

What Happened?

A student decided to try to make his own ice cube by placing water on a tray outside where snow was.

Expectations:

Science 2.3.- select and use materials to carry out their own explorations.
2.2 make predictions and observations before and during the investigations.

Full Day Early Learning Kindergarten Program Inquiry Template DRAFT

Team: JC and ECE
Timeline: Winter 1-2 days



What Happened?

A student decided to draw at a center, a sequence of how the ice cube melted. (i.e. first it was a square, the square become smaller, there was only water on the plate)

Expectations:

Science 1.1- ask questions about and describe some natural occurrences , using their own observations and representations.
Science 2.4- communicate results and finding from individual and group investigations.

Impetus of Inquiry:

- free exploration:
- object: Ice cube and Hair dryer**
- shared experience:
- read aloud:
- shared reading:
- guided reading:
- circle discussion: discuss the icecube/ predict what will happen**

Establishing the Question(s)/Problem(s):

Demonstrate the ice cube to the class. Ask them to make predictions about what they think it is?

Big Ideas:

- Children are connected to others and contribute to their world.
- Children have a strong sense of identity and well-being.
- Children are effective communicators.
- Young children have a conceptual understanding of mathematics and of mathematical thinking and reasoning.
- Children are curious and connect prior knowledge to new contexts in order to understand the world around them.**
- Children make healthy choices and develop physical skills.
- Young children have an innate openness to artistic activities.

What Happened?

A child wondered what other objects may melt, so he thought of things similar to an icecube. A child brought in snow from outside to see if it would melt just like the ice cube. The child predicted that the snow would melt faster, if he put it on the classroom heater. The child took a before and after picture.

Expectations:

Science 1.1- ask questions about and describe some natural occurrences, using their own observations and representations.
Science 4.3- make predictions and observations throughout the design process.

The Learning Story:

How did the inquiry begin?

The teacher brought in an ice cube on a paper plate. The students passed the ice cube around the circle, and were asked to describe the ice-cube.

What happened during the inquiry?

The students made predictions about the ice cube, and what it would do if we added heat to it. The students were able to hold the ice cube in their hands, and they discovered that it melted when you add heat to it.

The students wondered how you could get the ice cube back to its original state

How did the inquiry end?

The students wanted to try and make their own ice cubes. The students wanted to see if snow does the same thing?

What was discovered?

The students discovered that when you add heat to ice, it becomes water. The students learned that you cannot “blow cold air” onto an ice cube in order for it to return back to being an ice cube.

Sample Questions:

Why? Why do you think the ice cube is melting?
What can we do to change the ice cube back?
How? How do we add heat to the ice cube? What sort of things have heat?
What if? What if I left the water on the plate?
Would it turn back into an ice cube?
Tell me about... why do you think the ice cube is changing shape? What do you notice about the ice cube?

Differentiated Instruction:

(accommodations, modifications and extensions)

- *For children who cannot vocalize their thoughts, they can draw pictures.*
- *For children who need more time observing, they can have their own ice cube*
- *For children who are visually impaired, they can feel the icecube*

- *Extensions: give everyone their own icecube, and see what they do with it.*
- *Go outside (weather permitting) and find ice/ice cubes in the playground.*

Materials Used:

Ice cube (s)

Hair dryer (possibly)

Paper plate

Writing paper/pencils

Ipod/recording system for assessment

Teacher Reflection:

- The students were able to use their previous knowledge of ice cubes to determine what might happen
- The students had difficulty answering the why portion of the ice cube melting. They had some very interesting predictions about why they felt that the ice cube melted. (Because it become warmer by touching the ice cube, because it was taken out of the container it was in, because it is magic, because it is out of water).
- The class responded well to the ice cube impetus, and were able to make multiple science predictions about the ice cube.

Assessment:

(record, gather, analyse)

photo story: Have ece/teacher take pictures of the children working with the ice cube

anecdotal notes

video

audio: record children's voices to listen to after the lesson, to see the connections they make

artifacts

other?

Next Steps/Applications:

What could happen next?

The students could try to see if other things change shape when you add heat to them.

The students could try to see if you can change things by making them cold.

Future Materials:

- Snow
- Icicles
- Freezer