

Transcription of fish exploration 8/20/10

Context: Ryan had poked Lyla in the eye and said that her eye was squishy. In addition to teaching him about how to touch Lyla without hurting her, I want him to be able to continue his scientific exploration of the eye in an appropriate setting. Exploring dead fish with the children will also give Julia, Maya and Dylan a chance to talk about death, a topic of interest for them

<I have told the children a little story I made up on the spot about the fish when they were alive and how beautiful they are and how they might have gotten to the market where I bought them so that the children could learn about them. Then the children drew their hypothesis as to what the fish might look like. We are now going to look at the real fish and draw what we actually see.>

Emily: I'm going to take out one fish for us to look at so we can draw the one fish. Then we can each have a fish that we can touch when we're done drawing.

<the children watch and wait silently>

Emily: I'm going to put two so that there's one in each direction. Is that what you thought the fish would look like? Which fish would you like to draw?

Maya: I want to draw that one.

Julia: I want to draw that one too.

Dylan: I want to draw this one.

Emily: Okay, so look a little bit and then draw a little bit. Look, what does the eye look like? How can I draw the eye? What does the tail look like? How can I draw the tail? What part of the fish are you going to start drawing Maya?

Julia: I'm going to start drawing the eye. The eye is the easiest.

Maya: I drew one eye because the other eye is on the other side, and you can't really see it.

Emily: That's a very good point. You can only see one eye from this view.

Dylan: I want touch the eye.

Emily: We'll do that after we draw the fish. After we draw, then we can touch.

Julia: It is dead. I was right. <When I said the fish were in the cooler, she told me the fish were dead. I asked her how she knew, and she said that fish need water to live.>

Emily: It is dead, and it doesn't have any water.

Maya: The tail is like...

Dylan: Hey, there's another! <He's found the pencil on his clip board. Previously he was drawing with a permanent marker.>

Emily: Would you like to draw with the pencil instead of the marker?

Dylan: yeah.

Julia: I draw one eye. I draw one eye because the other's on the other side.

Emily: That's a very good point.

Maya: Look, I drew the tail.

Emily: The tail has all those lines.

Dylan: It came out again! It came out! <He is experimenting with how the pencil fits in the clipboard.>

Emily: It went in this side, and it poked out that side.

Emily: The tail has lots of lines. <Noticed that Julia was looking at the tail Maya drew.> Julia was learning about tails from you. It's very nice when we learn from our friends. I like that.

Ryan: Grunt. ...Grunt grunt.

Maya: Now I want to draw the body.

Julia: I drew the body too.

Dylan: It shoots out this way. <Referring to the pencil and the clipboard. He has drawn some on his paper.>

Emily: Dylan drew the fish here too, in the two-year-old way of drawing a fish....Oh and I like this. This is very similar to Julia and Maya's pictures of the fish, Ryan.

Ryan: ehht, ehht ehht ehht

Maya: I need help putting it back in. <she is trying to put the cap on the marker>

Emily: That looks so much like the fish! ...Now see right here we have a fin. <I want to point more details of the fish out to sustain the drawing process for the 4 year olds.> That's part of how the fish moves through the water. It moves with a fin on the side.

Dylan: <making frustrated noises as he tries to shove the pencil back in the clipboard slot. It is stuck at an angle halfway.>

Emily: You sound frustrated.

<I've been holding the fin of the fish up and away from the body.>

Maya: Does that hurt the fish?

Emily: Well, when you're dead, nothing hurts anymore. When the fish is dead, nothing hurts the fish. <At other times, I might have turned the question back on them, but the connection between dead and not-hurting vs alive and hurting is one I'd like to offer to Ryan.>

Ryan: aht aht aht

Maya: Look! <she's drawn the fin>

Emily: You've drawn more of the fish....And on the back, here's a fin here too. See that too, with all the spikes?

Julia: yeah, that doesn't hurt the fish because it's dead. My mommy told me about that when we were filleting a fish.

Emily: Are you ready to touch the fish, Dylan? Are you all done drawing?

Dylan: Yeah.

Emily: Okay there's some rules about touching the fish. This fish is not cooked, right? So it can't go in our mouth. Once we touch the fish, we can't put our fingers in our mouth either. If we want to put our fingers in our mouth or touch the toys, we have to go wash our hands first. Can we do that?

Dylan: Yep.

Emily: Okay. Everybody who's done with their pen, give me your pen and your clipboard. <to Ryan> Stay here if you want to touch the fish.

Julia: You can only touch the fish with your hands?

Emily: You can touch the fish and you can touch the paper, but I wouldn't touch your clothes or anything like that. Raw fish can make us sick if we're not careful.

Dylan: <chanting/singing excitedly> fishy fishy fishy...fishy fishy fishy...

Maya: Can I touch that fish?

Julia: Can I touch that fish?

Emily: There should be enough fish for each of us.

Maya: Is there going to be lots of fish?

Emily: Well, how many people are there? Let's get one fish per person.

Dylan: <counts the children, pointing> One, two, three, four...four <it is interesting here that he counts, saying the numbers, but then repeats the last number as that is the number of importance, telling us how many children are in the group. This is called the "cardinal principle" and it is one of the many important skills children need to learn during the complex task of learning how to count. The cardinal principle: The final word assigned to a set identifies the numerosity of that set.>

Emily: <copies him> one, two three four. Four kids and one adult. Five. <one of the fish has its mouth open. That has to go to the science girl, Julia> Would you like this one Julia? Have a look in the mouth. See what it looks like in there.

Maya: I wanna see a look in the mouth.

Emily: See if you can open your [fish's] mouth.

Maya: What mouth?

Emily: That fish has a mouth too. It's closed. Can you make it open?

Maya: <looks at her fish and decides not to open its mouth. That is a scary challenge> Hey Julia, can I take a look in that fish's mouth? Please?

Julia: Yep. Look inside.

Maya: Ooh! I saw the food.

Emily: you can see the food that the fish ate? I didn't know that.

Julia: I see its tongue.

Maya: can I touch that fish? <Her fish. The children are understandable cautious about their fish.>

Emily: You can. Remember to wash your hands when you're all done. Ryan, I got the fish so that you can touch the eyeball because you touched Lyla's eye. You said it was squishy. It hurts Lyla to touch her eye. But you can touch the fish eye because when you're dead, it doesn't hurt.

Dylan: I want to touch the eye! <laughs>

Emily: how does the eye feel? <everyone seems to like the invitation to touch the eye>

Dylan: squishy

<Ryan touches the eye and pulls his finger away quickly and laughs, repeats several times>

Emily: You want to touch the fin?....How does the eye feel Ryan?

Dylan: fishy fishy fishy

Ryan: squishy

Maya: Can I pick it up?

Julia: I'm feeling the tail.

Emily: You can pick it up. Let's keep it over the paper though.

Maya: not over there? <indicates the vinyl tablecloth underneath>

Emily: Well, I'll have to wash this too, but try to keep it in front of you over the table so it doesn't fall off.

<There are squeals of joy from Dylan and Ryan's explorations.>

Maya: I want to touch its mouth.

Julia: I have to scratch myself. <She is rubbing her cheek against her shoulder so as not to touch herself with fishy hands>

Emily: You're scratching your cheek with your shoulder so that you don't get fish on your cheek. That's a good idea. Dylan's going to open the mouth of his fish.

Maya: I'm going to open the mouth of my fish.

Emily: Let's see if I can do that. <I try opening the mouth of Ryan's fish. He explodes into laughter>

Ryan: ha ha ha ha ha ha ha ha

Emily: Open. I see the tongue. Look Ryan, there's the fish tongue. Ryan's poking the eyeball. If the fish was alive, the fish would say "ouch!" But the fish is dead. So it's okay to touch.

Maya: <to a fly> Go away from the fish.

Emily: <singing> shoo fly, don't bother me.

Maya: I told him to go away from the fish.

Dylan: it came up. The eye came up.

Emily: You pushed it down and it came up?

Dylan: Fishy. I have a fishy.

Maya: Can I pick up my fish?

Emily: Yes you may pick it up. How heavy is it?

Maya: I don't know.

Emily: Pick it up and see how heavy it feels.

Julia: I can't even pick it up.

Emily: Yours is too heavy?...Or, it's a little bit scary to pick it up?

Julia: Well, it's a little bit scary to pick it up.

Maya: I want to look inside that mouthy.

Julia: you can open it up.

Maya: it's scary in there.

Emily: Does it have teeth?

Maya and Julia: yeah.

Dylan: Mine has a tongue

Maya: I opened it!

Emily: <I open Ryan's for him>Ahhh. Say Ahhhh.

Maya: can I pick mine up? <she's really working up the courage to do so>

Emily: of course! Whenever you want to. I want you to learn lots about the fish, and we learn more when we touch things.

Maya: <picks up her fish, finally> Eww, ewy fish.

Dylan: <picks up his fish> Ewww, eewwy fish.

Julia: I just touched....I just picked up my fish. Eeewy fish <giggles>

Emily: Why do you say eeewy fish?

Maya: eewy gooey fish? Do you mean gooey fish, Julia?

Julia: Yeah. Gooey fish.

Emily: Is your fish gooey?

Maya: Yah

Emily: Or is that the name of your fish?

Maya: Gooley fish.

Julia: Eewy gooley fish.

Maya: Well, I'm lucky they got caught.

Emily: Ryan's looking at the fin

Maya: On a show called <?> they have...

Julia: go away fly

Emily: <singing> Shoo fly don't bother the fish

Julia: It's okay, it doesn't bother the fish. The fish is dead.

Emily: <smiles at Julia> What are you saying, Maya?

Maya: On a show called Nikki, they were catching gooley fish and I wanted this to be a gooley fish. <Here school and pop culture are working together. Pop culture has provided another context from which to explore the fish and school has provided a place to explore a deeper understanding of pop culture.>

Emily: I see.

Julia: They were catching fish and I wanted this to be a gooley fish.

Emily: I'm making the fish swim. A gooley fish. Making my fish swim through the air.

Maya: This is a funny fish.

Emily: What's funny about it Maya?

Maya: It's eye. ...Can I take it out into the sun? <In the story I had told about the fish when the fish were alive, I talked about the scales shining in the sun. Maya is showing reading (listening) comprehension>

Emily: You want to see if it's shiny in the sun? Hold on to it so it doesn't fall, then you can take it out into the sun and bring it back to the table.

Maya: I will. ...it's shiny.

Julia: <takes her fish to the sun> it's shiny

Maya: It's a gooley fish

Emily: Eewy eewy gooley gooley fish?

Dylan: <holds his fish in the sun> It's shiny.

Maya: Where did it poop and pee?

Emily: That's a good question. Let's see....where do you poop and pee?

Maya: I poop in <indicates her bottom> in the back

Emily: You poop in the back of your somewhere?

Julia: I poop in the back....I poop in the potty.

Emily: Where do your puppies poop from Maya?

Maya: They poop in the litter box.

Emily: The poop comes out from under the tail right? Should we look under the tail.

<Maya, Julia and Dylan are looking for the poop hole>

Emily: Do you see a hole?

Maya: Oh. I found it right here.

Emily: Oh, you found the poop hole right there. On a person, it's called an anus. Do you think it's called an anus on a fish?

Dylan: Where poop hole?

Emily: <shows Dylan on his fish> I don't know if it's called an anus.

Ryan: I put mine in the sun.

Emily: you put yours in the sun? Was it shiny? ...Can you find the poop hole? Where the poop comes out?

Julia: I found the poop hole.

Emily: is there any poop?

Julia: <laughs> no.

Ryan: poop hole.

Julia: it only poop when it's alive. It only poops when it's alive.

Emily: Oh, so when you're dead, you don't poop anymore? ...What else do we know is different between this fish and a live fish?

Maya: Well, because when you're dead, you stay very very still. And when you're alive, you talk and moving.

Julia: When you're dead you stay very very still. When you're alive, you're talk and moving.

Emily: How do we know it's not just sleeping?

Maya: Cuz the eyes are open.

Julia: Cuz the eyes are open.

Emily: Huh. So you close your eyes when you sleep? Does this fish have an eyelid that we could close?

Julia: Does my fish?

Dylan: Does my fish? <we all try to close the fishes' eyes>

Maya: hey! I found the nose! I just studied it very carefully and look and found a nose!

Emily: You found the nose. You're being very observant. Like a scientist.

Maya: You wanna see the nosey?

Julia: I found the nose.

Emily: A nose, a nostril.

Dylan: Why's that mouth open? <he draws each word out like a game, like he's being silly on purpose while at the same time asking a serious question. It's as if he's afraid to look silly when asking? Why? Is it something else?>

Emily: <I hold his fish's mouth and open and close it. "hello Dylan" <I say in a pretending voice>

Julia: the <?> was drawing its mouth open

Emily: Oh, that's a hypothesis

Maya: Well, this fish will not die, will it?

Emily: When you're dead, can you die again?

Julia: No. <she sounds unsure>

Emily: You only die one time?

Dylan: I want some more fish <indicating the cooler>

Emily: Well, we have all the fish out here <he needs something to sustain his learning process> but do you need more things you can do with your fish? Do you think you could use a knife very carefully? Scientists use knives to open up dead animals to learn about them. Would you like to use the knife very carefully?

Julia: I would.

Dylan: I would.

Maya: I don't.

Emily: You don't have to. ...You can use the knife to cut carefully along the body. I'm talking about knife safety. We're not going to stab, okay? Just cut very carefully, like a scientist. Okay? Do you think you can do that? <he nods>

Maya: You have to do it along the body like this. <She mimics both the hand movements I did and the pattern and music of the words I used.>

Julia: Very carefully, along the body like this. <She mimics Maya and I>

Dylan: What's in there? <the knife box>

Emily: The knives. What color would you like?

<they choose knives.>

Emily: <helping Dylan> Very carefully along the body. You might have to push down. Is it a tough body?

Maya: I'll show you.

Emily: Oh, look, you got a cut.

Maya: Can I show you how, Dylan? <I realized later: Maya really wants to cut a fish, but she doesn't want to cut *her* fish. She has, by now, spent a long time appreciating her fish. She has a connection to it. If Dylan would let her help, she'd get to cut his fish.>

Dylan: Wow, look. <He has a deeper cut into the flesh>

Emily: Let's see what the inside looks like. Oh, Julia cut hers too.

Maya: Let's see the tail. Let's see the bones.

Emily: <to Maya> I'll put a knife over here if you want to cut your tail and your bone. ...It's okay if you don't want to. ...Can I help you, Ryan?

Ryan: Yes.

Emily: let's cut together. This curvy side is the sharp side.

<the children talk with Jay about the fish.>

Julia: Look, I cut mine open.

Maya: Cut it! Cut it more Julia, Cut it more!

Emily: Look, Ryan cut under here and he can see the organs...where the fish's food goes, how the fish breathes...

Jay: What's inside yours Dylan?

Dylan: Bones.

Jay: Bones in there, huh?

Emily: Your thumb is really close to the knife here. Can I help you hold the fish?

Maya: Jay needs a fish.

Emily: You can offer him my fish if you like, Maya?

Dylan: This is the point and its...

Maya: Jay, would you like Emily's fish?

Jay: no, that's okay.

Maya: mkay

Jay: I'll just watch.

Maya: Is this my knife?

Ryan: <makes a noise while poking the organs with his finger>

Emily: Those are the organs. You have organs inside you too, Ryan.

Maya: Cut its tail, Ryan, cut its tail. ...Cut its head off, Dylan. Cut its head off.

Dylan: I'm gonna do it now. <They all laugh>

Jay: Ryan's got a fish on his shirt.

Julia: That's a shark. Sharks are fish too.

Emily: <interpreting Ryan's actions> You want to cut the tail off Ryan? Let's see if we can cut it off.

Maya: Mommy doesn't think sharks are fish, but they really are.

Jay: What does mommy think they are? Something else?

Emily: A monkey?

Jay: A hippo?

Maya: I don't know what she thinks they are.

Emily: Look, Ryan's fish lost its tail.

Maya: he cut it off!

Emily: <to Ryan> stay with us unless you're done. If you're done you need to wash your hands.

Maya: Shoo away from the fishys <to the flies>

Julia: Shoo away from the fishies.

<Emily helps Ryan wash his hands>

Maya: I got some fish scales on me.

Dylan: I'm cutting the head off.

Julia: I'm cutting the head off.

Maya: Cut off the head. Wanna cut off the head of yours?

Julia: I want my head off.

Emily: See how the head is joined to the body?

Julia: I want my head off. I want my head off.

Dylan: What else is in here? <in the cooler. He is trying to sustain his own interest again.>

<hard to hear the explanation>

Dylan: Can you cut the rest of it off?

Emily: <helps> Where do you need yours cut, Maya?

Maya: I don't.

Emily: You like yours whole. Would you like to cut mine?

Maya: Yes! <I finally understood her.>

Julia: I don't know what's coming out. <innerds>

Emily: It looks like the organs. I don't know which ones. I'm not a fish expert. Could be the lung, the liver, the intestines...

Maya: Cut the tail.

Julia: When I get boo boos, it hurts.

Emily: because you're alive.

Julia: Yeah.

Emily: Some people are alive, but their nerves don't work, so their boobos don't hurt.

Julia: My nerves do work.

Emily: How many pieces of fish do you have, Dylan?

Julia: I love cutting this fish.

Dylan: <counting> one, two, three, four. ...four

Maya: Oh, it came off. ...Can I stick it [the knife] in the fish body?

Emily: Be very careful.

Dylan: One two three four

Emily: One two three four

Emily: <singing> one two three four five once I caught a fish alive. Six seven eight nine ten. Then I threw it back again. Why did you let it go? Because it bit my finger so. Which finger did it bite? This little pinky on the right.

Maya: Look at, Emily, Look...ackh!

Emily: you want to see some of the scales? The scales are kind of like fur but on a fish.

Julia: Why did Maya say "ow"?

Maya: No I didn't

Emily: What did you say?

Maya: I said "ackh"

Emily: "ackh"; that's quite a sound <we all try out the sound>...Did anybody find the bones yet?

Maya: I didn't.

Emily: Dylan, Can I cut yours to see if I can find the bones? Is that okay? I can cut Ryan's instead. Want me to cut Ryans?...Let's see.

Dylan: What else is in there? <the cooler...he's trying to sustain interest again>

Maya: Can I cut its eye out?

Emily: Yes.

Maya: can I poke it into its eye?

Emily: Oh look, here's some of the ...

Maya: Can I poke that into its eye?

Emily: If you're being very very careful with the knife, you may poke its eye. What do you think will happen when you poke the eye?

Maya: What?

Emily: Well, I'm asking you! You're the scientist. You make a hypothesis before you do something.

Maya: I want to cut that fly. Can I cut that fly?

Emily: Do you see the little sharp bones sticking out? <of Ryan's fish>

Maya: Hey, sharp knife this fly.

Emiliy: Can you use your hand instead of the knife to shoo the fly?

Maya: I can't shoo it.

Emily: Dylan, look at those little bones here. They rib bones?

Maya: I think the eye would get all bloody.

Emily: you think it will get bloody? Kay, let's see if that's what happens.

...

Julia: <with emotion> I'm scared to poke its eye.

Emily: Don't poke its eye then.

Julia: <emotion gone> But I want to anyway.

<Maya pokes the eye>

Emily: Ope! What happened?

Julia: <giggles> blood came out.

Emily: Was it blood?

Julia: yeah!

Emily: How do we know if it's blood?

<Dylan leave the group>

Julia: It was dark red stuff.

<Emily helps Dylan wash his hands>

Maya: can I poke the eye out of the fish? Is that okay with you, Emily? Cuz it's your fish.

Emily: Yeah that's okay with me. The fish are here for you to learn, so if you're learning, do what you need to do.

Maya: Can I cut its mouth?

Julia: Can I cut its mouth?

Julia: I found dark red stuff. I found dark red stuff.

Maya: The fish is neat. I poked the knife in the eye, but it didn't pop out. ...I'm so scared to poke its eye out but I wanna.

Emily: What would help you be braver?

Julia: To learn about it.

Emily: Oh, you think about how much you're going to learn and that helps you be braver.

Maya: What's different about these fish? <indicates her own whole fish and my fish that has been thoroughly explored with the knife.>

Emily: that's a good question, what's different?

Maya: Which one is shorter? Which one did I cut and which one did I not?

Julia: that one's shorter and that one you cut and that one you didn't

Maya: Well, this one...you must be right, Julia. ...So let me poke the eye.

Julia: I want to see the bones.

Maya: Julia, do you want to help me cut this fish?

Julia: that's okay Maya. I won't mind with you. I have my own fish. Come and take a look at my fish.

Maya: Can I pull this fin off? ...Can I pull the fin off? <I've been helping Ryan elsewhere in the yard>

Emily: You don't have to ask, Maya. If you're being very careful with the knife, then it's okay with me.

Julia: I pulled the fin off.

Emily: Finless fish.

Julia: But that's okay because it's not in the water.

Maya: Look! The fin.

Emily: You cut a fin off too

Julia: I'm cutting the tail off.

Maya: The fish has no more blood.

Emily: What happens to the blood when something dies?

Maya: It fades away.

Emily: Is your fish breathing?

Maya and Julia: No

Maya: You need to have blood to breathe.

Julia: your belly has to move to breathe. When I was sick and there were boogers in my nose, I couldn't breathe and ?

Emily: When I can't breathe through my nose, I breathe through my mouth <demonstrates> because I still need oxygen. I still need air in my body.

..

Emily: So Maya, you didn't cut your fish. Did you have a plan for that fish?

Maya: Yeah. <she notices a whitish line along the body of the fish> Is this where the scales came off?

Emily: I don't know. Did you take the scales off that one?

Maya: Yeah.

Julia: Well how did you really get these fish?

Emily: I went to the store and I bought them from the fish seller. I went to Ta-Lin Market because I thought, 'they have fish that still have their eyes. They have fish that still have their organs.'

Maya: This was so much fun and I still want to bring this fish home with me.

Emily: We'll have to ask your mom. I'll put it in the cooler, and we can ask her when she comes, okay?

Maya: Don't cut it.