

Light play

EDUCATION
RESOURCE
2 Aug – 29 Oct 2021



Light Play is a light-based studio designed for children aged 3-8 years.

Light Play lets children investigate the properties of light and how light interacts with different materials.

Light Play encourages collaborative play, creative experimentation and discovery-based learning.

This education resource is designed to support further exploration of the properties of light in your classroom or education setting before, during and after your visit to *Light Play*.

Through the hands on exploration of light and its properties children are able to explore numerous artistic and scientific theories including shadow and colour and texture and shape. Children also are invited to consider the concepts of sight and touch and forward this thinking with investigation into the physical properties of materials.

Pre-Visit



To assist children to get the most out of *Light Play*, we encourage you to introduce some basic concepts...

Light: A natural energy that makes us see things and makes things visible

Translucent: When light passes through something but it does not make a clear image

Shadow: A dark area or shape made by a body or object that is between a light source and a surface

Form: The shape of something

Colour-Mixing: Mixing two or more colours together to make a new colour

Opaque: Cannot be seen through

Reflect: To bounce back light without absorbing it

Transparent: Allows light to pass through so that you can see directly through something (see-through)

You may wish to introduce these concepts through an activity, such as...

- make a collage on clear plastic using a range of materials with different qualities (eg. cellophane, tracing paper, cardboard, etc.). Then hold the collage up to the light and examine the shadows.
- make a simple 'stained glass' window out of cardboard and coloured cellophane.
- make a mobile of shapes cut from a range of materials which interact with light in different ways. Attach the shapes to short pieces of string, then tie the strings to a wire coat hanger. Hang the mobile under a light and examine the shadows.

During Visit

Light Play lets children explore the creative potential of light through a range of simple learning / play activities.



Light Boxes

Investigate the properties of transparent materials on light boxes. Light boxes work best when rich arrays of transparent materials are presented on them comprising of various colours and shapes. Children are then able to create, compose and explore how these materials interact with light.



Echo Tables

Echo Tables are a great way for children to experience the potential of light and new technology. Projectors, mirrors and computer programs create a magical interactive experience where colourful illuminated patterns may be created and manipulated with the wave of a hand.



Over-Head Projectors

Translucent materials retain light on the over-head projectors. Children are able to experiment with solid, semi-transparent, small and large objects to create colourful colour-mixing compositions which are resized to a larger scale with the projection.



Webcam + Projector Light Box

Investigate how objects and the body can be resized and manipulated using the webcam + projector light box. Children can play with the disorientating perspective of mirrors to discover how the reflection of light can create unusual points of view.

Curriculum Links

Year Level	Science	Visual Art
Prep	<p>Chemical sciences</p> <ul style="list-style-type: none"> • <i>Objects are made of materials that have observable properties</i> <p>Nature and development of science</p> <ul style="list-style-type: none"> • <i>Science involves exploring and observing the world using the senses</i> <p>Questioning and predicting</p> <ul style="list-style-type: none"> • <i>Respond to questions about familiar objects and events</i> <p>Communicating</p> <ul style="list-style-type: none"> • <i>Share observations and ideas</i> 	<p>Visual Arts</p> <ul style="list-style-type: none"> • <i>Explore ideas, experiences, observations and imagination to create visual artworks and design, including considering ideas in artworks by Aboriginal and Torres Strait Islander</i> • <i>Use and experiment with different materials, techniques, technologies and processes to make artworks</i>
Year One	<p>Chemical sciences</p> <ul style="list-style-type: none"> • <i>Everyday materials can be physically changed in a variety of ways</i> <p>Physical sciences</p> <ul style="list-style-type: none"> • <i>Light and sound are produced by a range of sources and can be sensed</i> <p>Questioning and predicting</p> <ul style="list-style-type: none"> • <i>Respond to and pose questions, and make predictions about familiar objects and events</i> 	<ul style="list-style-type: none"> • <i>Create and display artworks to communicate ideas to an audience</i>
Year Two	<p>Chemical sciences</p> <ul style="list-style-type: none"> • <i>Different materials can be combined, including by mixing, for a particular purpose</i> <p>Questioning and predicting</p> <ul style="list-style-type: none"> • <i>Respond to and pose questions, and make predictions about familiar objects and events</i> 	
Year Three	<p>Questioning and Predicting</p> <ul style="list-style-type: none"> • <i>With guidance, identify questions in familiar contexts that can be investigated scientifically and predict what might happen based on prior knowledge</i> 	<p>Visual Arts</p> <ul style="list-style-type: none"> • <i>Explore ideas and artworks from different cultures and times, including artwork by Aboriginal and Torres Strait Islander artists, to use as inspiration for their own Representations</i>
Year Four	<p>Chemical sciences</p> <ul style="list-style-type: none"> • <i>Natural and processed materials have a range of physical properties</i> <p>Questioning and predicting</p> <ul style="list-style-type: none"> • <i>With guidance, identify questions in familiar contexts that can be investigated scientifically and predict what might happen based on prior knowledge</i> 	<p>Representations</p> <ul style="list-style-type: none"> • <i>Use materials, techniques and processes to explore visual conventions when making artworks</i> • <i>Present artworks and describe how they have used visual conventions to represent their ideas</i>