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## Rays of Light

How do we interpret light? The artist, the writer, the actor, the scientist, the mathematician, the poet, the filmmaker...

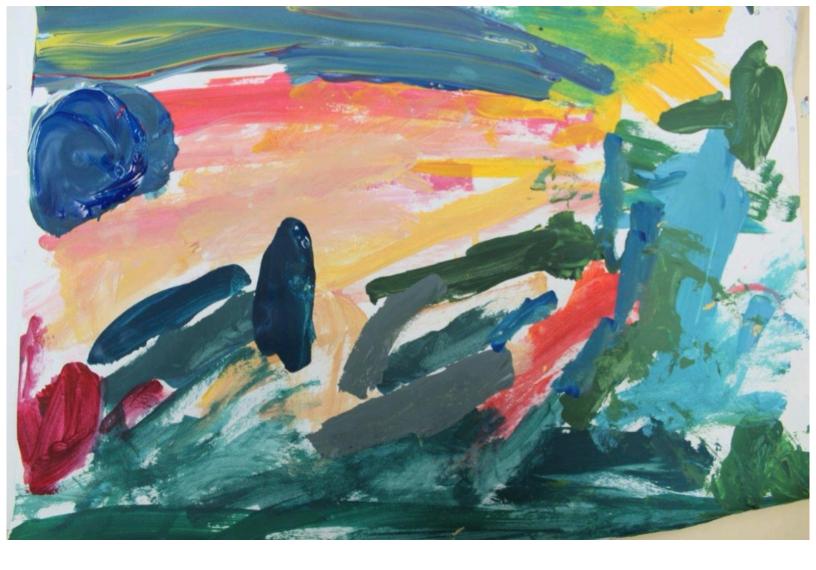
At the end of a school as we were leaving for the summer holidays one of my colleagues, said to me- ' What about light?'

What were the links and questions to uncover, which would go beyond the rudimentary facts that could be answered from an internet search engine or a 'How to book'. We questioned ourselves about light; as a commodity, light in play, light as time, light as survival, light as growth, light and culture, light and spiritual significance, light and science. These discussions continued amongst ourselves over several months in clarifying some of the provocations we would share with the children to elicit their curiosity and the developing of their theories and to further our own research and wonderings.

Light is there for you if I came to life and there was no light I would bump so everyone needs to see where we go. The sun is actually white in space. Yes it's like that in my brother's space book. There are more suns at the night time all stars are far away suns.

We also referred to several periods in Art history where the use of light by artists in the subjects of their paintings.

The art movement known as Impressionism offered both ourselves and our students a provocation which not only spanned the learning of new techniques but questions about ways of seeing. Today we may take these ways of seeing for granted, however in the past these points of view ostracized many well-known artists from their patrons, politicians and public alike.





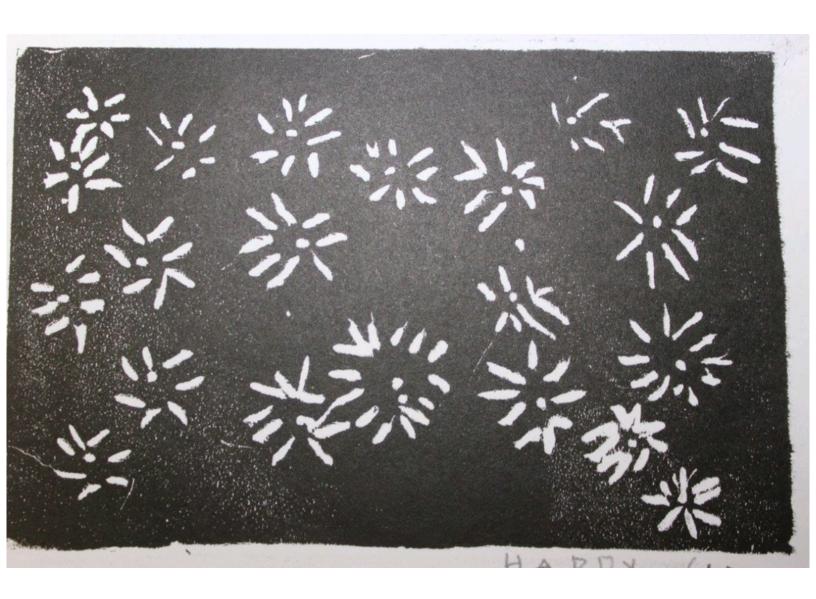


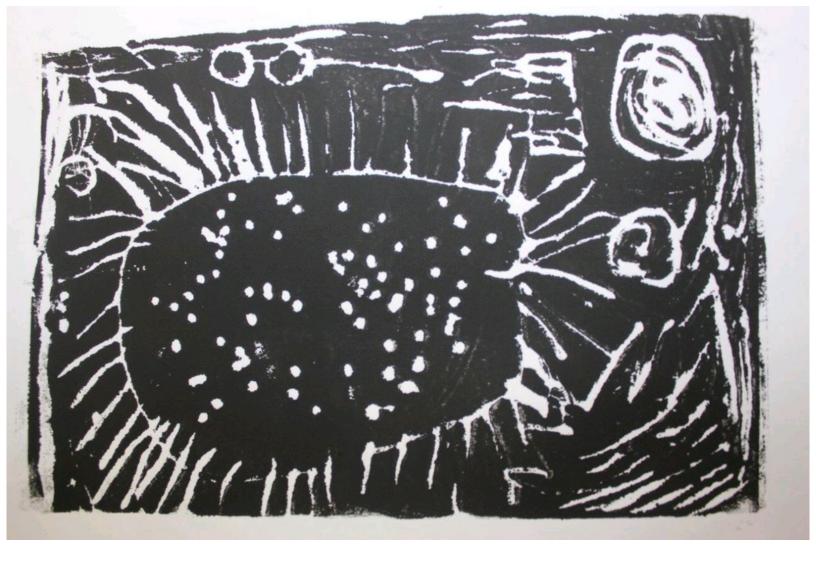
The opportunity for light to 'open our eyes', discover and search further was our intent for the preps as groups of children went beyond the classroom to 'search for the light' that may be 'hiding' or discovering the smallest glimpse of light. The focus on narratives, imagination, and curiosity was our intent. When you sleep you close your eyes and you can see too... The groups used iPads to photo and film their observations and discoveries this documentation was revisited back in the studio where many more questions were posed by the children. Their observations of light and dark, pattern in shadow from

surrounding architecture or natural terrain together with the position of themselves prompted groups to revisit and discuss these events.

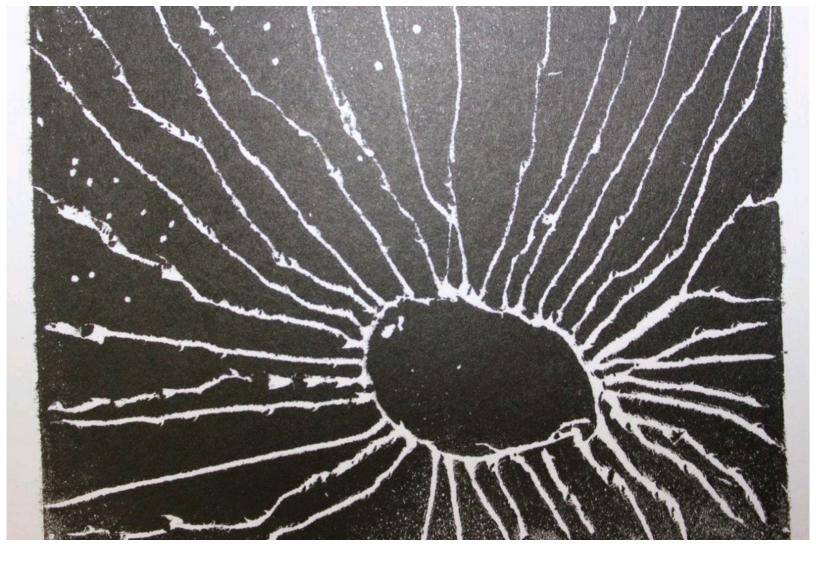
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The mystery of dark and light was further explored through the technique of etching where a single engraved line could conjure an element of suspense. At the same time we embedded skills to assist the recording of the children's observations and imagination together with new relationships with these materials.











As the children began to paint the light they had described they discussed each other's knowledge. They also explored colour mixing and the shades that best described their thinking about a particular light and its effects. My paper is white so if I paint with white paint you will not see the moon I am painting. I am making it a little grey movie film.

I am painting the moon. There Is more than one moon. No there is only one moon that is what I have painted. The first two planets close to the sun has no moon. Jupiter has nearly 28 moons. Earth has only one moon. I am going to paint the stars. The stars are always there even though you can't see them in the daylight. Yes moonlight is another light.

The light is dusk; Sunrise. Light is sunlight. Shadows are there. In the middle of the day there is no shadow. Light and is time. The moon moves around. The world is down below, when the earth goes around the sun. Sometimes the sun is always in front of one country and that is where it is morning. And the country on the other side it is nightime.

During the winter our city celebrated 'The Light In Winter' an annual month

long festival where this year we saw in the middle of the city a large steel sculpture entitled, 'The Helix Tree' by artist Bruce Ramus. At dusk this 'tree' would light up with series of coloured lights running up the tree in response to sound and pitch. This was a unique opportunity to discuss further the many elements and concepts of light we had been exploring.

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Visiting the enormous and imposing space at the NGV offered children discussion about scale, mathematical concepts and the awe of the brilliance of vivid coloured light shining through to the walls. One could not help as many do to ponder the designs, colour and light and lay on the floor gazing and refocusing on a new area of the ceiling and the light filtering through.

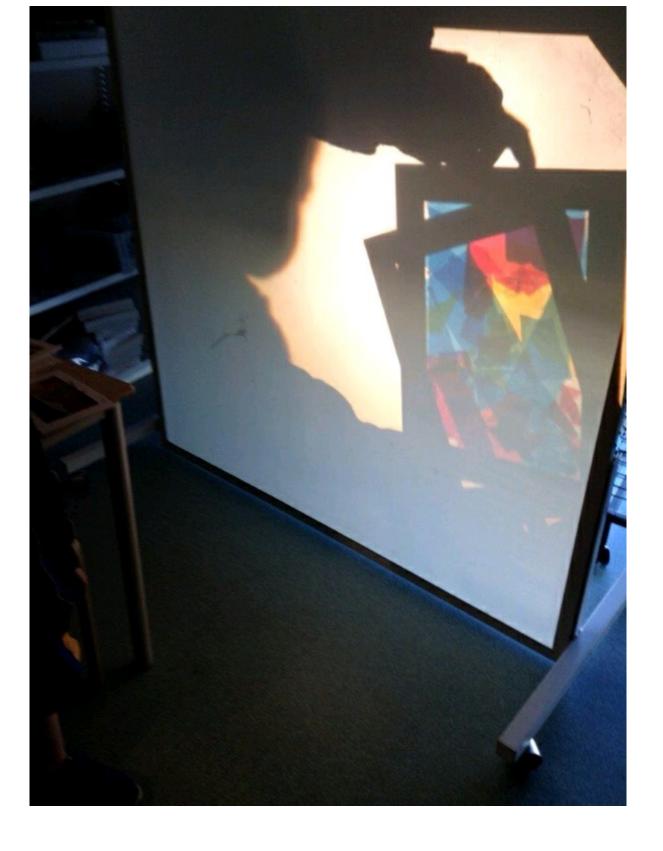
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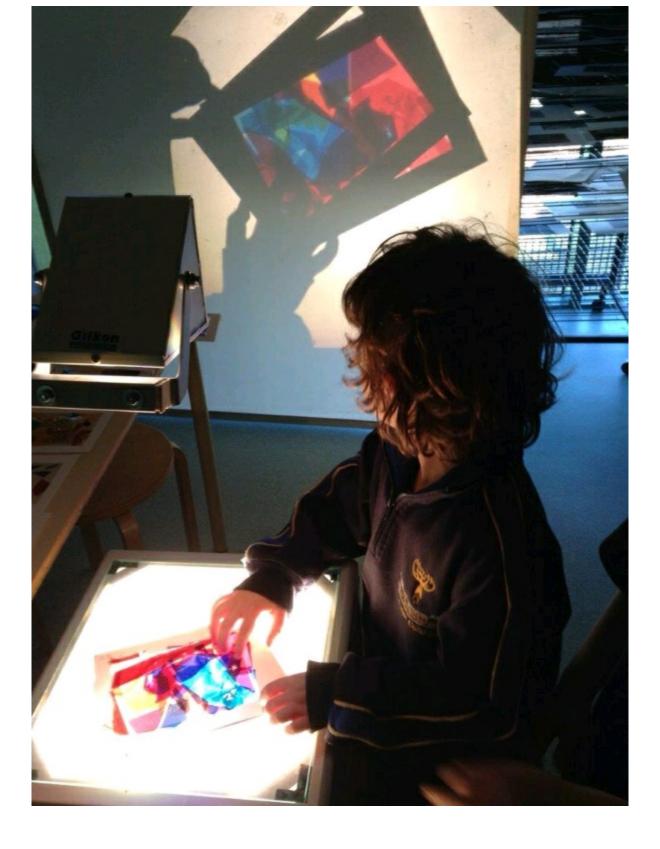
And now as the prep year is nearing its final term, our children, teachers and parents are exploring Melbourne landmarks and architecture, what materials catch and reflect the light, how does shape and pattern support the design and intent? The continuation of this investigation will remain not as a topic rather it is now embedded in the learning as another element to consider and draw upon one's knowledge when required to meet new questions and investigations.













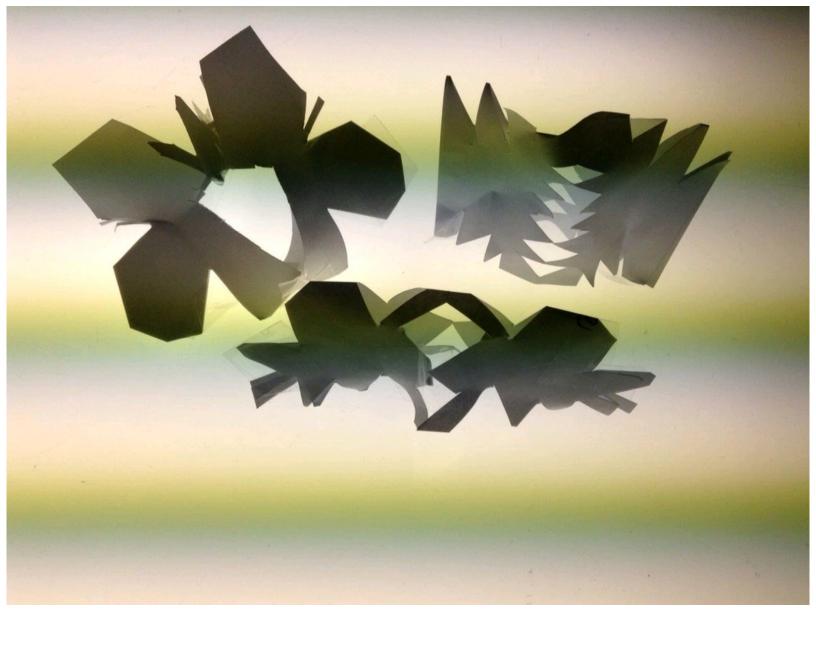




# **Holders of light**

















## Small group work video

A small group of children coming together to discuss, draw and animate the movement and light of the sun, moon, stars, earth and clouds highlights the significance of these interactions.

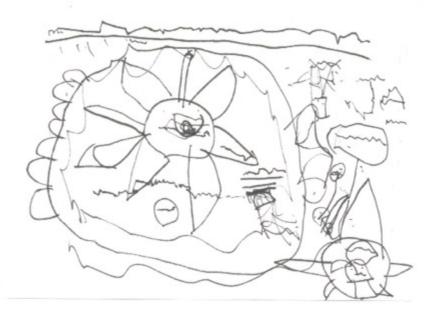
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## Step inside

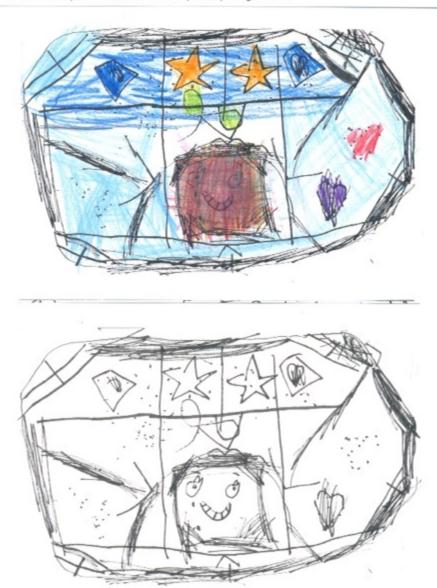
Step Inside Routine: The children were asked to imagine themselves as a source of light or object that is affected by light, to step inside and imagine themselves inside that point of view. This routine helped the children to extend their thinking and look at things differently, making abstract concepts come more to life. In this way the children were able to apply what they had gained through discussions and combine this knowledge with their imagination.

James: I am a star. When it is morning I hide behind the clouds because it is too light and it hurts my body. When it is night the sun gives me a hot snack so I can be light and then me and all my other star friends go and shine in the night sky. The moon helps us a bit by shining with us. It is hard work being a star when it is night, because I need to be quick to shine. I feel warm and pointy.

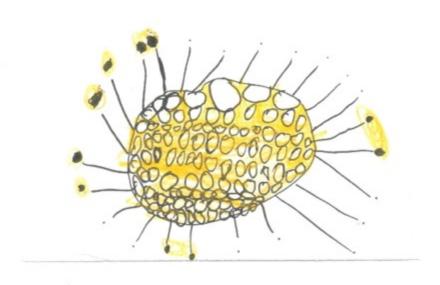


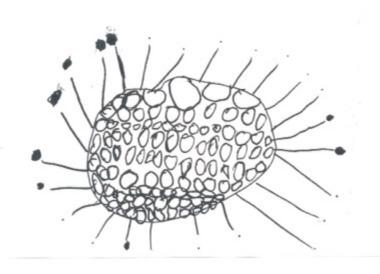


Mika: I am the earth and the stars are all around me. I feel good because I am big and lots of people are in me. I give them somewhere to live. I stay in the same spot all the time and all the stars give me their light. I then give the people who live in me light by dropping it down onto them with my big body. I share my light with lots of countries. Plants, people and bugs live on me. I feel warm on my inside and outside by everything in me.



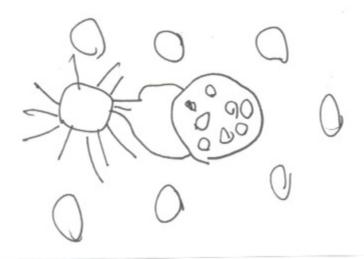
Hugo: I am the holes in the sun. The lava goes through me. It makes the sun hot. The light comes from electricity in the sky and the light goes through me and shines into the sky. I feel hot because the lava is coming through me.



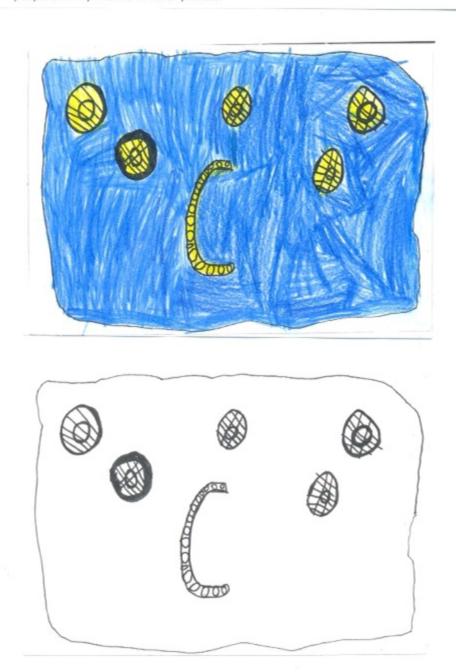


Noah: I am the moon. I feel warm when the sun and stars are shining on me. The sun shines on me and then I shine. I can see the earth. All of the planets are shining around me. Sometimes I show one quarter of my light and sometimes I show a half and sometimes I show my whole moon. I am happy being the moon because I am up high a lot.





Grace: I am the moon. I have holes in me and there are a few planets around me. Jupiter and others. I am shining in the sky brightly, like the colour yellow. I am high in the sky. I have a smiley face because I am yellow. I am made from the sun because when it's light, the sun makes me bright and at night time the sun makes me get more light in the sky. At night I am all alone in the sky and I like being all alone. During the day I look for friends in the other planets. I sleep during some of the day and then play in the sky by making light for other people and my friends in other planets.



Dion: I am a seed. I live under the ground and dirt is all around me. It feels warm with all the dirt around me. I am trying to grow and push up through the dirt and reach the sun. The sun will help me grow bigger. I want to grow bigger and bigger and grow into a flower with lots of colours.



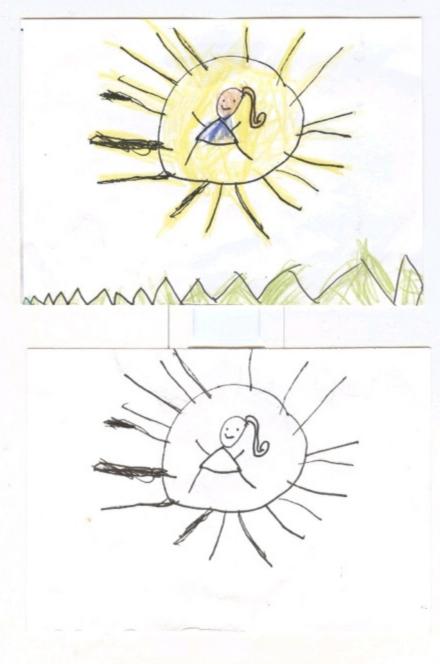
Tall: I am a seed. I am in dirt under the ground and then I grow into a flower. I am comfortable underground because I feel cozy and warm. When I grow the sun helps me have colours. I feel happy and love being with other flowers. I can feel myself growing when the sun shines on my head.



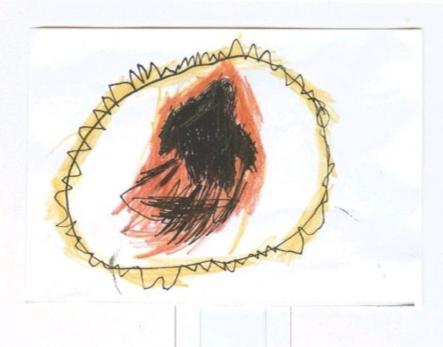
Sascha: I am a star. I am bright in the sky like a ring. I am high up in the sky with other stars. I am a silver colour. The other stars are my friends. I feel proud to be a star because I share my light with the other stars, moon, sun and people who live on the ground. I am made of metal from the sun and I am always shining. I love being a star.



Lexi: I am the sun. I feel hot all the time and I like feeling hot. I help the moon shine by my light going onto it. I shine all day and all night by shining though the moon. I live high in the sky. I share the sky with stars and earth. I can make shadows by shining on the ground with people standing in front of me. I like being able to make shadows and making people play with me.

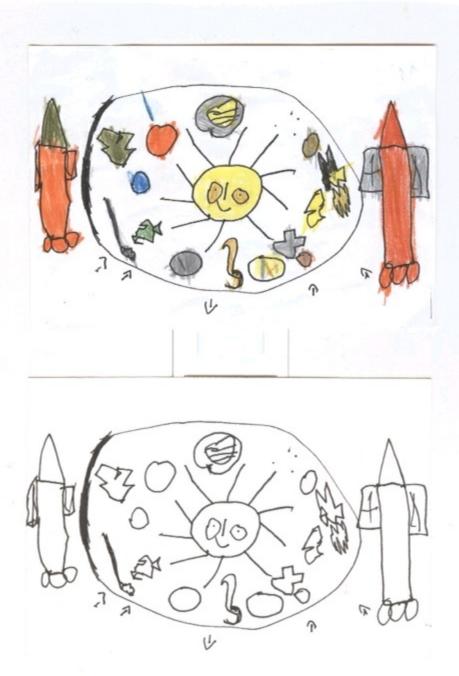


Jay: I am lava. I am in the sun. I make the sun light. I make the sun really hot. I feel hot. I move a lot because I get bigger and bigger and then I get smaller and smaller. There are holes in the sun and when I get into these holes I get smaller and smaller. I can hear a wind from the sky.





Dylan: I am the sun. I am in space. I can see the moon. I look at the moon and the moon shines. It shines onto the stars and the planets. I don't feel lonely because I have the moon as my friend and the stars and the planets. I love to shine because it makes the moon happy and the stars happy and the planets happy.



Jazmin: I am the moon. I am in the dark sky. I feel happy because I am light. I get my light from the sun before it is dark, because when you can't see the sun it shines the light to me. My friends are the stars. At night I am shining on another part of the world.

Liran: I am the sun. I am high in the sky. I am happy being the sun because I always shine brightly, like a star. I like being the sun because I make people feel warm and I help plants and flowers grow. When I shine over the water it makes the water look shiny.

#### **Exploring Light**

At the beginning of this year the three Prep classes began an investigation on light.

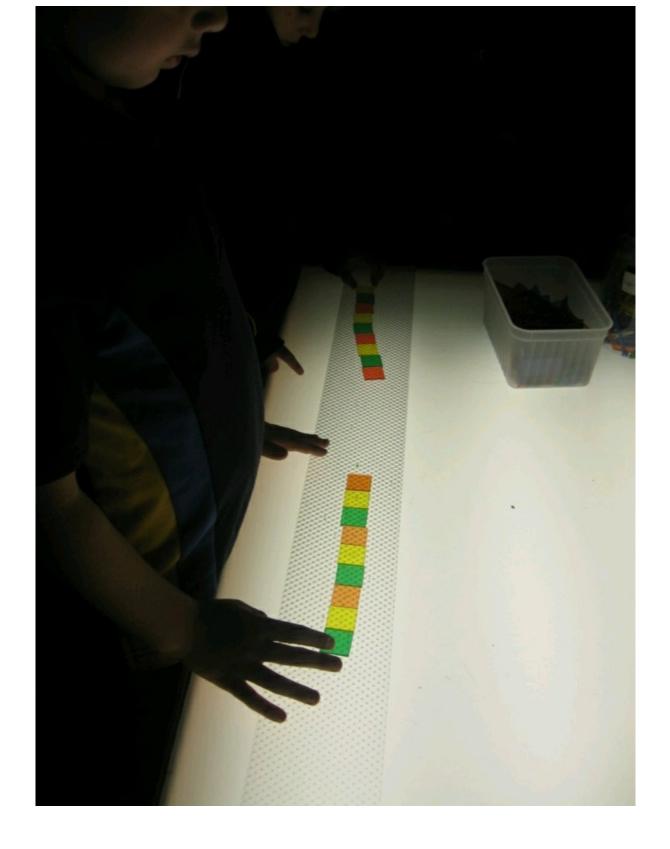
After the children in Prep R has explored the materials and tools we had set up in the classroom and studio it became apparent that they were interested and intrigued by shadows. So began our journey into the wonder, mystery and science of shadows.

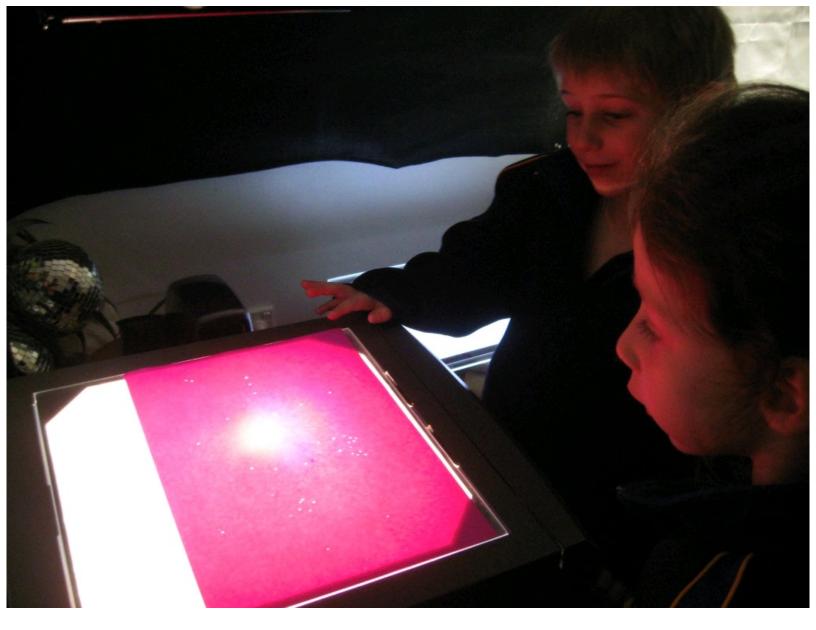
# **Exploring Materials and Tools**

We explored the materials and tools in the studio related to light and colour.











# Using the iPad mini to explore light

We used the apps on the iPad mini to explore light, dark and colour.





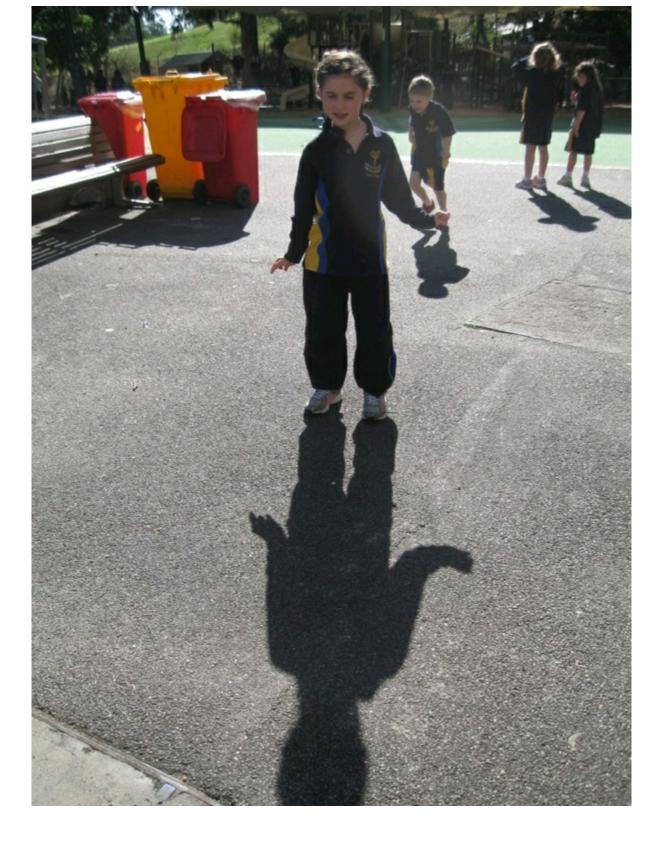


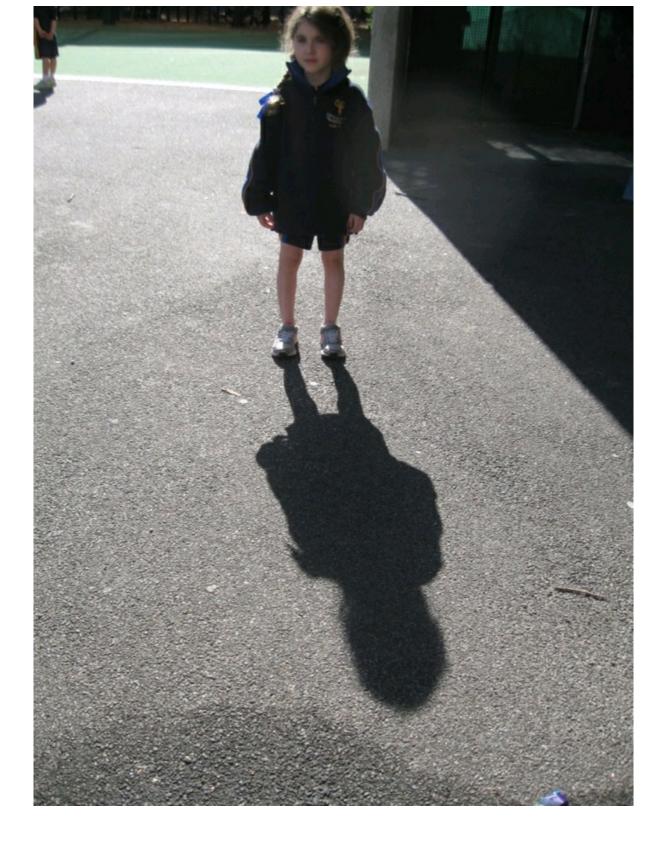


# **Exploring Shadow**

The children explored their shadows in relation to themselves and the sun.











# **Drawing our Shadows**

The children drew themselves and their shadows after looking at photos.





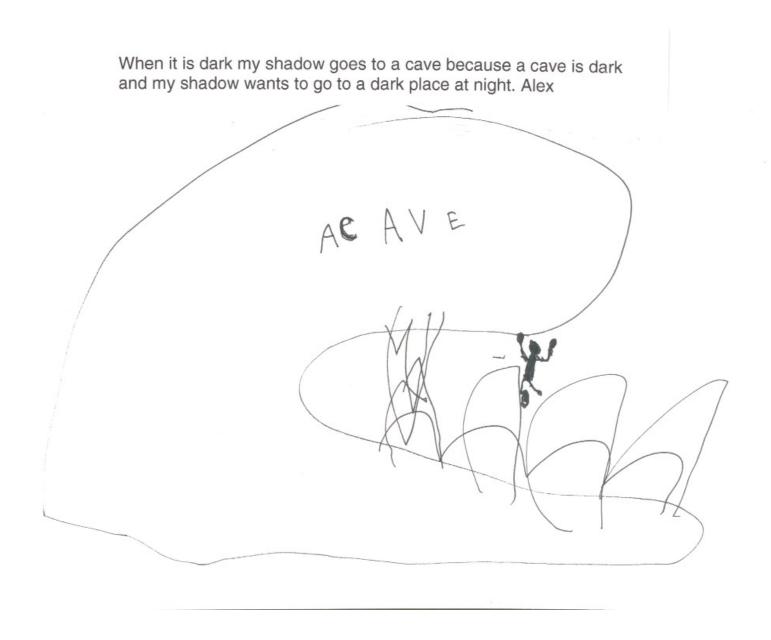




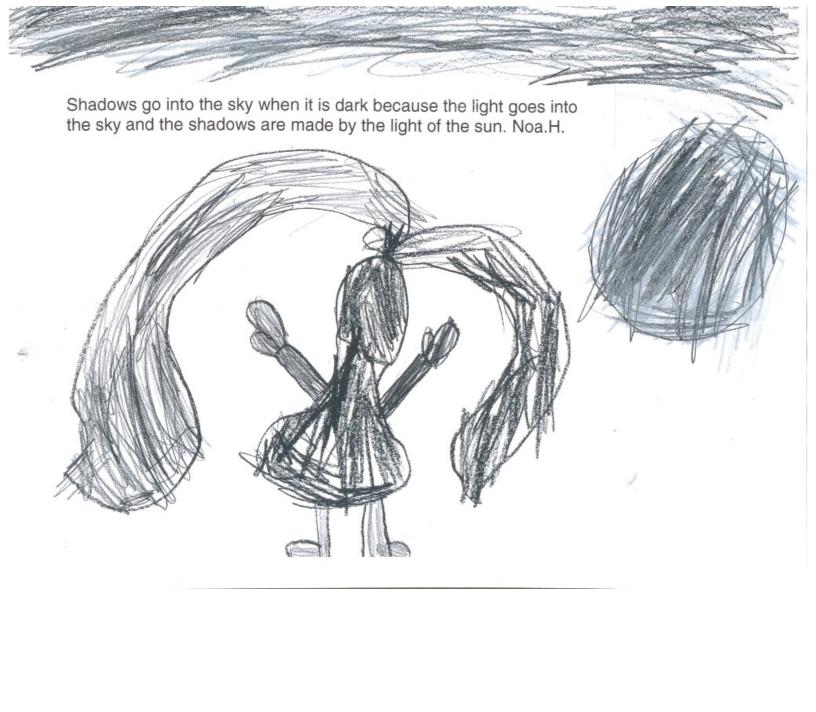


#### **The Mystery of Shadows**

The children were fascinated by the mystery of shadows and one of the questions they asked was where do shadows go at night or when it's dark. These are some of their answers and drawings.









When it's dark my shadow goes to Butterfly land because when it's dark on earth its light in Butterfly land and the shadows want to be able to see each other. It leaves Butterfly land when it gets dark and comes back to me because when it's dark in Butterfly land I am light. Sophia



Shadows are made by the body. The arrows show you which direction the shadow goes. The shadows go into the ground when it's dark and you can't see them. Woody



#### **Continuing the Journey**

Our exploration of shadows continues and the children are currently looking at the length of their shadows in relation to the length of themselves depending on the position of the sun.













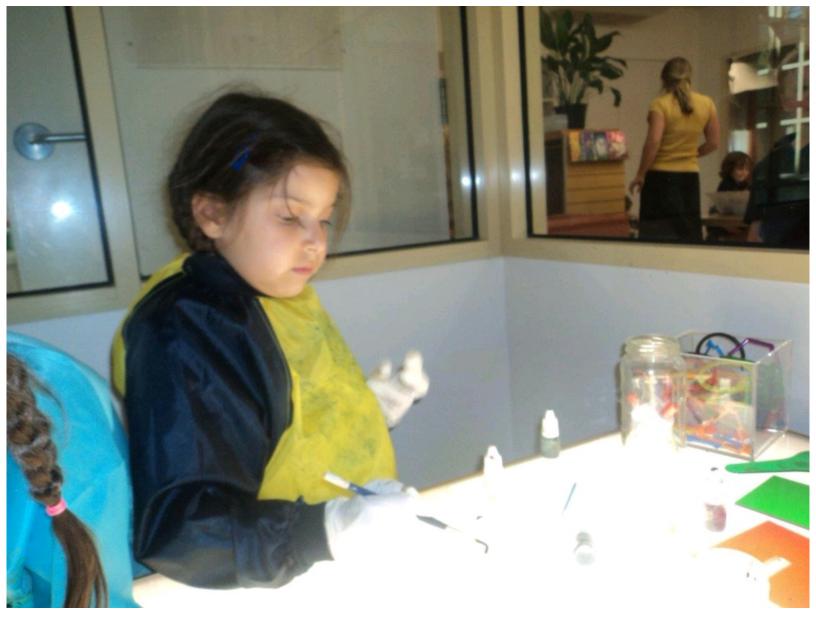
#### Prep Z

# Things can look beautiful in the dark?

It's way too easy when you can see, it is more fun and difficult when you can't.

After creating various different lanterns and studying the effects of a glimpse of light, the children recognised the importance of the shimmer of light when we are in the dark. The children were curious about their own and others' differing experiences and feelings when they were in the light or the darkness. They pondered, is the darkness important? What is important about the dark? And, where does the dark go?



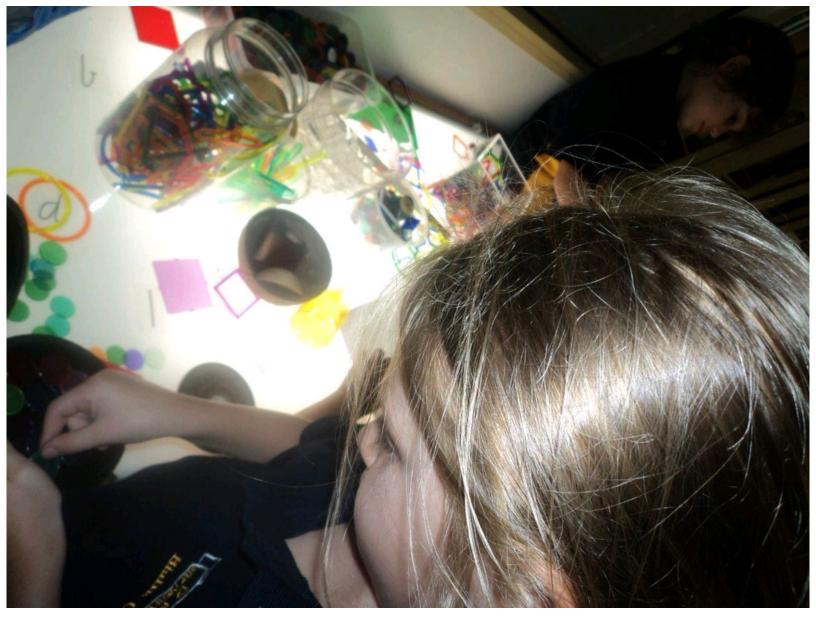












The children were curious about their own and others' different experiences and feelings when they were in the light or the darkness.

When it's dark time I always keep the light on at night as I am always so scared in the night time.

Light is special because without light people won't see. Dark is special because people will be able to sleep.

The light's going through e dark. The dark is losing as the light is going through.

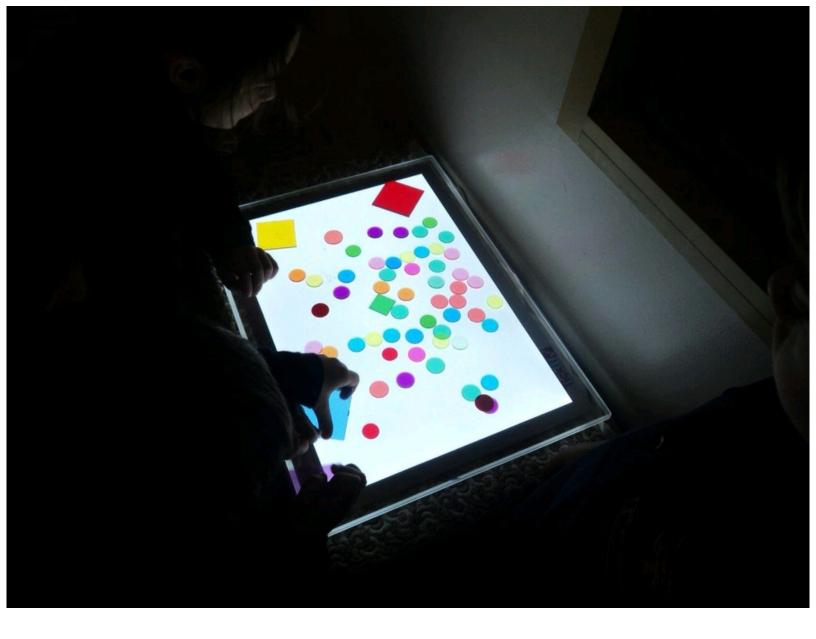






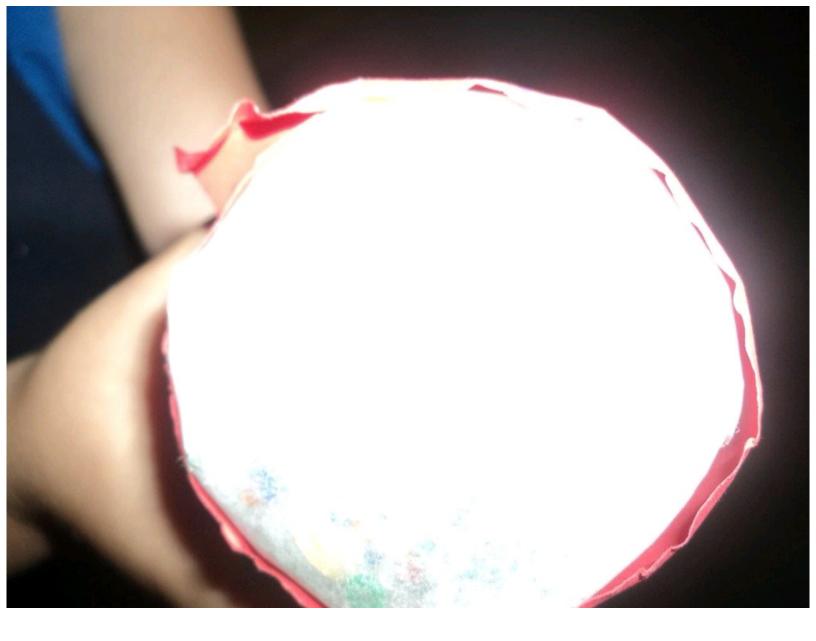
After sometime, the investigation turned us back to the intriguing mystery of the darkness and the children pondered about why we need it.

I love the dark because you never know what's going to happen and sometimes you just go what is that and when you turn the light on you go, what, that was just a book! It is so funny when you jump because when I jump it makes me laugh. I jump because it's so strange. I just wonder why you need dark?



How does the world change when there is dark and how is the darkness celebrated by light?

Without the dark, you would miss out on sunsets and the stars and the moon, and sleep. At night-time you have to sleep, the dark can be boring. However, when there's a star different things can happen in the light because there are dark things that you can't see and dark can be more beautiful then. There is something that makes it special. I like the dark because there was a wishing star and I wish. Things glow in the dark. I can make reflections on my roof with a torch.



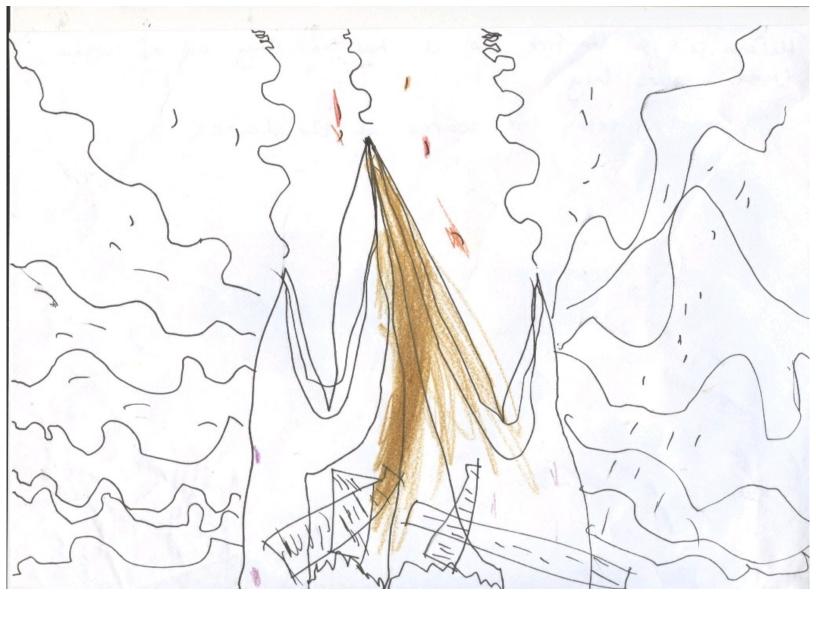
The children reflected on that and drew what they felt about the darkness and the unknown. How does the world change when there is dark? One student commented that the light festivals need the dark. How is the darkness celebrated by light?

This was me playing in the sun. Then it got darker and darker and darker. After it got so dark I was scared. Then I went inside and I got my lamp and when I turned it on it went really bright.

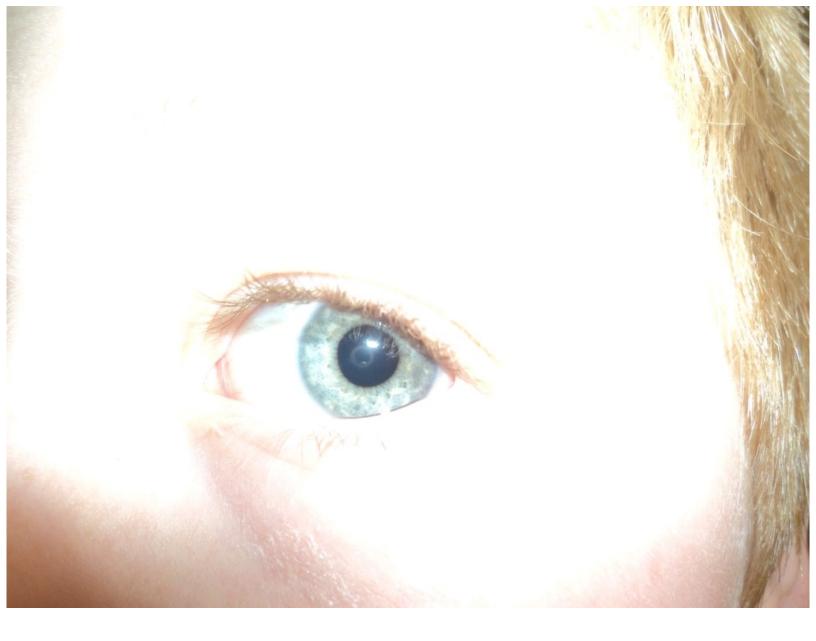
It is a bonfire and it has a tiny bit of light that grows big. I'm a tiny teeny bit scared of the dark.







What is so scary and yet excitingly mysterious about the dark? Does this reflect our own needs to 'see' where we are going? To know what is in front of us? The very annoying thing about night-time is that I always go into fairy land where the nights are darker than here and it makes it easier to see. It's still easy to see in the dark.



So, if there are ways of 'seeing' in the dark. Are there also ways of 'seeing' or empowering ourselves in times of fear, loneliness, anger, disappointment, uncertainty and worry? I questioned the children, what situations create these darker feelings?

Being alone on the playground, not finding my friends, not having a friend, fighting with my family or friends.

These were important concerns to the children so we brought in an expert in human behaviour to work with them. She explained that courage is the light that we need and always hold within ourselves. The ability to be a courageous warrior in our own lives, even in times of darkness and uncertainty. After, the children discussed how they could be courageous warriors in these times and remove the worry from mystery and keep the excitement of the unknown.

When you're sad and scared you need someone to help you, just say please help me. Just close your eyes and relax, take a big breath and blow it out. Stand tall like a warrior.



# **Light Investigation - Hebrew**



'The light in me is my home and my family.'

#### **Prep R Hebrew**

# What makes me special...

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#### **Prep Z Hebrew**

#### What makes me special...

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# When I see the light of the Shabbat Candles, I feel...

Hope: You think of Shabbat.

Michael: Your heart comes true; it means I love to sing the Shabbat songs.

Tali: It makes me think about the songs of Shabbat. It means we are welcoming Shabbat.

Romy: I think bout nature, because I think that nature is special.

Tilly: I think about my cousin.

Ella, because she lives in Israel.

Dean: It feels like I can remember me when I was playing with my old friends from kinder.

Ethan: I think of Shabbat. Shabbat is special because it's a day that we rest.

Noah: I think about my family, because I love my family.

Dylan: I feel hot because of the fire.

Peaches: It makes my heart loves my parents and sisters.

Rochelle: I feel like it's helping the Jewish people, because Jewish people stick together.

Helena. I think of my heart, because your heart thinks of stuff that I love.

Asha: My heart feels I have a rainbow in my whole body. I think about my

family because my family is anything I can think of when it's good.

Zara: That the sun is out, because it looks like the sun.

Harry: It's so bright, it makes me happy.

#### **Prep L Hebrew**

# What makes me special...

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# And the questions were endless...

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