

Nova's Starlight Science: Understanding Light

Learning objective: To identify and explain the core concepts of light, including reflection, shadows, and how we see objects, as required by the Grade 4 Science curriculum.

Use these flashcards to test your knowledge of light. Read the question on the front, think of your answer, and then check the back to see if you are correct! You can work with a partner or quiz yourself.

What is a light source?

An object that produces its own light, such as the Sun, a flashlight, or a candle.

How do we see objects?

Light travels from a light source, hits an object, and reflects off it into our eyes.

What does 'opaque' mean?

An object that does not allow any light to pass through it, which creates a dark shadow.

What happens when light hits a mirror?

It creates a reflection, where light bounces off the smooth, shiny surface.

What is a shadow?

An area of darkness created when an opaque object blocks the path of light.

What does 'transparent' mean?

A material that allows light to pass through it clearly, such as clear glass.

Define 'translucent'.

A material that allows some light to pass through, but scatters it so you cannot see clearly through it, like frosted glass.

In what direction does light travel?

Light travels in straight lines, which we call light rays.

Why does a shadow change size throughout the day?

Because the position of the Sun changes in the sky, altering the angle at which light hits an object.

What is the function of the pupil in the eye?

It is the hole in the center of the iris that allows light to enter the eye so we can see.

What happens if you move an opaque object closer to a light source?

The shadow it casts becomes larger because it blocks more of the light rays.

What is the spectrum of light?

The range of colors (red, orange, yellow, green, blue, indigo, violet) that make up white light.