

Create Classroom Ice Cores

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Students recording observations of their classroom ice core.

BACKGROUND INFORMATION

Ice cores provide scientists with a way to learn about environmental conditions in the past before people were around to write records. The benefit of drilling ice cores is that the cores can be taken back to the laboratory and analyzed. Since a new layer is deposited each year, the more layers that scientists can observe the more years into the past they can investigate. Each layer of ice provides information about the amount of snow that the glacier received in a given year. These layers also contain materials such as debris from forest fires and volcanoes, dust picked up by winds, and living materials such as pollen and insects. Some of these materials can be seen with the naked eye. Other materials, such as chemical tracers, cannot be seen with the naked eye and more sophisticated ways are used to analyze for these materials.



Students drawing a model of their classroom ice core.

LESSON PLAN SUMMARY

BPCRC's Education and Outreach team created and field tested a comprehensive lesson plan designed to provide students with a simulation of the process that scientists use when analyzing ice cores. Included in the lesson plan are instructions on how to create your own classroom ice cores, as shown below.



An example of a classroom ice core and the various visible layers.

MATERIALS

The materials used in this activity include:

- Pringles cans
- Graduated cylinder
- Gravel
- Plastic insects (3-6)
- Instant coffee
- 2 pitchers
- Tray
- Access to a freezer
- Instructions typed out and taped to Pringles cans

Preparation time: 8 Days to allow for freezing of layers

ACKNOWLEDGEMENTS

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Find written and video instructions for creating classroom ice cores online at bpcrc.osu.edu/create-classroom-ice-cores



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