



Revisiting some of the work the children had done involving clouds last term, we worked on developing our understandings about clouds further through a science experiment. Martin was keen to be a science assistant and helped set the experience up, removing the ice cubes from the trays and Jack stepped in to help him 'I can help with that too', announced Jack. Whilst the setting up was happening John told a fictional story about some animals observing the sky, looking for clouds, in order to set the scene. Safety is always a priority when conducting experiments and Catherine spoke about the importance of everyone not touching the hot water. Finn observed the steam rolling off the top of the container of hot water (which Catherine held onto) and said 'It's hot, hot, hot'. 'These are not hot', said Martin as he continued to plonk the ice cubes into a bowl.



The children were interested in the materials and referring back to his story John encouraged the children to think of the blue food colouring in the water as the ocean. Lena S. poured it into a glass jar. We asked the children what they thought would happen when the hot water was added, the hairspray and the ice on top of the lid (after sealing it) as part of encouraging them to create a hypothesis.



'It will melt', said Lena S. focussing on the ice. 'It's blue', said Emilia L. focussing on the water. Many other children also said 'It will melt!'. With no further hypothesis the hot water was added to the jar as well as a spray of hairspray and the lid was quickly placed on top and secured. The final step was to place the ice cube on top of the lid. The children were encouraged to see what was happening inside of the jar and Catherine held it up so that they could see. 'That's gonna be cold!', exclaimed Finn. Catherine reminded the children to think of the blue as the sea and above this as the air. 'It's all white', said Emilia R.



John suggested doing the experiment again, this time without the hairspray. Again the blue colour was poured into the jar (by Emilia R.), the hot water was added and the lid placed quickly on top. 'Now the ice!', called Martin. The children were encouraged to look again and express their thoughts. John asked why there was not a reaction this time. 'It's cause we have to wait', said Axelle. We decided to wait a bit longer, at Axelle's suggestion but still nothing happened. 'It's cause we didn't put this in', said Axelle pointing to the hairspray. Tom affirmed Axelle's observation and added his own interpretation....'Der Spray macht das. Das Meer gibt auch Schaum, durch die Wellen, die auf das Wasser schlagen und diese Weiß machen, wie die Wolken'.



The experiment was conducted again so that the children could see the reaction when the hairspray was added. 'It's the Antarctic', said Finn. 'It's clouds', said Billy.



'It's a tornado in there', said Axelle. John asked why they could see the air moving. 'It's steam', said Billy. 'It's cause the water is making it move', said Axelle further. John asked what it was changing and he made an interesting observation that the glass with the hairspray added retained the heat more than the one that did not have it. 'It's getting hotter', said Axelle. John asked if the air was hotter.

'A little bit of hot and a bit of cold', said Axelle. 'Like a bit of both', added Billy. 'Just like a volcano', said Axelle, focussing on the movement of the air in the jar. 'But it's not erupting', said Billy.

'When the sun comes out it gets warmer and warmer', explained Alexander. Using Alexander's understandings, Catherine explained that the sun heats up the water and that forms clouds, as can be seen in the experiment. John explained that the hairspray enables us to see what is happening with the air.

The children were then keen to conduct the experiment again and as the lids of the jars were removed and the water which had now cooled was emptied out, they focussed on the smell.

Sebastian had emptied one of the jars out in the bathroom and was smelling it on his way back to the table. 'It smells like something', said Axelle. 'It smells like orange', said Emilia L.

Emilia L. poured the blue water into the jar and again the experiment was created. 'I see the clouds', said Billy and everyone agreed that the water and the air inside of the jar certainly represented clouds being created. Again John ( in German) spoke about how the warmth from the sun on the water heats it and when mixed with cool air that clouds are formed.



Here the children had the opportunity to work through the cycle of research, to hypothesise ( something we are still very much focussing on within experiments) and to observe and describe what they could see. Links were made to what happens when clouds are formed and how this works and although this is an abstract concept, many of the children were able to make the connection within the discussions. We will continue to offer experiments as a means of engaging the children in this cycle. Next steps will be to have them record their observations and any results through pieces of drawing/mark making or writing.