

THE LAKE MISTAKE

COVIEWING GUIDE



INVESTIGATE A FROZEN LAKE, AND FIGURE OUT HOW TO MELT THE ICE.

TIME: 25 minutes

STORY SUMMARY

Freeze Louise accidentally freezes the lake on a hot summer day, it's Sparks' Crew to the rescue! The kids investigate the properties of solids and liquids and find out how heat and cold can cause a liquid to become solid or a solid to become liquid.

HOW DOES SPARKS' CREW SOLVE THE PROBLEM?

They investigate and observe solids and liquids and test their idea to use heat to change the frozen lake to liquid.

WATCH THE VIDEO (whole group or individuals)

1. To introduce the video, say, *Let's watch Sparks' Crew in action! They will use the same Superpowers of Science that scientists use. Notice what happens when Petie Heat uses his heat superpower.*
2. Watch the video as a whole group, or have children watch individually.

DISCUSS (whole group, pairs)

3. Have children find a partner. Each child shares something they remember or liked about the story with their partner.
4. Discuss how solid and liquid materials relate to children's everyday lives. Say, *Tell me about objects at home that are solid or liquid. How do you use solid objects at home? How do you use liquid objects?* Children share with their partners.
5. (Optional) For a more focused discussion, use the **Science Focus** questions below.

REFLECT (optional, whole group)

6. Have each child stand and say **one word**, with a gesture, that tells what they liked best or found most important or most interesting about the story.

WRAP UP (whole group)

7. Say, *Sparks' Crew had to ask questions and observe what happened when the sun warmed the lemonade and when Petie Heat heated the lake.*
8. Say, *In this story, Sparks' Crew found out what can happen when you heat materials. Some solid materials can melt and become liquid.*

SCIENCE TALK

Use these words when talking with children. Listen for children to use these ideas.

SUPERPOWERS OF SCIENCE	CHILD-FRIENDLY LANGUAGE
ask questions	ask • wonder
explain	explain • figure out what happened • use evidence to explain
figure it out	create a way to fix it • figure out a way to solve • fix the problem • solve • what are your ideas
observe	notice • observe
share what you know	share your ideas • share information • talk about what you found out

SCIENCE BIG IDEA

When you heat some solid materials, they can melt and become liquid.

SCIENCE FOCUS

Choose a few of these questions. The bold terms can help you choose which questions you wish to use. You may want to advance to the time shown and watch segments with the group as a lead-in to the conversation. Guide children to discuss with a partner what's happening onscreen and the Science Focus.

1:50-2:21	WHAT HAPPENED TO THE LEMONADE? WHY?
WHAT'S HAPPENING ONSCREEN?	Freeze Louise zaps the lemonade. It freezes solid.
SCIENCE FOCUS	Freeze Louise chills the lemonade. The cold turns the lemonade from liquid to solid ; it freezes .

6:21-7:00	WHAT DO THE KIDS FIGURE OUT ABOUT THE FISH IN THE LAKE?
WHAT'S HAPPENING ONSCREEN?	They discuss how the fish can be swimming when the lake has ice on top.
SCIENCE FOCUS	The top of the lake freezes when Freeze Louise chills it. Below the ice, the lake is not frozen . It is still liquid .

7:01-7:40	WHY DOES SPARKS' CREW SAY THAT ICE IS SOLID WATER?
WHAT'S HAPPENING ONSCREEN?	Lucita and AJ explain about solids and liquids. Then Lucita and Sara remember what happened to the lemonade and realize that water works the same way.
SCIENCE FOCUS	Lucita and AJ explain that a liquid can flow . A solid does not flow . The kids explain that water is the same stuff whether it's solid or liquid .

5:36 TO THE END	WHAT SUPERPOWERS OF SCIENCE DID SPARKS' CREW USE TO FIGURE OUT THE PROBLEM?
WHAT'S HAPPENING ONSCREEN?	They notice fish swimming under the ice. Sara punches a hole in the ice, and they find water underneath. The lemonade starts melting, which gives them an idea for how to melt the lake.
SCIENCE FOCUS	They observe and notice that there are fish swimming. They ask questions about the lake. Then they test out Benny's idea that there's liquid water under the solid ice. They share what they know about how solid water and liquid water are different. They observe the dripping lemonade when the sun melts it. And finally, they come up with a solution to use heat to melt the ice.

