January 2021

Floating and Sinking

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This project began when B was interested in filling a container with water and placing polar bears inside. We observed that most of the polar bears sunk but the largest one had floated.

This was an unexpected result and led to a discussion that the large polar bear must have been made from a lighter material. This led us to providing an activity so that the children could investigate floating and sinking in depth.

A variety of objects and materials were given so that the children could explore which of them sank and which floated in the water.

To develop this further clipboards and paper were provided and J and A drew the water containers and represented objects that floated and sank.

B approached the adult with a plastic container filled with water. **"Umme help me it tuck"**.
"What's stuck B?" He replied **"lid"**.
The adult unscrewed the lid for him and asked him "B why is the container filled with water?" He smiled and said, **"Polar bears wimming (swimming) in the water"**.
"That's a good idea B".The adult then commented "I can see a ribbon in the water". B giggled and said, **"Polars bears atching it U"**.
B took the container to the winter display. "Can I join you?" said the adult. B said **"yes"** and the adult noticed that he had taken the ribbon out of the container and added a chain with an explorer figure. **"U look man wimming with polar bears"**. B appeared to be using the chain like an anchor.
The adult asked B "What is the man using to catch the polar bears with? He replied **"I dunno"**.
"I think he is attaching a chain to the polar bears. Why has the man attached the polar bears with the chain?" B replied, **"ecause** (because) **the polar bears ight** (might) **run away"**.
B pointed and said **"That polar bear floating"** he then pointed to the bottom of the container and said, **"These polar bears sinking ... that man floating as well"**.

B continued to explore the floating and sinking display.

He took all the objects out of the water and sorted them into the correct boxes. The box with the floating objects was full.

B commented **"Look we need more sinking ones"**.

Z came to investigate which objects float or sink and said to the adult **"I choose this one…the lid it floating"**. The adult asked him if he could choose an object that is heavy from the tray and he nodded his head and picked up the rock and put it in the water **"It sinking"** he commented.

Z took the rock out of the water and put it in the box with the rest of the sinking objects and said **"It go here"**. Next Z tried something different; he chose a plastic container and put it in the water and he observed it floating. Then he filled it with water and it sank. Z explained his findings to the adult "**When I put water in it sinks, I take water out floats"**.

A picked up the ping pong ball and put it in the water, "**ball floating**" she said.

The adult asked her "Do you know why the ball is floating?"

"It got water" she replied.
"What happens if you push the ball down to the bottom of the tray?"

"It ome (come) bat (back) up".

A then forced the ball to the bottom and

L experimented with adding different objects to the water and noticed the plastic container floated, **"That floating"** she commented.

She discovered which other objects were light and would float and which were heavy and would sink, **"It sinked down"** she remarked as she watched how the different objects behaved in the water.

I was showing interest in this activity. At first he was confused which objects would float and which objects would sink.

The adult gave him a light object and a heavy object to hold and asked him to tell her about them.

I pointed to the stone **"Stone heavy"** and then pointed to the cork **"That one light"**.

The adult explained "The objects that feel heavy will sink and objects that feel light will float".

With help I put the stone in the sinking box and the cork in the floating box. He then placed the feather in the water and discovered that it floated and he placed it in the box of floating objects.

A picked up a pine cone from the tray and put it in the water. Then suggested **"This one gonna sink"**. When it did not sink she realised it floated and commented **"no it's floating"**. She then picked up a bottle and put that in the water; **"This one can float I guess"** she said. A had predicted correctly the bottle was floating.

A then commented **"I'm going to do something…look the bottle is sinking now"**.
The adult asked A "why is it sinking?"
"Because it water in it" she replied.
If the bottle is not filled with water what's going to happen? **"It's gonna float"** A replied.

I chose two objects and put them in separate containers. He pointed at the container holding sunken objects, **"I think the stone go that one"** he commented.

I held objects in both hands, he remembered from the week before what the adult had explained to help him understand which objects floated and which sank. I said **"Which one heavy Umme…stone…cone?"**

He pointed at the container holding the sunk objects and commented **"I think the stone go that one"**.

He then pointed at the container holding the floating objects, **"Pine** (pine cone) **go that one…look what I am doing!"** I picked up all the objects from the tray and put them in one of the containers.

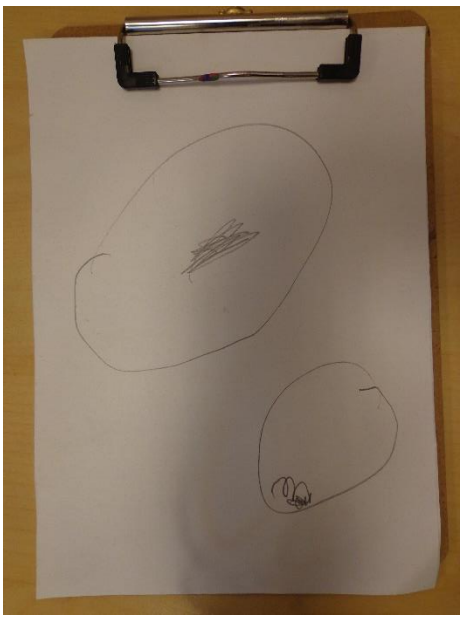
"What are you doing I?"

"Look everything is floating".

"Yes I most of the objects are floating and I can see a few objects have sunk".

A picked up several objects from the tray and put them in the water.
She watched what happened to them and commented **"It gone up…it gone down…that sink to bottom"**.

A was looking at the pictures displayed behind the activity.
She then moved the picture of the balloon across to the top of the water that represented floating and commented **"A balloon floats"**.
She then moved the picture of the brick across to the bottom of the water that represented sinking and said **"A brick sinks"**.
A continued sorting all the pictures and when she had finished she commented "**That's all sorted now**".
The adult asked A "Are you sure the bottle sinks?"
She replied **"Oh no it's empty, it floats"** and moved the bottle to the top of the water.

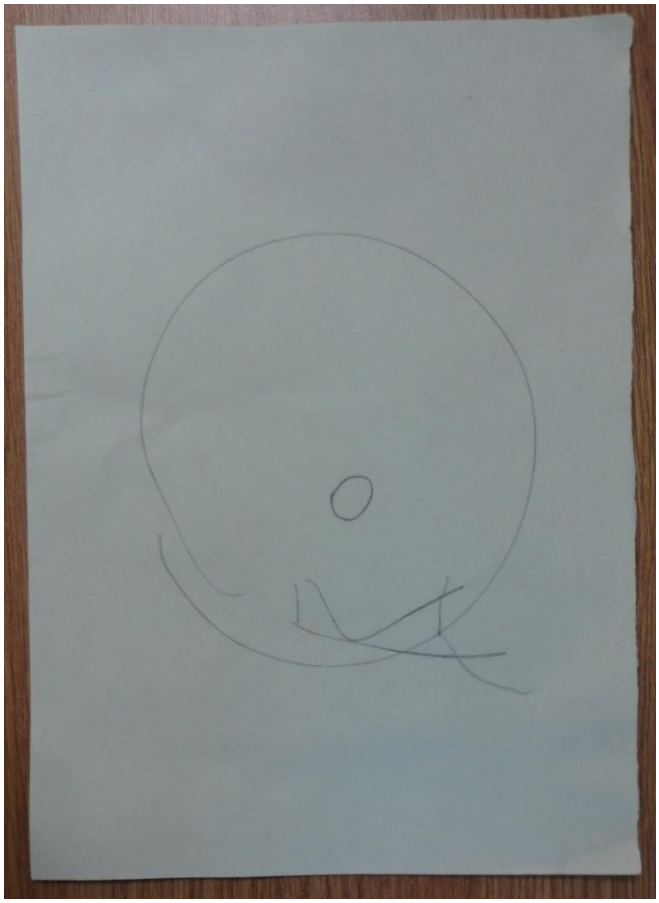


J put a tile in one container and a cork in the other. He began to draw what he could see and when he had finished he showed the adult; **"One sinked…one float"** he commented.

The adult asked J to explain what marks he had drawn and he showed her that the two big circles represented the two containers of water.

He then pointed to the objects he had drawn inside the circles and showed the tile which had sunk at the bottom and the cork which had floated at the top.

J continued to explore the floating and sinking display. He placed a tile in the water and commented **"It sink because it doesn't have no air"**. "J do you know why some objects float?" said the adult. **"Because it have air"** J replied.



A was drawing on the clipboard and explained to the adult what she had drawn. **"I put in this box…that a bottle like that"**. She had drawn a big circle and inside she had drawn a ball floating and a sunken tile, commenting **"that a ball floating…that tile sink down"**.