

## FIRST AND SECOND CLASSES – LIGHT

### Teacher Guidelines:

- Pp. 86-91

### Linkages:

- Living Things - Plants and animals
- Materials - Properties and characteristics

### Integration:

- Oral Language Development – English and Gaeilge
- History
- Visual Arts
- SPHE
- Geography

## FIRST AND SECOND CLASSES – LIGHT

### Content Objective:

- **RECOGNISE THAT LIGHT COMES FROM DIFFERENT SOURCES.**

### Some suggested activities:

- Discuss where light comes from. What would happen if there was no light?
- Display a range of light sources - torch, candle, oil lamp, picture of sun, fire etc. Which gives brightest/ dimmest light? Which one do you think is best and why? Draw/paste pictures of various light sources. When and why do we use the various sources of light?
- Discuss and list occasions that we use lights other than to see e.g. warning, celebration etc.
- Play torch tag: Ask children to ‘tag’ the beam from another’s torch with the beam from their own.
- Discuss the lights in the sky at night; moon, stars, aeroplanes etc
- Discuss power cuts. What light sources could we use?

### Some suggested investigations:

### Some suggested designing and making:

## FIRST AND SECOND CLASSES – LIGHT

### Content Objective:

- **RECOGNISE THAT LIGHT IS NEEDED IN ORDER TO SEE.**

### Some suggested activities:

- Ask children to draw pictures to show how they think they see an object in the classroom.
- Ask children to place a coin on the bottom of a container and move their eye and face over the edge of the container in such a way that no light can get in. Ask them if they can see the coin and to suggest why this is so.
- Allow children to experience total darkness safely by using a small room, which can be made completely dark, or by hanging black-out sheets/fabric over a desk. Ask the children to read a few sentences while in the total dark and discuss their efforts after.
- Play 'Blind man's bluff'.

### Some suggested investigations:

- Which colours are easiest to see in dim light?
- Will you see a shiny coin better in the dark or light?

## FIRST AND SECOND CLASSES – LIGHT

### Content Objective:

- **INVESTIGATE THE RELATIONSHIP BETWEEN LIGHT AND MATERIALS**

*Sort materials according to whether or not they allow light through (transparent/opaque)*

*Explore materials that do not allow light pass through (opaque) and thus form shadows*

*Design and make a model glasshouse using a plastic bottle that will allow light to pass through.*

*Design and make a pair of shades using different combinations of coloured film or plastic...*

### Some suggested activities:

- Discuss how light enters the classroom. What is the difference between the wall and the window?
- Ask the children to collect different materials and hold them up to the light. Discuss with the children how well can they see through them and sort them into groups accordingly. How are the materials similar/different?
- Predict and test a range of materials with a torch (or hold up to light) to find which are transparent and which are opaque.
- Exemplar 22, Teacher Guidelines p. 90: What kinds of shadows can you make and see outdoors?

- Do our bodies make shadows? How? Use body to make different shaped shadows. Can you make shadow puppets using your hands? Try to make animal shapes.
- Make silhouette pictures. Using a strong light source to create shadows of the children on white paper and trace around the outline. Can you identify each child from their silhouette?
- Use a pencil (standing upright by using plasticine) and a torch to investigate if a shadow can be longer/shorter than the object casting the shadow.

**Some suggested investigations:**

- Which materials make the best shadows?
- Do shadows made by the sun move during the day? Are they always the same size and shape?
- How can you make clearer shadow puppets?
- Which type of paper is best for tracing through? Which type of paper allows most light through? How many layers of each type of paper are needed
- Is the temperature higher inside or outside the glasshouse?
- How can we get orange seeds to germinate?

**Some suggested designing and making:**

- Plastic bottle glasshouse.
- Shades (NB: do not use to look at the sun) Use coloured filters/sweet wrappers in the lenses. Look at objects of varying colours using the finished glasses? What do you notice?
- Shadow puppets

**FIRST AND SECOND CLASSES – LIGHT**

**Content Objective:**

- **RECOGNISE THAT THE SUN GIVES US HEAT AND LIGHT, WITHOUT WHICH WE COULD NOT SURVIVE**

**Some suggested activities:**

- Discuss what plants need to grow. Plant seeds in different conditions. Which of the plants needs does the sun meet? What happens if we leave a brick on grass for a period of time
- Discuss the children’s recent meals. Trace all foodstuffs back to plant life.

**Some suggested investigations:**

- Will cress seeds grow better inside or outside a plastic bottle glasshouse? Does the size of the plastic bottle used to make a glasshouse affect the temperature inside the glasshouse?
- Place a potato in a shoe box with a hole in one side. Will the shoots grow towards the light source?

**Some suggested designing and making:**

- Plastic bottle glasshouses

**FIRST AND SECOND CLASSES – LIGHT**

**Content Objective:**

- **BECOME AWARE OF THE DANGERS OF LOOKING DIRECTLY AT THE SUN.**

**Some suggested activities:**

- Discuss how we protect our bodies from the sun especially during the summer.

**Some suggested investigations:**

**Some suggested designing and making:**

- Make a poster to illustrate the point that we should ‘Never look directly at the Sun’