




















Light: Light and Dark

<p>Aim: To recognise that we need light in order to see things and that dark is the absence of light by taking part in a 'feely bag' investigation.</p> <p>I can explain that I need light to see things, and that dark is the absence of light.</p>	<p>Success Criteria: I can identify a range of light sources. I can explain that dark is caused by the absence of light. I can explain that I need light to see things.</p>	<p>Resources: Lesson Pack</p> <p>5 'feely bags' (drawstring bags for children to feel inside without looking)</p> <p>5 objects to place inside them- for example, an orange, a shell, a pine cone, bubble wrap, pumice stone, a dice, an avocado or cotton wool.</p>
<p>Key/New Words light, source, dark, reflect, see, illuminate, visible.</p>	<p>Preparation Light Mind Map Activity Sheet - 1 per child Light Sources Sorting Cards - as required What's In the Bag? Activity Sheet - 1 per child Light and Dark Activity Sheet -1 per child</p>	

Prior Learning: It would be helpful if children are familiar with the vocabulary related to light and dark.

Learning Sequence

	<p>What Is Light? Share the questions on the Lesson Presentation and discuss them with the children. Use the Light Mind Map Activity Sheet to find out what the children already know about this topic, and what they would like to find out about light. <i>Look for children who have a good prior knowledge of this topic in order to assist with future planning.</i></p>	
	<p>Sources of Light: Use the Lesson Presentation to explain light sources and discuss some examples. The children talk to their partners to identify light sources, using what they can see in the classroom as a starting point.</p>	
	<p>Light Source Sorting Game: Using the differentiated Light Sources Sorting Cards, the children work in pairs to sort their sets of cards into objects that are light sources and those that are not.</p>	
 <p>Children should use the smaller set of cards.</p>	 <p>Children use the larger set of cards. Adults could challenge children to explain their decisions.</p>	
	<p>Light Source Sorting Game - The Tricky Ones! Use the Lesson Presentation to explain the reason why tricky objects like the moon, a window and a mirror are not light sources. Address any misconceptions about these objects.</p>	
	<p>What Is Dark? Talk to the children about dark and explain that it is the absence of light. Ask them about their own experiences of dark, such as places that are dark, or times that it is dark. Discuss which light sources are absent in these places or at these times in order to make it dark. Can we see in the dark? Discuss the idea that we cannot see in complete darkness, but it is rare to find this. There is often light from street lamps, a night light etc. that allows us to see objects, but not as clearly as in full light.</p>	
	<p>What's In the Bag? Place 5 feely bags around the room. Use the Lesson Presentation to introduce the idea that it is dark inside the bags so we cannot see the objects they contain. Children visit each bag and fill in their What's In the Bag? Activity Sheet. Ask how we can illuminate the objects by getting light into the bags. Open the bags and allow children to revisit the bags and add to their What's In the Bag? Activity Sheet.</p>	
	<p>Light and Dark: Children should complete their differentiated Light and Dark Activity Sheet to show what they have learnt in the lesson. <i>Look for children who have a good understanding of light and dark and how we need light to see.</i></p>	
 <p>Children should use the key words to fill in the gaps.</p>	 <p>Children should fill in the gaps without the use of key words.</p>	 <p>Children should complete the sentence starters with their own explanations.</p>

Taskit

Askit: Can you create a 'True or False' light source quiz for a friend or family member?

Drawit: Why not draw a picture to show the difference between light and dark? You could draw the same scene in the day and in the night.

Playit: Work with a friend to guide each other around a set course while one partner is blindfolded. Time yourselves! Then try it again without a blindfold. You should be much quicker when you can use the light to see where you are going!



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Science

Light



Light and Dark





Aim

- I can explain that I need light to see things, and that dark is the absence of light.

Success Criteria

- I can identify a range of light sources.
- I can explain that dark is caused by the absence of light.
- I can explain that I need light to see things.



What Is Light?

- Can you name some things that give out light?
- How does light help us to see?
- What is dark?
- How do mirrors work?
- What is reflection?
- How are shadows made?

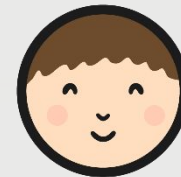
This unit of work is all about light.

You will find the answers to all these questions, and more!





What Is Light?



What do you already know?

Create a mind map to show what you already know about light.
Can you think of any questions you would like to find out about light?

Mind Map

Draw or write about the things you already know about light.

How do we see things?

What is darkness?

How are shadows made?

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graph TD; Light[Light] --- Q1[How do we see things?]; Light --- Q2[What is darkness?]; Light --- Q3[How are shadows made?]; Light --- Q4[What is a reflection?]; Light --- Q5[Why do people wear sunglasses?]; Light --- Q6[What things make light?];
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What is a reflection?

Why do people wear sunglasses?

What things make light?

Do you have any questions about light? What would you like to find out? Write your thoughts below.

Science | Year 3 | Light | Light and Dark | Lesson 1



Light Source Sorting Game



Can you sort the set of cards?

Identify the cards that are sources of light, and which ones are not.

Can you explain your reasons?



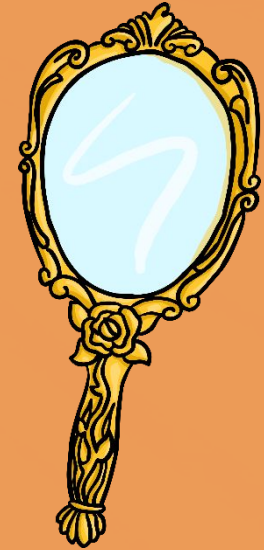


Light Source Sorting Game

The Tricky Ones!

Some of the cards were tricky to sort - the moon, the window and the mirror are some examples.

These objects look like light sources, but they are not!





Light Source Sorting Game

The Tricky Ones!

The moon is not a light source because it does not make its own light.
We can see the moon because light from the sun reflects off it
(bounces off it) back to the earth.





Light Source Sorting Game

The Tricky Ones!

The window is not a light source. It is an opening that lets the light from the sun or other light source into the room.

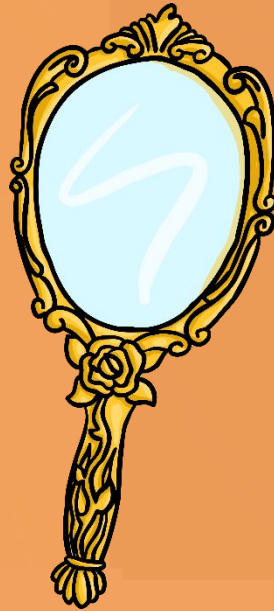




Light Source Sorting Game

The Tricky Ones!

The mirror is not a source of light because it does not make its own light. It reflects light from other sources.





What Is Dark?

Dark is the absence of light.

If there is no light from a light source, it will be dark.

Think about times when it is dark, or places where it is dark. Which sources of light are absent, or switched off?

Can we see in the dark?



What's In the Bag?



Around your classroom you will find some feely bags.
It is dark inside the bags, so you can not see what is inside.
You will have to feel!

Visit each one and feel the object inside. Write a description or draw a picture of what you think is inside the bag on your Activity Sheet.

What's In the Bag?



There are 5 feely bags around your classroom. It is dark inside the bags, so you cannot see what is inside. Visit each bag and feel the object inside. Draw or write about what you can feel in the correct space below.

1.	2.	3.	4.	5.
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Open up the bags. The light can get inside now, and can illuminate the objects. Visit each bag again, and draw or write about what is really inside!

1.	2.	3.	4.	5.
----	----	----	----	----



What's In the Bag?



Was it hard to tell what was in the bags?

It is much easier to use our eyes to see, but for this we need light.

How can we get light into the bags?





What's In the Bag?



Open up the bags.

The light can get inside now.

Which light source is illuminating the objects?

Visit each bag again now they are open to the light.







Use your Activity Sheet to draw or write about the objects that are really inside!

It is much easier to tell now because you can use the light to see.



Light and Dark

Complete your Light and Dark Activity Sheet to explain what you have found out in this lesson.

<p>★ Light and Dark</p> <p>Complete the paragraph using the key words below to show what you have found out.</p> <p>A _____ source something that makes light. Some examples of light sources are _____, _____ and _____.</p> <p>_____ is the absence of light. It is dark at _____ time because _____.</p> <p>When it is dark there is no light so _____ objects, so we can't see them, so we _____.</p> <p>In the jelly bag activity, we could not _____ the objects when they were in the bag, once we turned up so light could illuminate the objects, we could see that we need _____ to see.</p> <p style="text-align: center;">Key words</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  light </div> <div style="text-align: center;">  dark </div> <div style="text-align: center;">  night </div> </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center;">  television </div> <div style="text-align: center;">  sun </div> <div style="text-align: center;">  see </div> </div>	<p>★★ Light and Dark</p> <p>Complete the paragraph using the key words below to show what you have found out.</p> <p>A light _____ is something that makes light. Some examples of light sources are _____.</p> <p>_____ Some objects seem to make light, but are not really light sources, because _____.</p> <p>Dark is the _____ of light. It is dark at night time because light from the _____ is not _____.</p> <p>When the jelly bags were turned up so light could illuminate the objects, we _____.</p> <p>This shows that we need _____ to see.</p>	<p>★★★ Light and Dark</p> <p>Complete the paragraph using the key words below to show what you have found out about light and dark.</p> <p>A light source is _____.</p> <p>Some examples of light sources are _____.</p> <p>_____ Some objects seem to make light but are not really light sources, because _____.</p> <p>Dark is _____.</p> <p>It is dark at night time because _____.</p> <p>When it is dark, there is no light so _____.</p> <p>We need light to _____.</p> <p>In the jelly bag activity, we _____.</p> <p>This shows that we _____.</p>
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Aim



- I can explain that I need light to see things, and that dark is the absence of light.

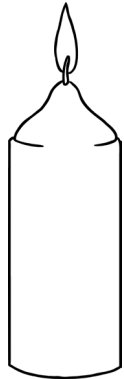
Success Criteria

- I can identify a range of light sources.
- I can explain that dark is caused by the absence of light.
- I can explain that I need light to see things.



Light Sources Sorting Cards

candle



flowers



boots



fire



football



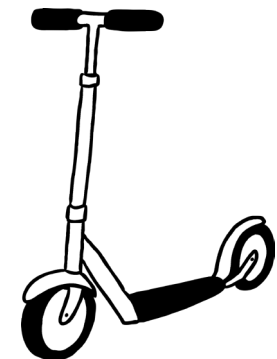
lantern



lightning

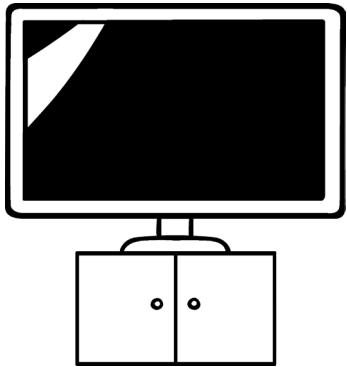


scooter

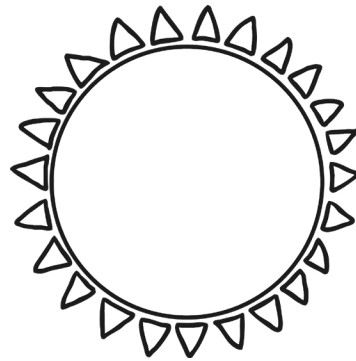


Light Sources Sorting Cards

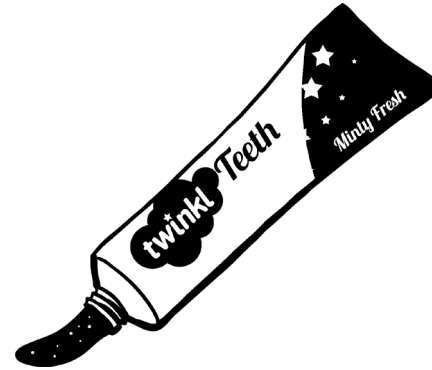
television



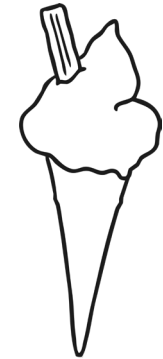
Sun



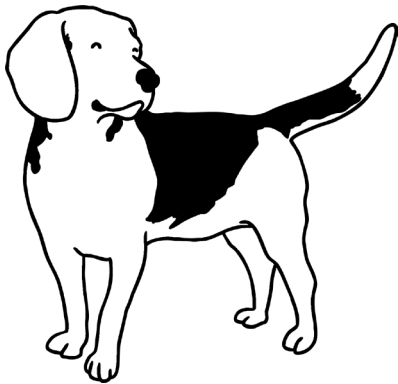
toothpaste



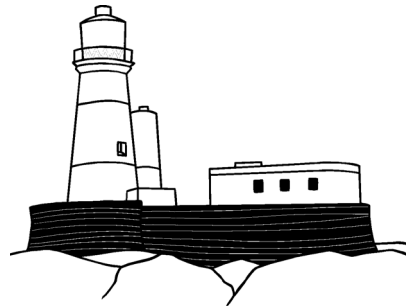
ice cream



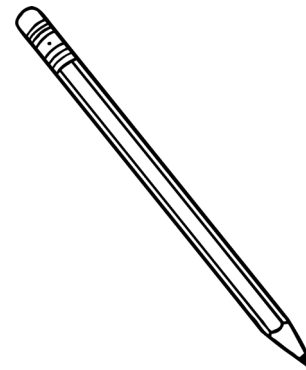
dog



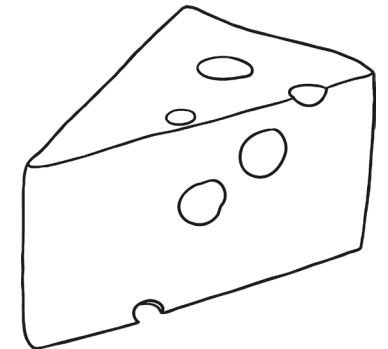
lighthouse



pencil



cheese

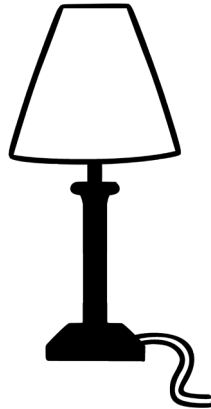


Light Sources Sorting Cards

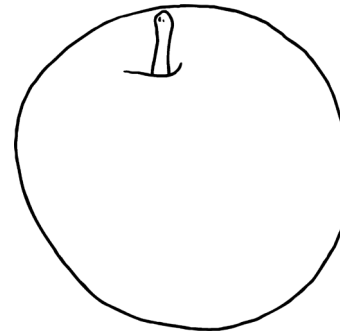
bucket



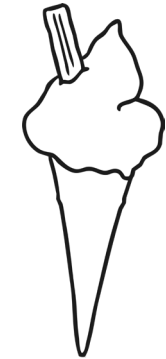
lamp



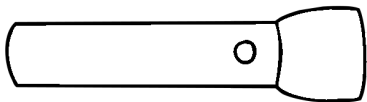
apple



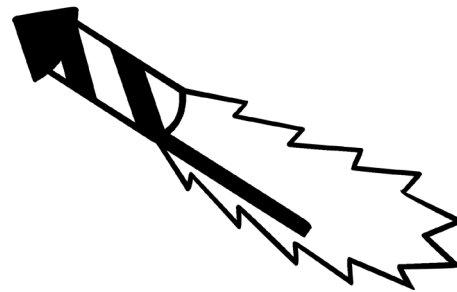
ice cream



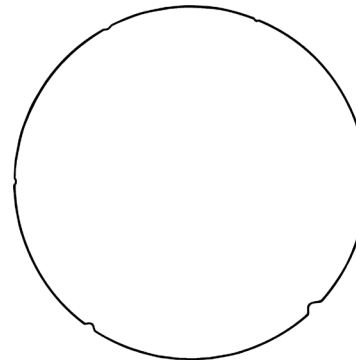
torch



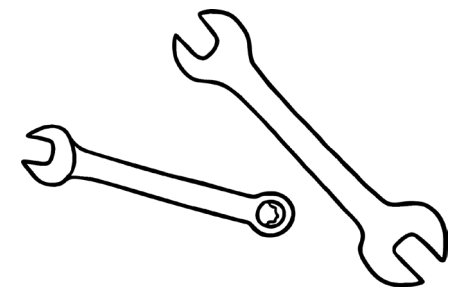
fireworks



Moon

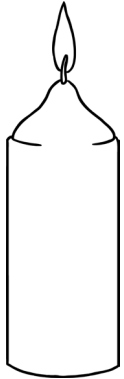


spanners



Light Sources Sorting Cards

candle



flowers



boots



fire



football



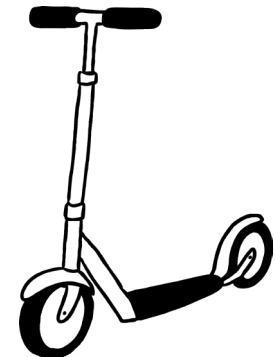
lantern



lightning

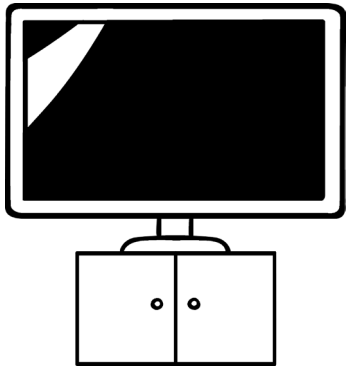


scooter

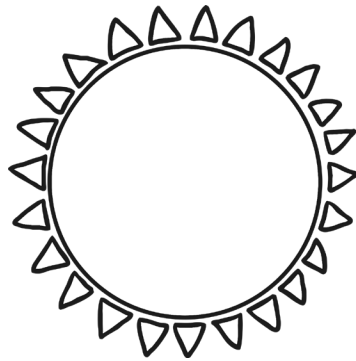


Light Sources Sorting Cards

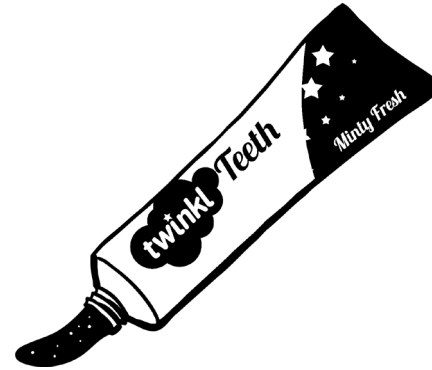
television



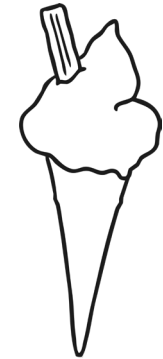
Sun



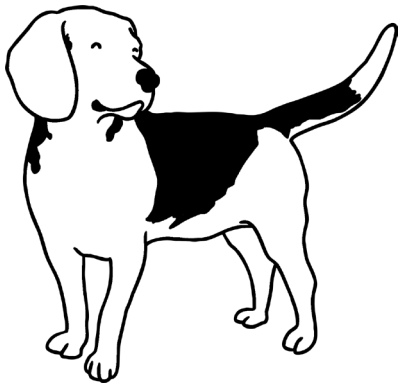
toothpaste



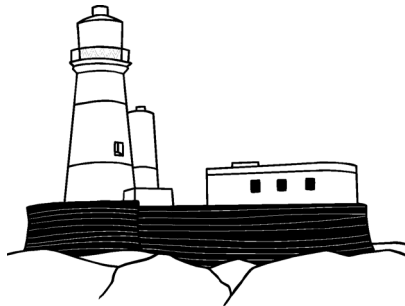
ice cream



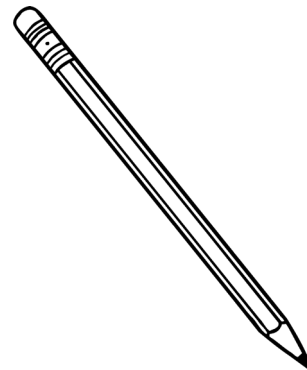
dog



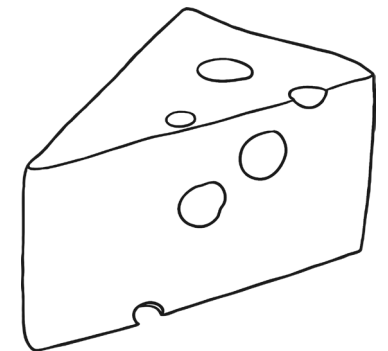
lighthouse



pencil



cheese

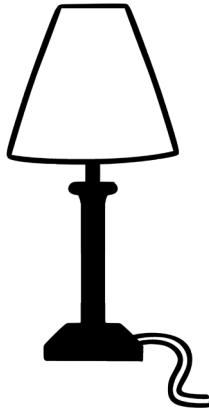


Light Sources Sorting Cards

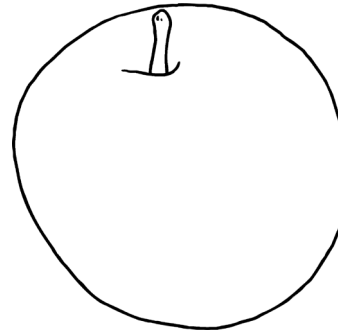
bucket



lamp



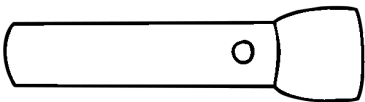
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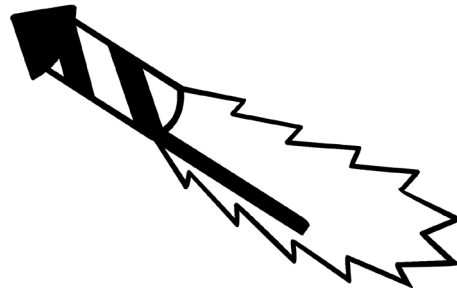
ice cream



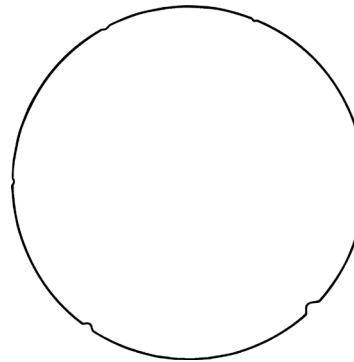
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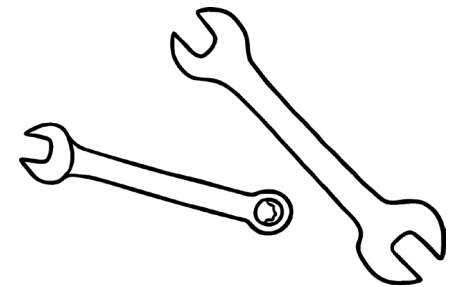
fireworks



Moon



spanners



Light Sources Sorting Cards

window



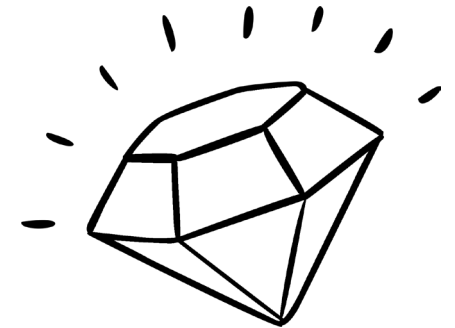
mirror



eye



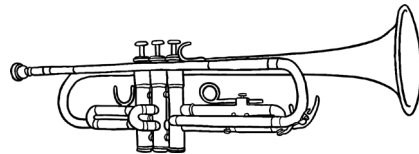
diamond



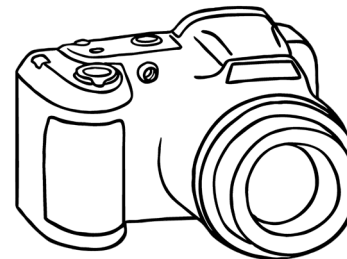
sunglasses



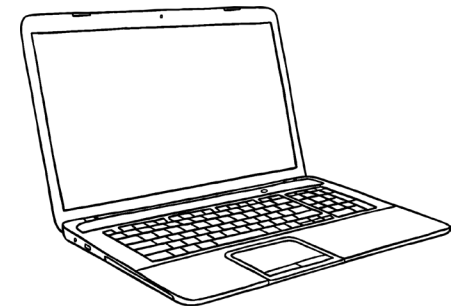
trumpet



camera



laptop



Light | Light and Dark

I can explain that I need light to see things, and that dark is the absence of light.		
I can identify a range of light sources.		
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