Dee's copy

ELINOR WONDERS WHY

EP 122A Frozen Fish

By: Adam Ruben

Elinor's Question: How do fish survive in a frozen pond?

Logline: When the lake freezes, Elinor and her friends grow concerned for all of the fish, but with Ranger Rabbit's help, they learn that even "frozen" lakes have liquid water underneath, and the fish are okay.

Curriculum Goals:

LS5c. Recognize that each kind of living thing has a habitat that has resources to meet its unique needs. (Fish can live in the lake even though the surface freezes.)

SEP1a. Demonstrate curiosity about the greater world outside of their environment. (Elinor and her friends wonder how fish survive the freeze.)

SEP1c. Ask and/or identify cause-and-effect questions that can be answered by an investigation. (Elinor and her friends ask whether the freeze harmed the fish, and they attempt to observe what's happening under the ice.)

SEP6a. Use background knowledge, experiences, and data to construct reasonable explanations and theories of natural phenomena. (Based on what they know about the progression of seasons, Elinor and her friends theorize about what has happened to the fish.)

SEP7b. Support thinking and argue ideas with evidence. (Elinor and her friends realize that the fish must be okay because the lake froze over last winter, and it was still full of fish in the spring.)

Main Characters: Elinor, Olive, Ari, Ranger Rabbit.

Non-Speaking Characters: Variety of animal town residents, Javier, Mary and Liv, Mz. Mole.

Backgrounds - Town Lake (not frozen), Town Lake (frozen and snow-covered)

Props - Ranger Rabbit's backpack, Ranger Rabbit's notebook and pencil, Olive's notebook and pencil, thermometer, binoculars, fish, ducks, sign showing an ice skate in a green circle, ice skates, Thermos, mugs of hot chocolate, auger, chisel, measuring stick, small flag

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SECOND DRAFT: September 20, 2019

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1. EXT. FOREST PATH - DAY

Open on one of the last few brown leaves falling off of a deciduous tree. The leaf drifts on a late fall breeze, then flutters by ELINOR, OLIVE, and ARI, who are playing and chasing each other down a path in the woods while RANGER RABBIT hikes down the path. They wear their autumn clothes, and there is no snow on the ground yet. Ranger Rabbit wears a backpack and has binoculars around her neck.

Elinor tags Ari.

ELINOR
Tag! You're it!

Ari stops running.

ARI
I thought I was already it.

ELINOR
Were you? Oops! Then... I guess I'm it now!

She tags Ari again.

ELINOR (CONT'D)
And now you're it!

Olive joins them.

OLIVE
Wait, wasn't *I* it?

The kids look at each other, confused.

OLIVE (CONT'D)
Did we forget to keep track of who's it again?

ARI
I guess... we all win!

Ari raises his arms in victory, and the kids <SFX: LAUGH>. Elinor walks a few paces ahead to catch up to her mother.

ELINOR
Mom, where are we going?

RANGER RABBIT
You'll see. We're almost there.

2. EXT. LAKESIDE - DAY

They emerge from the woods and find themselves at the edge of the town lake, Mossy Lake, a large, blue body of water with a grassy bank alongside.

10 RANGER RABBIT 10
Here we are!

11 ELINOR 11
We're at Mossy Lake!

<SFX: GENERAL EXCITED WALLA> Ranger Rabbit puts her backpack down and removes a few instruments.

12 RANGER RABBIT 12
That's right. It's the biggest lake in Animal Town.

She crouches next to the lake and begins taking measurements - temperature, pH, etc. - which she records in a little ranger notebook. It should just look like she's dipping small things into the water or observing carefully, then writing something down. Ari walks over next to Ranger Rabbit.

13 ARI 13
What are you doing, Ranger Rabbit?

14 RANGER RABBIT 14
Just checking to see how the lake is doing, Ari. I come out here every summer, fall, winter, and spring to write down observations about how the lake changes from season to season.

Ranger Rabbit dips her thermometer into the lake. Olive walks over and joins Ari.

15 OLIVE 15
(smiling, holding up her own notebook and pencil)
I love writing down observations. That's my favorite thing to do with them!

Ranger Rabbit checks her thermometer.

16 RANGER RABBIT 16
Well, the water is definitely colder now that it's fall, but it's still liquid, which means it's still flowing.

Olive writes that down in her notebook.

17 OLIVE 17
Liquid. I like that word.

A couple of ducks paddle by, quacking a bit <SFX: Quacking>, dipping their heads in the water to eat.

18 RANGER RABBIT 18
And we still have a few ducks that haven't flown south for the winter.

She makes a note of it, and Olive copies her. Ari dips a finger in the water.

19 ARI 19
Brr! That water IS pretty cold! Better hurry up, ducks.

At that moment a few ducks rise up out of the water and start flying away.

20 OLIVE 20
Wow!! There they go.

ANGLE ON: Elinor waves to the departing ducks.

21 ELINOR 21
Bye ducks! Have a good trip!!

Suddenly Elinor hears a <SFX: Bloop!>. She looks over in the direction where she heard it, but she sees nothing, so she turns back to watch the ducks. Then there is another <SFX: Bloop!>. This time she's a little quicker to look for its source, but again she sees nothing. Elinor shrugs, and just as she's turning back to the ducks, the <SFX: Bloop!> comes a third time. This time she thinks she sees something.

22 ELINOR (CONT'D) 22
Olive! Ari! Look at this!

23 OLIVE 23
What are you looking at, ~~Elinor?~~

24 ELINOR 24
(still staring at the lake)
I saw a splash. And I heard a *bloop!*

Ranger Rabbit joins them. Elinor points across the lake.

25 ELINOR (CONT'D) 25
It was right out there.

ANGLE ON: We see a shot of the four of them, but from the viewpoint of the middle of the lake. Ripples slowly expand from the spot across the surface of the water.

26 RANGER RABBIT 26
Good observation, Elinor. See the ripples in the water? That means something must have splashed there a moment ago.

ANGLE ON: Back to the kids and Ranger Rabbit looking at the lake. Suddenly a cute, shimmery, silvery fish jumps out of the water in the middle of the lake! <SFX: Bloop!>

27 ELINOR 27
(excited)
It's a fish!

28 OLIVE 28
That's DEFINITELY not a duck!

The kids <SFX: LAUGH>.

29 RANGER RABBIT 29
Nice spotting. I think that fish is a lake trout.

She checks her notebook.

30 RANGER RABBIT (CONT'D) 30
There are a lot of trout this year - that's good. It means the lake is a healthy place for the fish to live.

31 ELINOR 31
(still excited about the fish)
Why do the fish jump like that?

32 RANGER RABBIT 32
They're probably trying to catch and eat the bugs that are on the surface of the water.

Ari points toward the lake.

33 ARI 33
Look! Another fish!

ANGLE ON: The fish, or at least a similar-looking fish, jumps out of the water in a different part of the lake. <SFX: Bloop!>

ANGLE ON: Now all three kids peer at the water intently, waiting for the next jump.

34 OLIVE 34
Wait for it... wait for it...

ANGLE ON: The fish jumps again, this time in a different spot. <SFX: Bloop!>

ANGLE ON: The three kids point to the unexpected spot and jump up and down with excitement.

35 ELINOR, OLIVE, ARI 35
Bloop!

Olive starts quickly sketching something in her notebook.

36 ELINOR 36
I'm going to name the fish Splashy.

Olive holds up her notebook and points it at the lake, as if showing it to the fish. She has drawn a simple picture of a fish.

37 OLIVE 37
Look, Splashy! I drew you! You're my favorite observation today!

We PAN to see Ari puckering his lips like a fish and wiggling his fingers like gills!

38 ARI 38
(in a fish voice)
Thanks, Olive! It looks great! (Stage whisper to Olive and Elinor:) I'm Splashy.

They <SFX: LAUGH> as Ari puts his hands down.

39 ELINOR 39
Silly Splashy.

At this moment, a <SFX: WIND> blows in. Everyone shivers.

40 OLIVE 40
Oooh, it's really getting chilly.

41 RANGER RABBIT 41
Winter is almost here, kids. Let's hike back to the ranger station to warm up.

ANGLE ON: We see a longer shot of Mossy Lake with the four figures heading back where they came from. The kids wave goodbye to the fish.

42 OLIVE 42
Bye, Splashy!

43 ARI 43
See you next time we come to the lake!

44 ELINOR 44
Stay warm!

They continue following Ranger Rabbit along the lake, and in the foreground of the shot Splashy jumps out for one last splash. We TILT UP to the blue sky with the winter wind starting to blow.

CROSSFADE TO:

3. EXT. LAKESIDE - WINTER, A FEW WEEKS LATER

The shot stays on the sky, which turns from blue to white. A soft snow falls, and we TILT DOWN to see that the lake has frozen, with snow topping all of the nearby trees and plants. Ranger Rabbit emerges from the forest path, followed by Elinor, Olive, and Ari. They're bundled up in their winter gear (from The Science of Staying Warm) - and the kids are wearing helmets.

They all carry ice skates (or have ice skates tied together and slung on their backs). Ranger Rabbit carries a circular sign on a stake, but we can't see what it is yet.

Elsewhere along the edge of the lake, in the background, we can see other animals hanging around, talking, preparing to skate, etc. (NB all wearing helmets).

45 ARI 45
Whoa, look at all the snow!

46 ELINOR 46
I'm so excited! I can't wait to go ice skating on the lake!

47 RANGER RABBIT 47
Me too. But before we skate, I need to make sure the ice is safe enough to skate on. Wait here, kids.

Ranger Rabbit ties a rope to her waist, the other end of which is tied to a tree.

She walks a little way onto the ice, then takes out a bundle of tools (auger, measuring stick), kneels, and gets to work measuring. NOTE: she makes a small hole with her auger but the kids don't see.

ANGLE ON: The kids sit on a log and start lacing up their skates while they chat.

48 OLIVE 48
Wow. Mossy Lake doesn't look at all like it did in the fall.

49 ARI 49
Yeah, it doesn't even look like a lake! It looks more like a big , thick piece of ice.

50 ELINOR 50
And thick ice is perfect for ice skating!

ANGLE ON: We still see the three kids on the log, but now we can see Ranger Rabbit working on the ice as well. She drills a hole to test the thickness of the ice, then labels the hole with a little flag (that she sticks in the ice BESIDE the hole) to make sure no one trips.

Ranger Rabbit approaches, then plunges her sign into the ground. It's a green circle with a picture of an ice skate on it.

51 RANGER RABBIT 51
(announcing)
Okay, everyone! Mossy Lake is officially open for ice skating!

Elinor, Olive, and Ari <SFX: CHEER>. We quickly ZOOM OUT to see all of the other animals cheer as well! Some of them excitedly head toward the lake.

Elinor, Olive, and Ari join them.

MONTAGE: In a series of shots, we see animals frolicking on the ice (all with helmets).

Elinor skates by. <SFX: WHEE> She's pretty good!

Ari's struggling to stay up - Olive skates over and grabs him just before he falls.

Mary and Liv hold hands and twirl each other around.

Mz. Mole skates by with ease and twirls delicately in the air, landing perfectly.

Javier Moose skates along with his hands behind his back - he's a cool customer.

Olive gets Ari stable and he skates a few feet. He's doing it!! Elinor joins Olive who watches Ari with pride.

He skates a few more steps, then <SFX: WHOOOAA> falls down again and slides the rest of the way to Olive and Elinor on his bottom.

END MONTAGE

<SFX: LAUGHING>, Elinor, Olive, and Ari skate to the side (Ari is still quite tentative) and have a seat on the snow-covered log, where Ranger Rabbit pours hot chocolate from a Thermos into three small mugs.

52 RANGER RABBIT (CONT'D) 52
Great skating, kids! Here, have some hot chocolate.

<SFX: THANKS, AWESOME WALLA> Ranger Rabbit leaves to monitor the lake. The kids hold their mugs and watch the lake, sipping.

53 ARI 53
It's pretty amazing to think that this is the same lake where we hiked in the fall.

54 ELINOR 54
And where we met Splashy the fish!

55 OLIVE 55
In the spring, summer, and fall, the lake is full of water. But in the winter, the liquid water turns to ice! That is soooo cool!

Suddenly Elinor <SFX: GASPS>. She looks worried. She has stopped drinking her hot chocolate and places the mug down on the log.

56 OLIVE (CONT'D) 56
What's wrong, Elinor?

57 ELINOR 57
If the lake has turned to ice... what happened to Splashy?

58 ARI 58
Huh?

59 ELINOR 59
The fish we saw in the fall. It was swimming in the lake, but now the water is frozen.

60 OLIVE 60
Oooh, I never thought about that.

ANGLE ON: Elinor stands and walks over to the lake. Ari and Olive leave their hot chocolates on the log and follow. (They're all still wearing skates, but the snow is deep enough that the blades crunch into it, and they can walk with no difficulty.) She crouches and knocks on the ice <SFX: Knock knock!>.

61 ELINOR 61
It feels hard and solid, all right.

She turns to face her friends.

62 ELINOR (CONT'D) 62
Do you think Splashy is okay? I hope she didn't get frozen, too!

A THOUGHT BUBBLE appears, in which Elinor imagines a cross-section of the lake, populated with swimming fish. The lake freezes <SFX: quick freeze/crystallization>, and the fish stop swimming.)

63 OLIVE 63
Oh! Maybe Splashy went south for the winter - like the ducks we saw.

A THOUGHT BUBBLE appears, the ducks flying though the sky, joined by flying FISH!

64 ARI 64
~~Uhh~~, Olive, fish can't fly like birds.

Ari flutters his wings and lifts himself off of the ice a little bit.

65 ARI (CONT'D) 65
Or bats!

66 OLIVE 66
Riiiight. Fish have to stay in the water.

67 ARI 67
Let's take a look. Maybe we can see inside the ice.

68 ELINOR 68
Good idea, Ari, we need more observations.

Elinor and Olive follow him. They drop to their knees and join Ari, who is already peering down into the ice.

ANGLE ON: The kids' faces looking down into the ice.

ANGLE ON: We see what the kids see, which is a fairly opaque lake surface.

69 ELINOR (CONT'D) 69
I can't see anything.

70 OLIVE 70
Me neither.

71 ARI 71
I see something: ice.

72 OLIVE 72
I know! What if we try to melt a little of the ice so it turns into liquid water again? My trunk is nice and warm.

She starts to rub her trunk comically all over the ice.

73 ELINOR 73
Is the ice melting?

Olive Lifts up her trunk. The cold has numbed it, and she speaks as though with a stuffy nose.

74 OLIVE 74
Dot really. Ad dow by trung isth cold. ("Not really. And now my trunk is cold.")

She rubs her trunk to warm it up.

75 ARI 75
(peering at the patch where Olive used her trunk)
And we still can't see anything.

76 ELINOR 76
Oh, I wonder what happened to Splashy. And what about all of the other fish in the lake? How can they swim? Or find food?

As they ponder, Olive looks out over the ice. She notices the little flag that Ranger Rabbit planted earlier.

77 OLIVE 77
Huh? What's that?

They stand up from their crouched positions. Ari is a little shaky, so the girls support him as they traverse the ice.

ANGLE ON: The kids approach the hole Ranger Rabbit made earlier. It's a small hole, just wide enough to peer through, but not wide enough for a hand.

78 ARI 78
(pointing at the hole)
Look! It's a hole. I saw Ranger Rabbit make it when she was checking the ice.

They arrive at the hole and stand around it (NOTE: The flag is stuck in the ice beside the hole).

79 ELINOR 79
Holes are PERFECT for making observations!

They crouch down, and Elinor peers into the hole.

CU: We see what Elinor sees: at the bottom of the hole is liquid water! Elinor sits up <SFX: GASP!>.

Olive and Ari try to peer in the hole, comically moving their heads around each other to try to see.

80 ELINOR (CONT'D) 80
There's WATER down there!

81 ARI 81
You're right!

82 OLIVE 82
There's water UNDER the ice!

83 ELINOR 83
I thought the whole lake was frozen.

84 OLIVE 84
Whoa... Maybe the lake is still full of liquid water...

85 ARI 85
...and the ice is just on top.

86 ELINOR 86
Mom! Mom!

Ranger Rabbit returns.

87 ELINOR (CONT'D) 87
We see water in that hole! Does that mean most of the lake isn't frozen?

88 RANGER RABBIT 88
That's right!

A THOUGHT BUBBLE appears, and we see a cutaway diagram of the lake with fish swimming in it.

89 RANGER RABBIT (CONT'D) 89
Usually only the top part of the lake freezes into ice. The rest of the lake is still liquid.

That's why I made the hole. To check that the ice was thick enough to skate on.

In the thought bubble, the top of the lake then freezes, and the fish keep swimming underneath. Ranger Rabbit herself appears in the thought bubble, drilling a hole and giving a thumbs-up when her hole reveals that the ice is sufficiently thick.

The thought bubble disappears.

90 ELINOR 90
So if there's still water under the ice... (gasps) The fish could still be swimming around down there!

91 RANGER RABBIT 91
I can show you if you'd like. I need to make the hole bigger to check on the trout anyway.

She makes the hole a little bigger with a chisel. ANGLE ON: The kids take turns looking into the hole; their faces brighten.

92 ELINOR 92
Look! The fish are swimming around under the ice! (gasps) And that one looks like Splashy!

Elinor moves out of the way, and Olive peers down in the hole as well, pointing at fish.

93 OLIVE 93
Actually, that one also looks like Splashy.

She moves aside, and Ari gets a turn.

94 ARI 94
That one, too.

95 ELINOR 95
(giggling)
I guess a lot of fish look like Splashy.

96 OLIVE 96
But what do the fish do under there all winter?

97 RANGER RABBIT 97
Oh, all kinds of things.

THOUGHT BUBBLE appears next to Ranger Rabbit, showing the same cutaway of the lake. The fish in the lake illustrate all of the actions Ranger Rabbit describes.

98 RANGER RABBIT (CONT'D) 98
Some bury themselves in the sand at the bottom and go to sleep. Some get close to their friends to stay warm. But other fish, like the trout, stay awake. They just move more slowly, and eat as much as they can find.

The thought bubble disappears.

99 ELINOR 99
That is SO INTERESTING!

100 RANGER RABBIT 100
Yup, animals find lots of ways to keep going, even when the weather changes.

101 OLIVE 101
So all the time we've been skating...

102 ARI 102
...there's been a whole lake full of fish underneath us!

The kids skate as they sing. SONG:

103 ELINOR, OLIVE, ARI 103

ELINOR: Lakes are fun to dip your toes in,
But in the winter, they get frozen.
ALL: Ice, ice, ice on the top...
liquid water on the bottom!

OLIVE: When the ice is hard and strong,
Fish can live all winter long.
ALL: Ice, ice, ice on the top...
liquid water on the bottom!

ALL: When winter winds start blowing,
Animals they keep on going
They change with every season
ELINOR: Even when it's freezin'!

It's Ari's turn to think of a verse, and he's having a little trouble.

ARI: Ice is nice. Ice is nice.
It's so nice...I said it twice.
ELINOR, OLIVE, ARI (giggling): Ice on the top. Water on the bottom.
ELINOR: Lakes have fish if you can spot 'em,
OLIVE: Even when it's after autumn,
ARI: So grab your ice skates if you've got 'em!

ALL: Ice, ice, ice on the top...
liquid water on the bottom!

END SONG.

ANGLE ON: Elinor looks up at Ranger Rabbit.

104 RANGER RABBIT 104

So you see? When the weather changed, and the lake froze, the fish found a way to stay healthy.

105 ELINOR 105

I'm glad Splashy and the other fish are okay, Mom.

ANGLE ON: We pull out a bit to see that Olive is already writing in her notebook.

106 OLIVE 106
And I'm glad we could help observe the fish.

ANGLE ON: We pull out a bit more to see Ari skidding past them across the ice, starting to lose control. <SFX: WHOOOAA WALLA>

He slips and accidentally launches himself in the air, but before he can hit the ice, he flutters his wings and keeps himself hovering above it.

107 ARI 107
The fish stay under the ice all winter - I'll use my wings to stay OVER the ice!

On <SFX: GIGGLES>, Ari tags Elinor.

108 ARI (CONT'D) 108
You're it!

They laugh and chase each other, with Elinor and Olive skating and Ari fluttering/skating. We ZOOM OUT to show all of the skating animals, then PAN DOWN through the ice into Ranger Rabbit's hole to the liquid lake below, where we can see a whole aquatic community concealed under the top layer of ice - moving slowly in the cold water, but still there.

FADE OUT.

SEGMENT 2.

1. EXT. DRY POND -- DAY

Open on MZ. MOLE, ELINOR, OLIVE, ARI and KIDS (as necessary). The kids are spread out, looking for something in different directions. The sun is overhead and it is hot. Mz. Mole is carrying a bag.

109 ELINOR 109
I think it was that way.

110 ARI 110
I'm pretty sure it was over there.

Olive stands staring at an empty space between a tree and a large rock.

111 OLIVE 111
Where did it go?

112 MZ. MOLE 112
Now just what are you all looking for?

The kids gather around Olive. Olive holds up a large picture.

ANGLE ON: the picture is in full frame, we see the same tree and rock with a pond, surrounded by lush green plants, dragonflies and frogs. The picture also has the kids sitting by the edge with their feet in the pond.

113 OLIVE 113
This really neat pond we saw the last time we were here.

The picture is pulled down to reveal the same scene but with no pond and just some dried plants

114 OLIVE (CONT'D) 114
But now it's gone.

115 MZ. MOLE 115
Oh, that IS a neat pond! But it's a SPRING-TIME pond. And what happens a lot in the spring?

116 ARI 116
It rains a LOT?

117 ELINOR 117
Oh, I get it. Now it's SUMMER and there isn't much rain so the pond is all dried up.

118 MZ. MOLE 118
That's right.

119 ARI 119
But there were so many little critters living in the pond. What happened to them?

120 MZ. MOLE 120
Those critters have some very clever ways to survive. Let's read about one of my favorites, called Daphnia.

Mz. Mole pulls out a book from her bag and opens to a picture of a pond

2. EXT. IMAGE OF POND IN BOOK

CROSS/SECTION: We see daphnia bobbing in the water, they are quite small.

Adult daphnia with eggs image ref:

https://upload.wikimedia.org/wikipedia/commons/thumb/4/4e/Daphnia_pulex.png/440px-Daphnia_pulex.png

121 ELINOR 121
Look how they bounce up and down!

Mz. Mole turns the page and with a magnifying glass we can see a Daphnia close up with two eggs on her back.(Or Mz. Mole can us a magnifying glass. Some books have these attached by a string)

122 OLIVE 122
She has little eggs on her back!

Mz. Mole turns the page a few times and the level of the pond drops down with each turn.

123 ART 123
Oh no, their pond is drying up! We should warn them.

124 MZ. MOLE 124
Not to worry, the momma daphnia makes a special case that keeps her eggs safe as the pond dries up.

The Daphnia's back develops a hard brown case. We see the egg case fall off the Daphnia's back, the daphnia swims away as the case falls to the bottom of the pond.

Egg case ref:
https://upload.wikimedia.org/wikipedia/commons/thumb/5/52/Daphnid_GLERL_1.jpg/440px-Daphnid_GLERL_1.jpg

Pages Turn and we see the level of the pond drop until there is just dry dirt with a brown egg case resting on it.

125 ELINOR 125
Don't the little eggs need water?

126 MZ. MOLE 126
They do. But if they are in their special case they can wait for the spring rains to fill up the pond again. Then, pop! Out come the new little daphnia.

We see rain fill the water level back up. We zoom in closer to the brown egg case at the bottom. When Mz. Mole says "pop!" Two little daphnia pop out of the case and start bobbing around.

Baby daphia image ref:
https://upload.wikimedia.org/wikipedia/commons/thumb/5/52/Daphnid_GLERL_1.jpg/440px-Daphnid_GLERL_1.jpg

127 OLIVE 127
There they are!

128 MZ. MOLE 128
Indeed! Nature has a lot of clever tricks to help pond creatures survive the hot, dry summer.

3. EXT. POND -- DAY

The kids are sitting around the dried area, looking hot and tired, except for Olive who is next to Mz. Mole

129 OLIVE 129
So there's a whole pond here just waiting for water to bring it back to life?

130 MZ. MOLE 130
That's right! A little like your friends over there.

Mz. Mole smiles and winks at Olive and pulls a jug of water out of her bag. Olive smiles, puts her trunk in the water, sucks it up and then sprays it in the air. The water falls on the other kids and they start <GIGGLING AND LAUGHING> and running around

Video of swimming:

https://www.youtube.com/watch?v=3rOCjjD29SY

THE END.