

SHADOW PLAY (LEVEL 2)

Description	Learners will explore the qualities and characteristics of light and shadows. They will create their own shadow theatre by illustrating part of their story, illustrating and cutting their own puppets and setting up the stage
Leading Question	Can we create a show with shadows?
Total Time Required	5 hours over 5 days
Supplies Required	White Sheet Straws / Skewers / Toothpicks Light source: Lamp, Torch, Sun etc. Tape, Paper, Black Marker / Crayon, Scissors Paint and Paintbrush Paper and Pen
Learning Outcomes	<ol style="list-style-type: none"> 1. Identify sources of light as natural and artificial 2. Classify and name some everyday examples of opaque, translucent and transparent objects. 3. Investigate how opaque objects cast a shadow, and how the shadow appears. 4. Investigate how shadows change when the distance of a light source is altered 5. Storytelling through puppets
Previous Learning	None

DAY 1

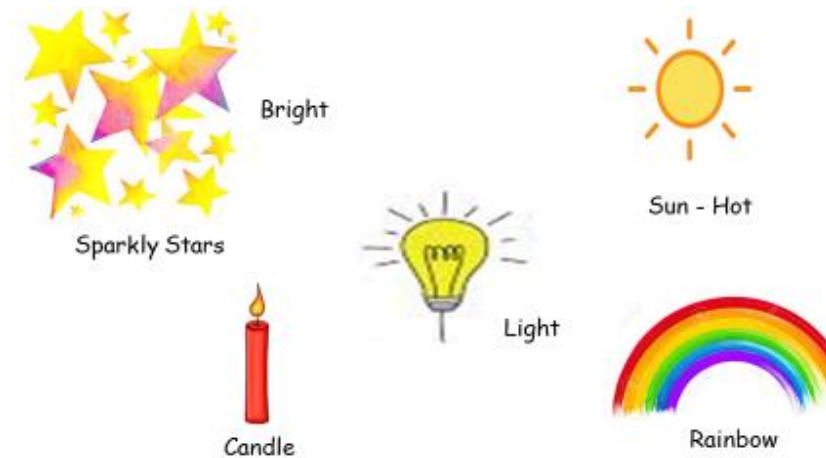
Today you will explore the properties and qualities of light through this project!

Suggested Duration	Activity and Description
15 minutes	<ul style="list-style-type: none"> ● Explore the importance of light so that we can see and to provide heat. Draw a scene in the daylight and night – think about the different things we do when it is light or dark. ● Explore that most of your working time is in the day with the sunlight and most people sleep in the night in the darkness




15 minutes

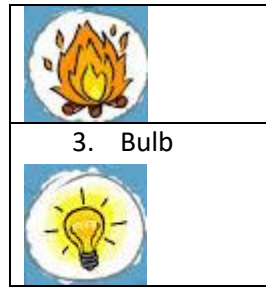
- Draw an image of “light”. Think of how you can draw and show light and draw this. Think of all the words you associate with light.
 - What color do you associate with light?
 - How would you describe light?
 - What are the main sources of light?
 - Do you think of hot or cold when you think of light?
- Illustrate and label these answers in mind map 5 adjectives you associate with light for example: bright, sun, yellow etc.



15 minutes

- Identify all the sources of light and make a list illustrating their examples
- Input: Parents can support the learners with input on this including:
 - Natural: Sun, Stars, Moon, Flame (Candles, Stove), Lightening etc.
 - Artificial: Light bulb, Torch etc.
- Draw the different sources within each of the columns:

Sources of Light	
1. Sun	
	
2. Fire	



15 minutes

- Explore what happens without lights and how the different senses work together. Play a game of dark room. In this game, learners will turn off all the lights of the room and make it dark. The family members will call out and learners will try and find them based on their voice. Learners will think about how their different senses of sound and sight work together, there are animals like bats that are blind but follow sounds and echoes.

DAY 2

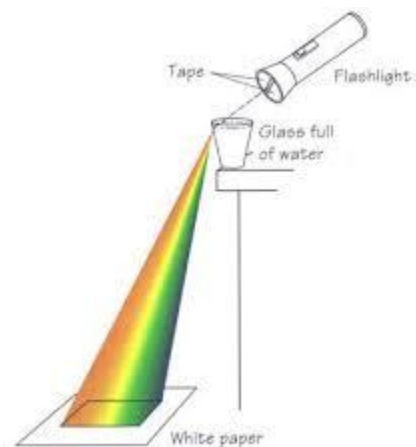
Today you will continue to explore the properties of light and color.

**Suggested
Duration**

Activity and Description

20 minutes

- Conduct an experiment on how rainbows are formed. Place a white paper or sheet on the ground or a table. Fill a glass with water and hold this against the sun – as the light goes through the glass of water it reflects a rainbow on the white sheet of paper



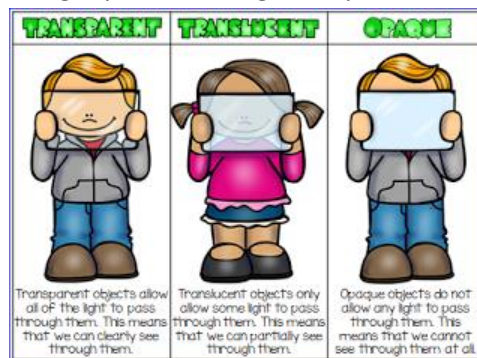
- Input: This is called the prism effect when different colors of light hit a prism, or an object with 2 sides that are not parallel, they leave at different angles (refraction) so they separate.
- Understand that sunlight has all the colors. Paint over the reflected rainbow that is on the paper with colors and paints

20 minutes

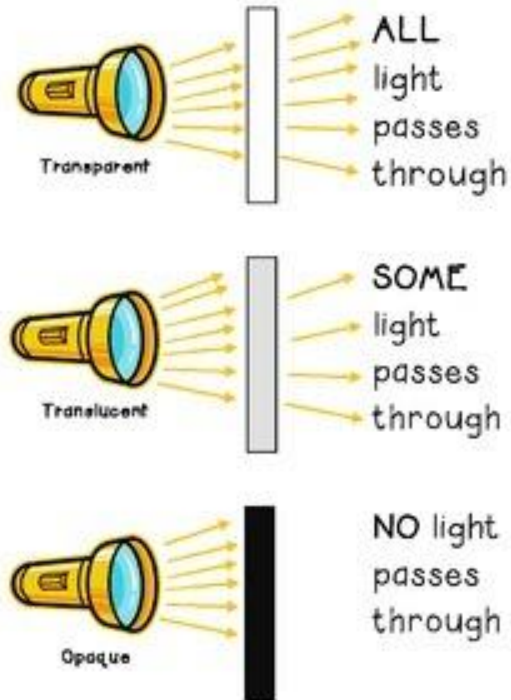
- Explore how colors mix to create new colors. Experiment with mixing different colors to see what happens. Start with the primary colors of red, blue and yellow – but will then work on creating 3 – 4 other secondary colors e.g. pink, maroon etc.
 - Then, write the “math – equations” on the result as a list for example:
 1. Red + Yellow = Orange
 2. Red + Blue = Purple
 3. Yellow + Blue = Green

20 minutes

- Explore how some things are transparent, translucent or opaque by holding up items against a source of light.
- Explore new terminology including:
 - Transparent materials include glass, windows, clear plastic etc. that you can clearly see through since all light passes through
 - Translucent materials include sunglasses, white shirt, paper towel, white sheet etc. that you can partially see through since some light passes through
 - Opaque materials include a chair, a cardboard box, a book etc. that no light passes through and you cannot see anything through



Translucent, Transparent & Opaque



DAY 3

Today you will explore the sun's patterns and the impact of shadows.

Suggested Duration	Activity and Description
30 minutes	<ul style="list-style-type: none"> ● Track the sun's movements through the day and see where it is from their window. Illustrate this in a schedule answering the following questions ● Prompts include: <ul style="list-style-type: none"> - Where do they see the sun from their window? - How bright is it? - How big is the sun? - What is the color of the sky around it? ● Draw and label images of sunrise, mid-day and sunset based on the above.



5 minutes

- Numeracy extension: read the time and write that down for the different time of the day that you are illustrating e.g. sunrise (5:45 am), mid-day (12 pm) and sunset (6:15 pm). Conduct subtraction to see how many hours it takes the sun from sunrise to mid-day.

30 minutes

- Explore the concept of shadows – a shadow is made when an object blocks the light – this is for opaque objects. A shadow can show an object's shape, but it cannot show colors or details (like a smile or a frown).
- Place small toys or objects in the sun and place a paper underneath it. Try and trace the shadows of the toys



- Try and form shadows of your own body and move around to see how your shadows move –form a sundial to mark your own shadows at different times of the day standing at the same place. Notice where your shadows move on the ground and the length of your shadows



DAY 4

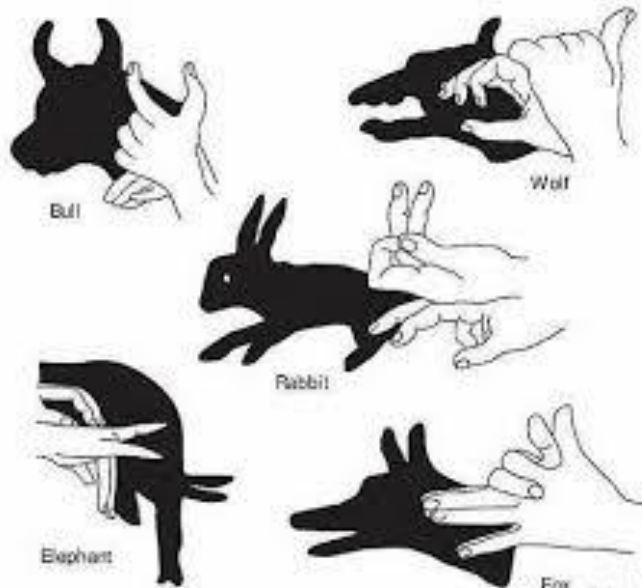
Today you will begin to plan for your shadow puppet theatre!

Suggested Duration

30 minutes

Activity and Description

- Use a torch or the sun to form shadows with your hands and form different animals and characters and try and have your family guess what these different shadows are?



EAA welcomes feedback on its projects in order to improve, please use this link:

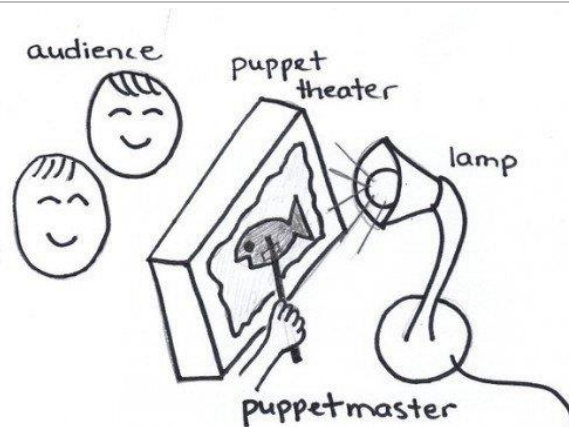
<https://forms.gle/LGAP9k17fMyJrKJN7>

20 minutes	<ul style="list-style-type: none"> ● Think of a basic story that you will tell the viewers through the shadow theatre – to make it easier you can adapt a section of a story that you already know. Pick a story with not more than 2 or 3 characters: a wolf, a princess, a rabbit and props including the sun, a house, a cloud etc. ● Illustrate or write out the story. Think of a fairytale like the Hare and the Tortoise Race or Jack and the Beanstalk
30 minutes	<ul style="list-style-type: none"> ● Design the main “characters and props” of shadow theatre as puppets. Draw the main outline on paper or cardboard and color this inside with black crayon, paint or marker <ul style="list-style-type: none"> - Cut out these characters or props and stick them using tape on toothpicks / chopsticks

DAY 5

Today you will begin to set up and present your shadow puppet theatre!

Suggested Duration	Activity and Description
30 minutes	<ul style="list-style-type: none"> ● Design the stage. <ul style="list-style-type: none"> - Find a place to hang a large white bedsheet or shadow screen – it can be hung on a door frame (it is better if the screen is straight) - There needs to be space behind the screen for the learners to stand and hold the puppets - The bottom half of the screen can have a desk or table so learners can hide behind it when they operate the puppets - Find a good source of light e.g. sunlight or a lamp / torch behind the screen - There needs to be space in front of the screen for audience to sit ● Use a doorframe –make the screen: pin a large sheet of paper on the frame or hang a sheet from the rod.



10 minutes	<ul style="list-style-type: none"> • Play with light and experiment with it until you discover its effects on the shadows your puppets make. Learners will quickly discover that the shadows grow larger when the puppets are close to the light source, and smaller when they are further away
10 minutes	<ul style="list-style-type: none"> • “Act” out the story using these puppets and props and try and simultaneously narrate or tell the story. Add music or sound effects for e.g. a plastic bottle with little stones as a shaker for rain etc.
10 minutes	<ul style="list-style-type: none"> • Now, enact the play for their family.
10 minutes	<ul style="list-style-type: none"> • Ask family about their opinion about the play: Did they understand the characters based on the shadows? Did the family members like the story? Did the family members enjoy any additional effects of sound or the narration of the story?

ASSESSMENT CRITERIA

- Clarity of drawings, illustrations and labelling including the understanding demonstrated
- Creativity and simplicity of the story and character puppets
- Narration and retelling of the story
- Ability to distinguish between objects as opaque, translucent or transparent

ADDITIONAL ENRICHMENT ACTIVITIES

Learners can design more complex shadow puppet theatre

MODIFICATIONS TO SIMPLIFY

Learners can work on days 3 – 4 and 5 of the project to explore shadows and create their own shadow theatre