

1.3 Act 4**Freezing****(Edited version for public review)**

1. Your teacher will show you identical bottles of water, one of which is still a liquid, and the other of which has been placed in a freezer overnight.
Draw a particle diagram of what you think is happening to the liquid vs. frozen water. Be prepared to explain your representations in context of the two bottles of water shown to you by your teacher.

Liquid water**Frozen water**

2. What do you think happens to water “bbs” when liquid water changes to solid ice? Explain.
3. Based upon the comparison between the liquid and frozen water in the water bottles shown, what do you think happens to the road when water seeps into cracks? How might potholes form during cold winters?

Activity:

An interesting process occurs when you mix ice with salt. Follow the directions and record what you observe.

- Dry the outside of your can before you begin.
- Place 3 heaping teaspoons of salt in the bottom of the can. Fill the can about halfway with ice.
- Add another 3 heaping teaspoons of salt.
- Add more ice until the can is almost filled and add another 3 teaspoons of salt.
- Hold the can securely and mix for about 1 minute.
- Stop mixing and wait 3-5 minutes. Answer the following questions about your observations.



4. Look at and touch the outside of the can. What do you observe?

5. Describe what happened to the particles in the air when they came into contact with ...

(Additional materials available in members' resources)