an extended lab:**

TEMPERATURE	1°C	4°C	10°C
<b>THE COLORED WATER WILL...</b>			