

Transcription of Science Time video – Water

The video for this transcript can be found on the Questacon website at:

<http://canberra.questacon.edu.au/sciencetime/>

Transcription from video:

BJ: Hi there! Welcome to Questacon’s Science Time. I’m BJ.

[Waving]

Dion: And I’m Dion.

[Waving]

BJ: And today we’re talking about water. Come and join us.

[Science Time logo]

[Music playing]

[Singing]

Wake up sun and moon, it’s Science Time, it’s Science Time.

Wake up skeleton, it’s Science Time, it’s Science Time.

At home in the bathroom, when we’re swimming there is science,

Outside at the playground, in the sunshine, there is science.

Wake up.

[Video showing children doing various activities]

[Science Time logo – Title, “Water”]

BJ: What do we use water for? We use water every day, what’s some of the things?

Child: Swimming.

BJ: Swimming – yeah, who went swimming over the holidays? [BJ showing swimming actions with her arms]

[Child raises their hand]

BJ: I love swimming. What’s something else we use water for?

Child: Um, drinking.

BJ: Drinking. Who likes to drink water? [Children raise their hands] Yum! Yeah. [BJ is nodding her head in agreement] What else do we use water for?

Child: For the beach.

Child: Turtles.

- BJ: Turtles. You have pet turtles, don't you, and they live in water. Does anyone have any pets at home that lives in water, like fish?
- Child: I didn't have fish.
- BJ: You don't have fish? I don't have fish. But you do, you do, don't you?
[BJ points to the child sitting next to her]
- Child: I use to.
- BJ: You use to have fish, did you?
- Child: But they dead and... they... we put them in the filter where the turtles, but the filter killed them.
- BJ: Oh! Yeah, fish are quite...
- Child: And I blame the filter for that.
- BJ: You blame the filter for that, yeah. Yeah, I would too. Yeah. And did you say the beach? *[Child nodding their head in agreement]* Yeah, there's water at the beach, isn't there? Yep. What else do we use water for at home? What happens when you go to the toilet and you press the button?
[BJ is demonstrating pushing a button with her hand]
- Child: Flush.
- Child: Um, you flush down.
- BJ: It flushes all the water. It flushes, doesn't it? Yeah?
- Child: And you have water to um wash um dishes.
- BJ: To wash the dishes, we use water. Well done. Yeah. What else do we use water for?
- Child: Um, to wash our hands.
- BJ: Wash our hands
[BJ pretends to wash her hands]
yeah. And we can wash our whole bodies in water, can't we? Yeah.
- Child: Yeah, like showers.
- BJ: Like showers, and baths. Do you like to have baths? I like to have baths. Yeah. Yeah.
- Child: I like baths.
- BJ: You like baths? Oh, I love baths. So we use water every single day. Lots of things we use water for.
- Child: And sometimes you can make a bath in the shower by blocking the um, the plughole.

BJ: Blocking the hole – you can, you can have a shower and a bath at the same time, can't you. Yeah.

Child: I love baths.

BJ: Do you? Now, I've got some toys we're going to play with today, because some things float in water, and some things sink in water. So we're going to have a look at some pictures now. Here are some pictures. Turn around so you can see the picture.

[Children turn around and face BJ]

Here's a picture of a boat.

[Camera zooms in on the picture of a boat]

Now, does a boat float on top of the water, or sink to the bottom of the water?

[Collectively]

Children: Float.

BJ: It floats, doesn't it? Do you think a boat floats? Well let's do an experiment and find out. So here's our boat, and here's our water, we're going to put the boat on, so do you think it might float on top, or sink to the bottom? What do you think? Here we go.

[BJ drops the boat into the water in the tank]

Yeah

[BJ nods and smiles]

it floats on top, doesn't it? Boats float really well. There we go, out you come boat. What's our next picture? Oh, beach balls!

[Camera zooms in on the picture of the beach balls]

What do you think beach balls do, float on top of the water, or sink to the bottom? What do you think?

Child: Float.

[Collectively]

Children: Float.

BJ: Float? Float? Well, I don't know... yeah, here we go; I've got a balloon, haven't I? I haven't got a beach ball, but I've got a balloon, and it's full of air as well. So let's see if it floats or sinks. What do you think is going to happen?

Child: Float.

Child: Float.

BJ: Let's experiment. Are we ready?

[BJ drops the balloon into the water in the tank]

Oh! Yeah, it floats on top of the water.

[BJ smiles]

It floats really well, doesn't it, because it's full of air? There we go. What's our next picture? Oh, what animal is this one?

[Collectively]

Children: Duck.

BJ: What does a duck say?

[Camera zooms in on the picture of a duck]

[Collectively]

Children: Quack!

BJ: Quack, quack. Does a duck float on top of the water?

[Collectively]

Children: Yeah.

BJ: You think so? I got a little duck here, don't I? Thank you. Let's do our experiment. What do you think – do you think it will float or sink?

[Collectively]

Children: Float.

BJ: Do you think so? Let's have a look, here it goes. Quack, quack. *[BJ drops the rubber duck into the water in the tank]* Yeah, it floats on top! But he fell over a bit, didn't he; he must be a tired duck.

[Camera zooms in on the duck floating in the water]

BJ: But he floats on top of the water, well done duck. Quack, quack, you're welcome, quack, quack, quack.

[Children laugh]

And what's our next picture? Oh, what about people?

[Camera zooms in on the picture of a child in a pool]

You know, people can float on the water too. Have you ever floated on the water, maybe wearing a life vest, or your floaties? Yeah? Do you like floating on the water? I do.

Child: Yeah.

BJ: Yep. What else do we have? Oh, a piece of wood!

[Camera zooms in on the picture of a piece of wood]

Do you think a piece of wood would float on top, or sink to the bottom?

Child: Sink to the bottom.

Child: Float.

BJ: Good guessing – floating, sinking. I think we need to do an experiment to find out. Thank you helper – you’re a good helper. So here’s a piece of wood, let’s see if it floats or sinks. What do you think is going to happen? Let’s have a look.

[BJ drops a piece of wood into the water in the tank]

Oh, wow! I thought it might sink, because... well but look; it’s floating on top of the water! Wow! Wood is very good at floating.

Child: But I don’t... but there’s nothing I think likes drowning.

BJ: Well here we go, you’re right, I haven’t had any sinking things yet, have I?

Child: Rocks sink because... rocks sink because they’re so heavy.

[Camera zooms in on the picture of rocks]

BJ: Rocks are very heavy, aren’t they? And rocks might sink because they’re heavy. What do you think is going to happen to the rock? Do you think it will sink?

Child: Sink!

BJ: Or float?

Child: Sink.

BJ: What do you think? Let’s find out. We ready? You ready everyone?

[BJ drops a rock into the water in the tank]

[BJ smiles and nods]

Yeah, it sunk right to the bottom, didn’t it? Yeah, that went straight down. Well done! OK, what else have we got here? Ice?

[Camera zooms in on the picture of an iceberg]

Child: Ice.

BJ: This is a big iceberg, and I’ve got a big piece of ice – my assistant is helping here, thanks sweetheart – I’ve got a big chunk of ice here. It’s actually really quite heavy. What do you think? Have a feel; is the ice warm or cold?

[Children touch the ice with their hands]

Child: Cold.

BJ: It’s cold! Yes, it is. Can you feel it? It’s all cold and wet. Can you feel it?

[Children touch the ice with their hands]

Child: And it wet my trousers.

BJ: Yeah. Oh, did it wet your trousers? Here's a towel for you. There you go.
OK, ready everyone? What do you think is going to happen? Do we think it
will float or sink?

[Collectively]

Children: Sink.

BJ: Because it's quite heavy. Let's see, I'm going to stand up for this one.
Ready?

[BJ drops the ice into the water in the tank]

Oh, wow! Sitting down. Look! It floats! Wow! It floats on top of the water.

Child: But not the rock.

BJ: No, no, the rock still sunk, didn't it? Yeah. So even heavy things like this
ice can float on top. Here's one more picture I want to show you.

[Camera zooms in on the picture of an ocean liner]

And this is a picture of a big boat, a big heavy boat that can float on top of
the water. How do you think a big heavy boat like this can float on water?
Do you have any ideas?

Child: Because it's got air.

BJ: Because there might be – there's certainly lots of air inside there as well.
Hmm. It's all got to do with the shape of the boat. So here I've got two
pieces of plasticine, they're the same amount, so they're the same weight,
but are they the same shape?

[BJ holds up two pieces of plasticine in her hands]

[Collectively]

Children: No.

BJ: No. They're quite different shapes, aren't they? This one is round, and this
one's hollowed out like a little boat shape.

[Camera zooms in on the plasticine shapes in BJ's hands]

Now I'm going to take our ice out – out you come wet, drippy ice, put you in
there – and let's put our plasticines in the water. Do you think they're going
to float or sink?

Child: Sink.

BJ: Do you think they're both going to do the same thing?

Child: Yeah.

Child: No. No, just the round one's going to sink, and the um, the big one's going
to float.

BJ: Good thinking. What do you think? And boys and girls at home, what do you think is going to happen; do you think they will float or sink? Are we ready to do an experiment and find out?

Child: Yes.

BJ: OK, here we go.

[Camera zooms in on the plasticine shapes in BJ's hands, as she drops them into the water in the tank]

Oh, wow! Look! One sunk, and one is floating. But I'm going to change the shape of this one now, so I'm going to squash it up

[BJ squashes the plasticine into the shape of a ball]

and look, it's not like a boat anymore. Do you think it's going to float or sink?

[Collectively]

Children: Sink.

[Camera zooms in on the plasticine shape in BJ's hands, as she drops it into the water in the tank]

BJ: Oh, it sunk right to the bottom! So I'm going to change the shape back to a boat shape

[BJ presses out the plasticine into the shape of a boat]

change it back to our round, curvy boat, so now it's got a big surface area, and it can push lots of water out of the way.

[Camera zooms in on the plasticine shape in BJ's hands, as she drops it into the water in the tank]

And it floats! Wow! Isn't that great? So some things in water float, and some things sink.

We've got lots and lots of things to play with in Science Time today, so are we ready to have some fun? Ready, set, go! Go have a play.

[Music playing and camera showing children doing various activities]

Dion: So while everyone's playing, I want to show you something special at Questacon. Come with me.

[Science Time logo]

Dion: Hi everyone, we're at Questacon's H2O Soak up the Science Gallery, and I have something very special to show you. Here we have some ice.

[Dion holds up some ice]

Now, is ice warm or cold? It's pretty cold, isn't it?

[Dion nods]

Now, when water gets really, really cold it turns into ice, and ice is a solid. You can see it's really, really hard.

[Dion knocks on the ice with his knuckles]

Now, when ice gets warm, what happens to it? It turns into water, doesn't it?

[Dion nods his head]

And this is some water right here.

[Dion holds up a cup of water]

Now water is a liquid, which means we can pour it, we can drink it, we can even splash it. You can't do that with a solid though, that's why liquids are really special.

Now we've got lots of things to have a look at, at Questacon's H2O Soak up the Science Gallery, let's see what's here.

[Video showing Questacon's Hydrotram]

Can you hear the thunder? A storm is coming. So where does water come from? Have you ever been out in the rain? Water comes from clouds, and falls from the sky as rain. The water fills up lakes, rivers, and even the ocean. Now, lots of things live in the sea and in water. Do you know any animals that live in water? Yeah, fish live in the water. Do any other living things need water to live? Yeah, we need water too, but we drink it instead of live in it.

All living things – animals, humans, and plants – all need water to live. Water is really important stuff, and it's fun to play with too. You can splash water, swim in water, it's great fun.

Wow, so many different types of water. Let's go back to Science Time, see what they're up to.

[Science Time logo]

BJ: So over you come, sit on the mat. I've got something to show you before we finish Science Time today. A little bit of a water demonstration. So here I've got two glasses, one with water, and one without water. I'm going to move all the water from this cup

[BJ points to the cup of water in her left hand]

to this cup

[BJ points to the cup without water in her right hand]

without touching it. And I'm not going to pour it; I'm going to use my bendy straw. You ready? I'm going to use my mouth to get it started a little bit.

[BJ puts the straw to her mouth and sucks, then puts the straw into the empty cup]

So, do you see how the water is pouring down the straw from the top cup to the bottom cup? That's called siphoning. The water's being siphoned out of the top cup and it's going into the bottom cup. Do you see how well it's pouring? You see little water molecules, they like to stick together, they pour really well. And look, they're both the same amount of water now, but it's going to keep pouring, keep pouring. Now which one has more water?

[Camera zooms in on the cups in BJ's hands]

Child: That one

[points to the bottom cup]

BJ: The bottom one's got more water, doesn't it?

Child: Yeah, because you're pouring that... um, this one...

Child: Into the other one.

BJ: Yeah. Yeah. And look, the top one is now empty. Wow! So we moved all the water from one glass into the other glass without pouring. How clever is that?

Child: Can I have a go?

BJ: Oh, we'll have a go in a moment. I've got something for you to take home with you first though. Now, parents, we've got an information sheet, and boys and girls at home, you can find this on our website. It talks a bit about what we did in Science Time today, and it shows you how you can make rain bottles at home as well.

[Camera zooms in on a picture of the information sheet]

BJ: So Dion, can you give those to all of our grown-ups please? There you go. And boys and girls, one last question, where does water come from?

Child: Outside.

BJ: Outside

[BJ nods her head]

And where from outside?

Child: The clouds.

Child: From the clouds.

BJ: The clouds. The clouds make it rain.

Child: Rain, rain, rain.

BJ: Rain, rain. And here's someone in the rain, and they've got their umbrella

[Camera zooms in on the picture of a person with an umbrella]

This is a colouring in for you to take home. And boys and girls at home, this colouring in sheet is on our website. And here, she's got an umbrella, you

can colour that any colour you like, and she's got gumboots on in a big puddle.

[BJ points to the colouring in picture]

Who likes to splash in puddles?

Child: Me, me, me.

[Collectively].

Children: Yeah.

BJ: Yeah, yeah, me too, me too. So now it's time to say bye everyone! Can we say bye?

[BJ is waving to the camera]

[Children waving and saying goodbye]

And can you look at the boys and girls at home and say, "Bye!"

[BJ and the children waving and saying goodbye to the boys and girls at home]

BJ: Bye! See you next Science Time.

Child: See you next Science Time.

BJ: Bye! See you later. Here we go.

[Music playing and singing in the background]

BJ: Questacon Science Time is held at Questacon in Canberra, Tuesday to Friday, during school terms. Bookings are essential. For further information go to our website at questacon.edu.au. See you next Science Time.

[Credits rolling]

[Music playing]

[Singing]

At home in the bathroom, when we're swimming, there is science,

Outside at the playground, in the sunshine, there is science.

Wake up.

[End of audio]