

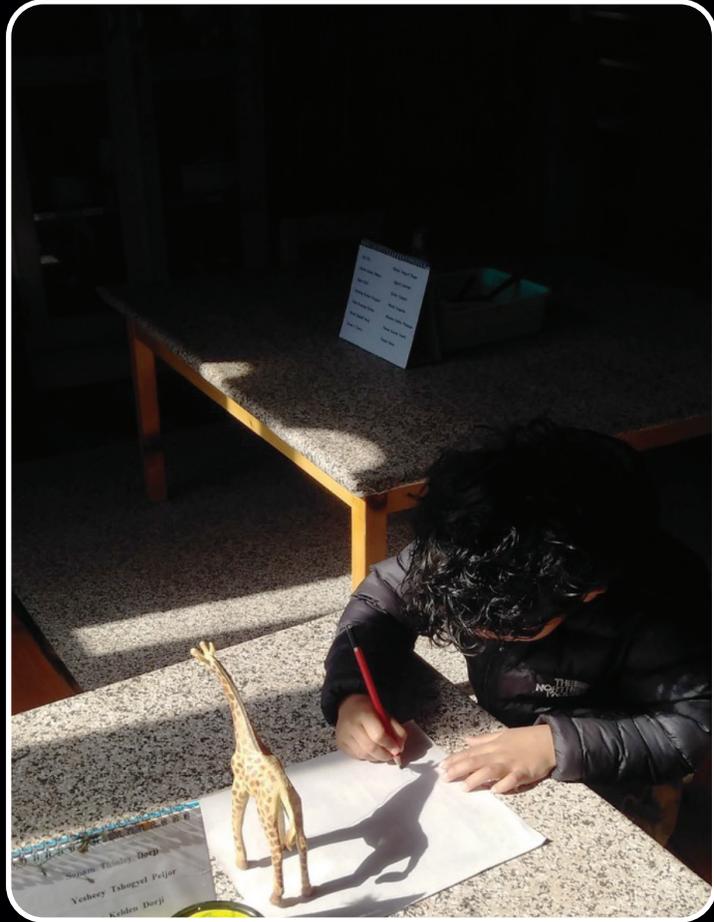
Shadows by Yeshi and Lalita



Sometimes projects arise spontaneously from something a child has noticed or is experimenting with. An observant and knowledgeable teacher will see the potential for extending the child's idea and including other children in the study.

One morning a child noticed the shadow of the plant on some paper on the drawing table and carefully copied the shadow with a pencil.

The two children found some other things that left a shadow and drew these as well.





Soon other children became curious and joined in the drawing of shadows.

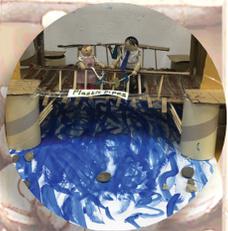


The teacher encouraged them to extend their thinking. She wondered if everything had a shadow. Did trees or houses have a shadow? What makes a shadow?

The children were intrigued and spent several days finding things to trace the shadows.

They noticed that the shadows were not so clear if there was not much light. They noticed that the shadow was not exactly the same as the object. Some objects made better shadows than others.





We sat outside in the sun and observed our own shadows.

The children shared their ideas and what they noticed. Discussing their shadows engaged them in further investigation.

The children had a lot of prior knowledge about shadows and their shared understanding was supported by taking time to discuss their ideas.

One child said, 'a shadow will always come with us', another said, 'shadows copy us'.

The teacher rolled out some bigger drawing paper and the children traced the shadow of railings. They also took note of where the sun was.

'Just above that tree'.

Later in the day they went back to the same drawing to again trace the shadow. The children were surprised to see that there were changes in the position of the shadow. Their previous drawing no longer matched the shadow.

One child explained, 'it's because we went inside'. Another said, 'time is running'. And another said, 'the sun has moved. It is not in the same place as before'.





Next day the children worked in pairs to draw each others shadows. They had to figure out the best place to place their paper. As they drew they talked about the shadow.

They noticed that the shadow was darker in the middle and sometimes fuzzy on the edges.

They noticed that they could only see the outline of the person. Their eyes, mouth and nose were not visible in the shadow.

These noticings and discussions involved high level thinking and the acquisition of a lot of new vocabulary.

Because the interest came from the children they were more engaged in the learning.



Exploring how light travels through water but not sand





Also exploring how light travels through dirty water but not sand and the shadows each makes.

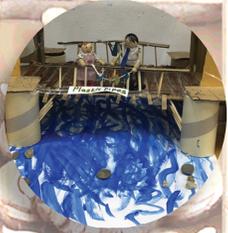


Next the teacher introduced the idea of a shadow theater. They used some of the animals and plants they had already drawn. Together they made up a story and put on a performance for their peers.

They learned how to place the objects and where to shine the torch to get the clearest shadow.

Supporting the children's ideas gave the children a real sense of accomplishment and confidence. It is important for children's initiative that they learn to set their own challenges and not always wait for direction from the teacher.





Testing the best positions for the object and the light

This child initiated project was thoughtfully supported by the teacher. Learning became a rich dialogue between the children, the teacher and the topic. The teachers role was that of a 'guide on the side'. The teacher recognised that the children each came with their own set of knowledge about shadows and her role was to make sure each child was heard and acknowledged for their contribution. For these children knowledge was constructed within a community of learners rather than mindlessly repeating facts given by the teacher. Children were encouraged to raise their own questions and pursue an answer. Learning was meaningful and memorable. The teacher's role was one of manager and provider of materials and suggestions. This way of teaching supports higher level thinking, independence, creativity, collaboration and self regulation. These are essential life skills and the foundation for developing adults who are innovative, resourceful and productive.

