Exploring pathways

Wingate Nursery

The starting point of the project was the children's interest in the outdoor sandpit. Over a period of weeks they had been developing their play, carrying water to the sand from the outdoor tap. They were enjoying this activity, the fetching and carrying, but the water did not build up very quickly, and kept soaking away.

A water supply was set up as an offering to the children. First of all containers with taps, and then a hosepipe that fed into a long drainpipe, provided a continuous flow of water into the raised sand boxes.

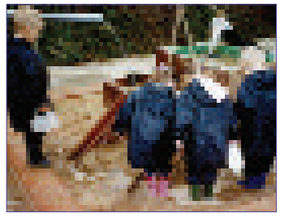
Before long the children began to set this equipment up themselves – they worked together to connect up the water supply as they needed it. They could go outside whenever they wanted to, with waterproof clothing at the back door, so they could work without having to think about getting too wet.

Beth: "Let's make a lake".
Hannah: "Yeah, it's going to be a pond".

"The river's not working."
Why?
Zoe: "Cos you need more water."

The water was leaking from the top sandbox, creating different watercourses, which the children were blocking and unblocking, controlling the flow of water in different ways. They used wood from the wood pile to build bridges, and to divert the water, creating lakes.

The children noticed that the water was disappearing, the water in the river was not staying there, it wasn't flowing away either.

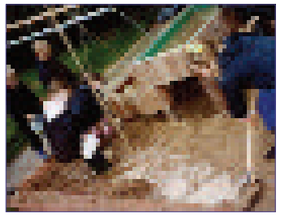


The accumulation of water is great fun for plodging.
Beth: "Hoo hee hoo this puddly wobbly pond, splash, splash".
This becomes a song as Hannah and Aaron join in.

The children asked themselves "Well, where's it going?"
They began to look for explanations.
Hannah: "There must be too much sand for the water."

Zoe was committed to creating a river, her solution was to keep on digging, scooping sand out. As long as she kept on digging the water seemed to rise. The other children began to consider why the water was disappearing. Zoe began to extend her river, she was very adept with the spade and lengthened her river.

The children drew upon their own experiences of water changing its state to explain the phenomenon. They were drawing on explanations they had for other things – the sun drying water on the playground, ice and snow melting and turning into water – they were bringing together everything they knew about water changing to see if they could explain it in any of these ways. They had other hypotheses about what happens to water, not all of them corresponded, but they were all related to water changing.



Beth: "It's sunk, the sun melted it over".
Adult: "But where is the sun?"
Hannah: "It's hiding behind the cloud".

The children were also interested in making the water go faster. Again they drew on their own experiences to devise strategies to make this happen.

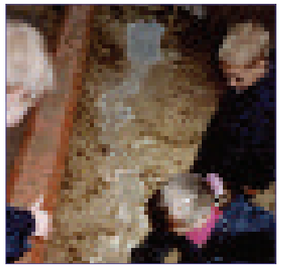
Beth: "The water goes faster down here because it's slippy."
She had the experience of slides, so was able to give her own explanation, construct her own hypotheses.

Hannah tried watching the water closely to find an answer to the problem of speeding up the flow.
Hannah: "We can make the water go faster if we make waves. (pointing at the drain pipe). That is faster because when it goes down it goes faster there and when it gets here (the sand) it goes slowly".

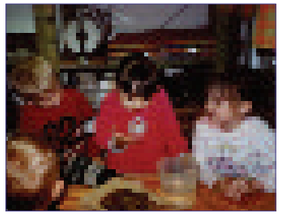
"It's when you take the blocks away that the water goes faster."

After the session the children gathered together to reflect on the morning's happenings.
K asked " What happened today, where did the river go?"
"It went into the sand, the water dried it out."
K: "Is sand good for water to run on then?"
"No". They all knew that.

In order to help the children answer the question they had posed themselves –"Where does the water go to?" – K set up the sand indoors, and the children were offered the opportunity to experiment with water and different materials, some porous, some non-porous.



Hannah pointing at the sand to show where the water flows slowly. Zoe: "I digged a big hole then it comes in here. I dug it along and through with the spade". Hannah (uses her hand to stop the flow of water): "If you close this it wont come out".



K lies hessian over the box and pours sand on top. Hannah, sensing a bit of an experiment and maybe what will happen next, pours water on the sand. Beth: "if you mix sand with water on hessian you get cement". K: "How is that going to make cement?" Beth: "Like the thick sand mixture", (indicating the stuff in the sand pit outside) K: "Why do we need cement?" Beth: "To build with". Luke: "To make rivers to hold water".

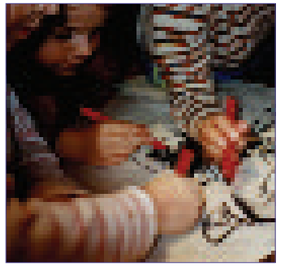
K: "Is this water running through?" Hannah, and then the others: "Yes."

The children continue their mixing activities.

Following this discovery they made quite sophisticated containers from the clay, and the clay containers held the water. They became quite excited by the result of their experiments, and collaboratively they drew a picture of how they might build clay pathways for the water. They speculated that if they put the clay down in these patterns in the sandpit then the water would go along on top of the clay.

K: "What about this?" and she offers the children some clay. Hannah and Beth flatten the clay and make it into a bowl shape. They try it out and so do Zoe and Luke.

Luke: "The water won't go through, look."



Zoe: "Haven't we had a lovely day."

The group were highly investigative and collaborative. They had had great fun together, and when it was suggested that they could make a map of what had happened that morning Beth ran for paper and they moved into another room to draw.

K went to the local brickworks and was given bags of rough clay which were left outside as an offering for the children when they came in the next day. They began laying it down in long channels, then scraping it out, creating the waterways they'd drawn. They practically covered the sandpit in waterways and channels.

This activity continued for two more weeks. It gave them tremendous satisfaction.