

Day and Night Colouring sheet

Goal	Understand that the earth is round and the origin of day and night
Age	4 upwards
Difficulty	Easy
Skills	Creativity, 3-dimensional thinking
Materials	A light, a round object, paper and pens or paint
Pre-requisites	None

Introduction

Daylight comes from the sun. At sunset, the sun seems to go behind the horizon to the West and at sunrise, it comes back up in the East.

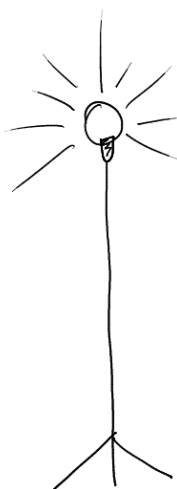
In fact, the sun is not hiding behind the earth; the earth is turning and the place on the planet where we stand turns away from the sun or back into the sunlight. This is the definition of day and night.

Model

Take a light source of any kind: a lamp, a flashlight, a candle, a bike-light, etc. Take a round object you can mark: a globe, an Earthball, any ball, a fruit, etc.

Tell the children that the round object is the earth. Mark a point with a flag or draw a mark on the round object and tell the children that this is where we are on the earth.

Turn the light on. Put the round object at a distance from the light so that half the object is illuminated, while the other is not:



Ask the children to notice the illuminated and not illuminated part of the round object.

Slowly spin the round object and observe how the mark goes from the illuminated zone to the shadow and back.

Let the children repeat the demonstration or explain it to each other.



Children's creation

To elicit what was understood from the demonstration, ask the children to colour in the template included. The template represents planets of different sizes around a central star. This does not need to be the solar system; it can be somewhere else in the universe. Ask the children to

- Colour in the star
- Colour in the planets
- Darken the "night" part of the planets
- Decorate the rest of the colouring sheet: the space around the planets. Encourage the children to imagine space: Does the planet have one, or more moons? Are other stars visible? Galaxies? Satellites and rockets? Aliens?

Extend the activity

This activity can be carried out as is or it can be carried out in a wider context, where children see images of the sun with features such as protuberances and sunspots, or they see images of the other planets of the solar system and paint day and night on other planets, etc.

When playing with the model, mention can be made of the following different perspectives: Daylight goes away on one side of the mark but comes back on the other. This is the same as saying that daylight comes on one side and at night it is shadow that comes from the same side, not daylight that goes away on the other side.

The colouring sheet can be reproduced on a large panel where many children work together to paint. This can then be used to decorate a classroom. Children can decorate their artwork with glitter, stickers, and other available things.

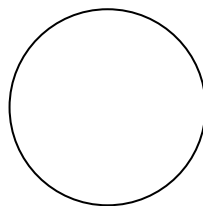
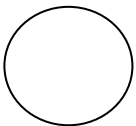
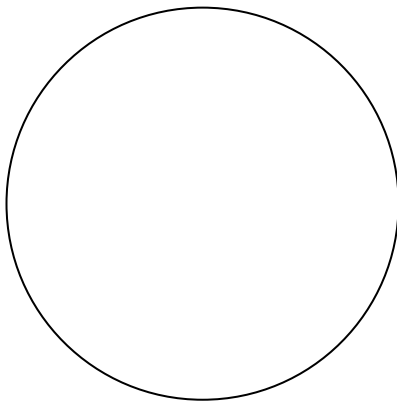
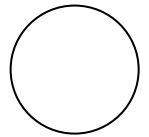
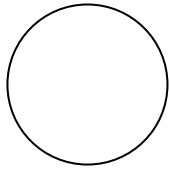
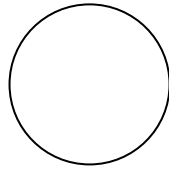
Connection to real life

Next time the children see a sunset, you can ask them to imagine that the ground is in fact moving backwards and that if we travel fast enough (e.g. in a plane) we could stay in the day all the time. See if you can spot a plane in the sky and ask if it could stay in the day for longer (yes, if it travels toward the sun).

You could even think of this to talk about the phases of the moon: we see both day and night on the moon.

Note: This example does not illustrate the scales of the sun and earth, nor the distance that separates them. It is more important to use a large object as the earth so that all children can see the shadow and illuminated parts clearly, as well as the mark.





Evaluation

The colouring sheet contains more than one planet so that children try to imagine day and night beyond their own environment.

Two things can be evaluated directly

- Children's understanding of day and night from the colouring sheet
- The creativity in decorating the colouring sheet

Children's response to the real-life connection can illustrate how they understood and enjoyed. If they pretend to fall backwards during sunset, they are imagining the rotation of the earth. If they guess correctly where the sun rises from, they understand the process.

Ask the children if they had fun.

Please send us feedback and comments on this activity to:
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