

Light and colour



God is Light.
He is pure and Holy.
Walk in the light as He is in the light.

Notes for teachers:

Concepts:

- Light travels from the sun and other sources; it travels in straight lines.
- Shadows can form when an object blocks some of the light shining on it.
- Light passes through some materials and is reflected by others.
- When light passes through some kinds of material, the path of the light can be changed.
- A magnifying glass bends light that passes through it and makes things look bigger.
- White light can be split into the colours of the spectrum: red, orange, yellow, green, blue, indigo and violet. You can use a glass prism to show this.

Bible stories and passages

Genesis ch 1 God said "Let there be light."

Matthew 5:13-16 Christians as salt and light.

Genesis ch 9- The sign of the rainbow, (spectrum)

Galatians 5:22 Goodness is a fruit of the Spirit.

Ephesians 5:8-11 Live as children of the light.

Matthew 6:22-23 If your eye is clear your whole body will be full of light.

1 Peter 2:9 He has brought you out of darkness into His wonderful light.

Deuteronomy 6:18 Do what the Lord says is right and good.

Romans 13:12 Put on the armour of light.

John 8:12 Jesus said, "I am the light of the world. Whoever follows me will have the light of life and never walk in darkness."

1 John 2:29 Everyone who does what is right is of God.

1 John 1:5 God is light and there is no darkness at all in Him.

1 John 1:7 If we live in the light, just as He is in the light, then we have fellowship with one another, and the blood of Jesus, His Son, purifies us from every sin.

Key Questions

What is light?

How does light make you feel?

What is darkness?

How does darkness make you feel?

Why does light remind us of the things that come from God?

Why does darkness remind us of things that come from Satan?

What does the Bible mean by 'walking in the light'?

Who is the light of the world?

How is life dependent on light?

Has God always been there?

What is the meaning of the word 'create'?

Why did God call the light 'good'?

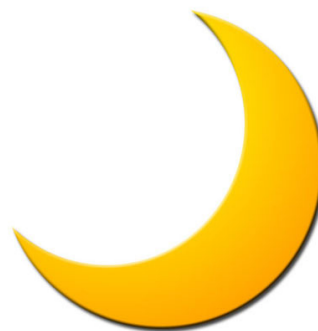
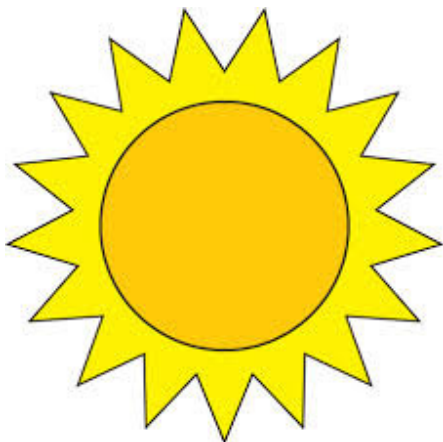
Light and Colour

It is light that lets you see things.
In the dark you cannot see at all.

The Sun gives us daylight.
The Moon gives us moonlight.
Fire gives us light.
Electricity gives light.
God made these things to give us light.

The Sun sends out rays of light. It shines on the Earth.
But the Sun shines only on one side of the Earth at a time.
Half the Earth has daytime while half the Earth has night
time.

The moon is like a giant mirror.
It bounces sunlight on to the earth.



Why does the sky look red or pink at sunset?

Sunset in a box

1. Fill a see-through plastic box with water and add a teaspoon of milk.
2. Shine a torch straight downwards. This like the Sun at midday.
3. Shine the torch sideways through the box. This is like the setting Sun.

What happened when we shone the light downwards?

What happened when we shone the light sideways?

Why the Sun looks red

The Earth is surrounded by a blanket of _____, called the atmosphere, which is filled with _____ particles. These particles are like the milk in the water and _____ light. At sunrise and sunset, sunlight travels further through the atmosphere so more of it is scattered. The red and orange parts of sunlight are hardest to scatter so more of them reach the earth.

What makes shadows?

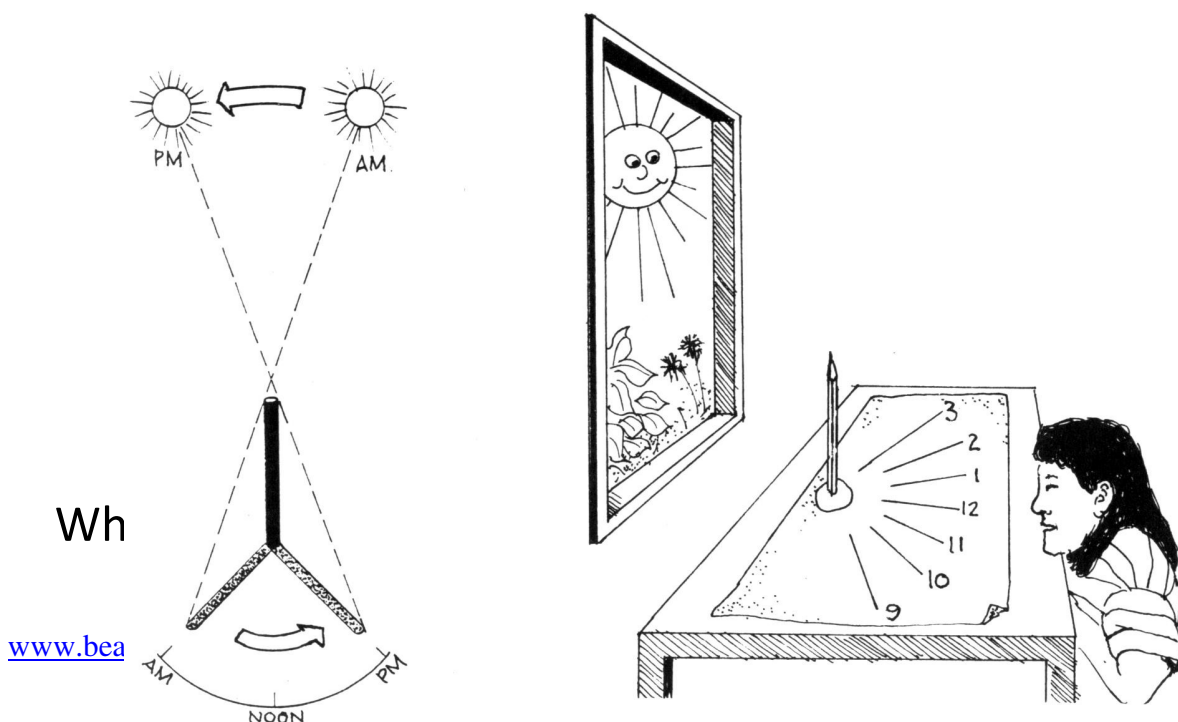
Shadows are made when something blocks the light shining on it.

Make a Sun dial

In the olden days, people did not have clocks like the ones we have today. They measured time by the sun. They could tell the time by the length of the shadow made by a shadow stick (also called a Sun dial).

To make a sun dial:

1. Cut a circle from stiff cardboard to make a dial.
2. Push a sharp pencil or skewer through the middle of it.
3. Push the pencil into the ground.
4. Mark on the dial where the pencil's shadow falls each hour.



Shadow Puppet Fun!



Characters: Jumpy the spider - he likes to jump

the owl
Crowey the owl - likes to fly. He crows like a crow

Beginning: Owl is crowing in his nest. Then spider sees him and thinks it's strange.

Middle: Spider thinks he can teach owl how to hoot. He teaches him.

End: Now owl can hoot.

What is white light?



Make this rainbow colour spinner. When you spin it you will see white light.

White isn't a colour, but different colours together make white.

Light passes through some materials, like glass or water. The light rays bend when they pass through a glass prism or water droplets in the sky. The different colors that make up white light become separated. This makes a rainbow.



Colour mixing

If you mix colours together you will make other colours.

What happens when you mix:

Blue and yellow?

Yellow and red?

Red and blue?

Red, blue and yellow?

Red, blue and yellow cannot be made by colour mixing.

They are called Primary colours.

What are you favourite colours?