

Lab #10: *Meteorology 1* (Chapter 7)

The Ice Age

INTRODUCTION:

The objective of this lab is to help students conceptualize the initiation of the post-Flood Ice Age.

MATERIALS

- 2 identical, freezable bowls
- Lukewarm water, both lukewarm and chilled (from the refrigerator) [Alternately: chipped ice instead of chilled water]
- A measuring cup or graduated cylinder that measures ounces
- Freezer
- Refrigerator

METHODS

1. Chill a pitcher of water in the refrigerator. Place another pitcher of lukewarm tap water on the counter.
2. Add 2 oz. of lukewarm water to the two bowls and place them in the freezer until the water has frozen (roughly one hour).
3. Remove the bowls from the freezer. Place one of the bowls in the refrigerator and leave the other on the counter. After 15 minutes, add 1 oz. of lukewarm water to each bowl. Allow them to continue to sit (in the fridge/on the counter) for 15 more minutes.
4. Put both bowls back in the freezer. After 15 minutes, add 1 oz. of chilled water (or chipped ice) to each bowl, then allow the bowls to continue to sit in the freezer for another 15 minutes.
5. Repeat steps 3-4.

RESULTS

- Describe the differences between the results observed in each of the bowls.

CONCLUSIONS/DISCUSSION

1. What does the initial 2 oz. of frozen water represent in “real life”?
2. What do the periods in the freezer represent?
3. What do the periods on the counter and in the refrigerator represent in the experiment?
4. What does the added lukewarm water represent?



5. What does the added chilled water/chipped ice represent?
6. What does the accumulated ice represent?
7. In reality at the poles, what would happen to any unfrozen water after the winter?
8. Discuss the effects of cooler and warmer summers on the accumulation of ice at the Earth's poles.

