

BIG QUESTION: What is light and how is it used in everyday life?

Lesson 1	Lesson 2	Lesson 3	Lesson 4	Lesson 5
Are mirrors all the same?	What are periscopes and how are they formed?	How are shadows formed?	How can we vary the shape and size of shadows?	Who was Thomas Edison ?



Link to website / lesson video:

[https://www.youtube.com/watch?v= E_SERfmeJk](https://www.youtube.com/watch?v=E_SERfmeJk)

NEW LEARNING: HOW TO...

Key Knowledge	Key Vocabulary
<ul style="list-style-type: none"> • Periscopes are used for observation • They are used when there is no direct line of sight • A periscope uses two mirrors • Mirrors reflect light from the object to the eye 	<ul style="list-style-type: none"> • periscope • mirrors • angle • direct line of sight

1. Mirrors that are flat and smooth are:

- convex mirrors**
 plane mirrors
 concave mirrors
 opaque mirrors

2. Mirrors that curve inwards are:

- plane mirrors**
 convex mirrors
 opaque mirrors
 concave mirrors

3. Mirrors that curve outwards are:

- convex mirrors**
 opaque mirrors
 concave mirrors
 plane mirrors

4. Mirrors that allow you to see an exact image of yourself are:

- concave mirrors**
 convex mirrors
 plane mirrors
 opaque mirrors

5. Which type of mirrors do dentists use to examine your teeth?

- plane mirrors**
 concave mirrors
 convex mirrors
 opaque mirrors

What is a periscope?

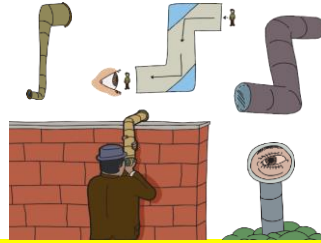
We see things when light coming from an object enters our eyes.

This light travels in straight lines, it cannot travel around or through opaque objects.

If there was an object at the other side of a wall, you would expect that a person would not be able to see it because of the wall.

A periscope is used to allow us to see things that are out of our direct line of sight.

Periscopes use **two mirrors** to allow a person to see something that should be out of sight.



Light enters the periscope and meets the first mirror before bouncing off to the other mirror and finally reaching the eye. An inventor called Johannes Gutenberg invented the first periscope in the 1430s.



Periscopes are used by submarines to see what is around them while they are submerged (underwater).

This helps them to avoid being seen by other boats.

INDEPENDENT TASK

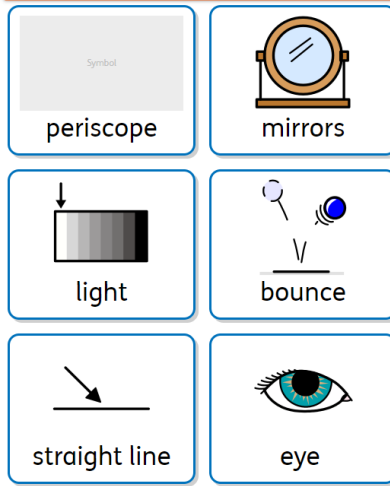


Which statements are correct?

- Periscopes are used to see what is not in the direct line of sight
- Periscopes are used to see through walls
- Periscopes were only used in the 1430s when they were invented
- Periscopes allow submarines to see above water without being seen

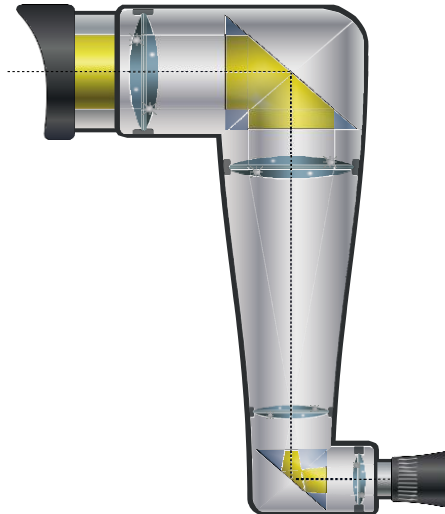
Record your answers as full sentences, in a workbook.

What were the first periscopes used for?



What were the first periscopes used for?

Add labels and annotations to this image to show how a periscope works.



CHALLENGE

Can you think of anything you would like to use a periscope for?

What have you learned today that will help you to answer the Big Question?

What is light and how is it used in everyday life?

Submit your Science learning to your teacher through Seesaw.

You can submit your work in the following ways:



1. Take a photo and send this in.
2. Type your ideas / answers to any questions in a message to your teacher.
3. Send your ideas / answers to any questions in an email to your teacher at the email addresses below:

- J.Year1@arkjohnarcher.org
- J.Year2@arkjohnarcher.org
- J.Year3@arkjohnarcher.org
- J.Year4@arkjohnarcher.org
- J.Year5@arkjohnarcher.org
- J.Year6@arkjohnarcher.org