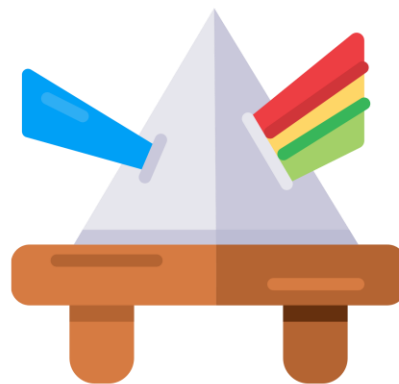




Light Report



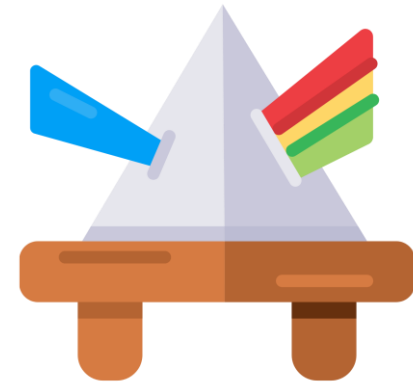


Lesson Objectives



By the end of this lesson, I will be able to:

- Write facts about light
- Paraphrase information
- Plan a report about light



Paraphrasing Strategies



It's important to paraphrase information you read and put it in to your own words. These 3 strategies will help.

Read the entire text and put it all in to your own words.

Just as it says, read the entire text (maybe twice), look away and write what you remember. It's a good strategy and ensures that you don't copy.

Read a sentence and flip the information so it's in your own words.

Shadows are created when light hits an opaque object, blocking the light.

→ Opaque objects block light which is how shadows are created.

Combine two sentences, but in your own words.

Rainbows are beautiful things. They are formed when light passes through water droplets.

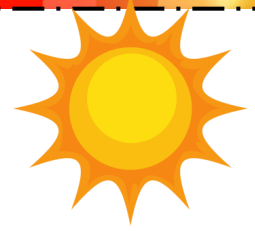
→ When light passes through water droplets, it creates a rainbow which are beautiful.



Preview



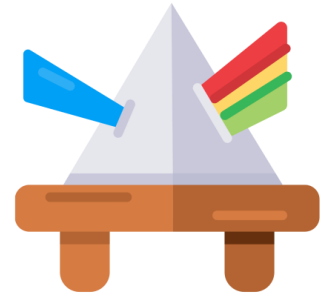
Note Taking



Read the following slides and take some notes. Use the notes to for your report on light.

Remember to paraphrase the information using one or more of the strategies.

- Read the entire text and put it all in to your own words.
- Read a sentence or two and flip the information so it's in your own words.
- Combine two sentences, but in your own words.



Preview



What is Light?

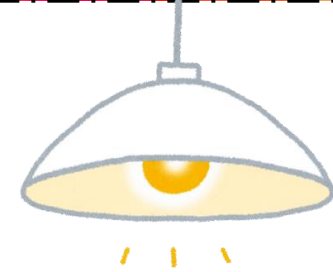


Light can be described as a type of energy that helps us see things around us. It comes from sources like the sun, lamps, or flashlights. When light travels, it moves in waves like ripples in water, but we can't see these waves with our eyes. Light travels really fast, so it can reach us from far away places. When light hits objects, it can bounce off them, bend, or even go through them. That's how we see things – because light reflects off objects and into our eyes, helping us understand the world around us. It's also important to understand that light travels in straight lines.



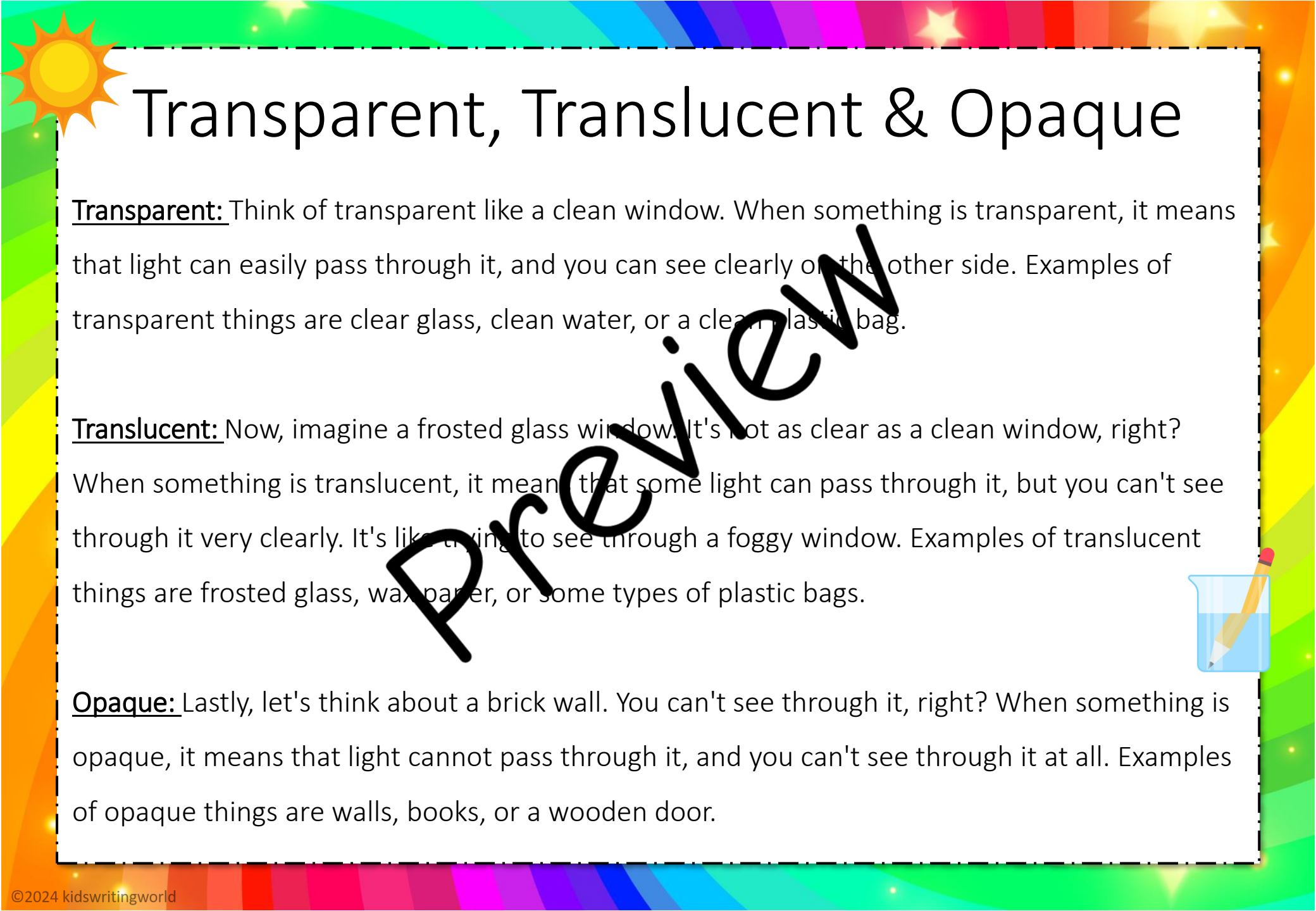


Shadows



For a year 5 student, shadows are created when an object blocks light from a source. Imagine you have a flashlight, and you shine it on an object like a toy or a book. When the light from the flashlight hits the object, it can't pass through it because the object is solid. So, where the light can't reach because of the object, a shadow is formed on the surface behind it. The shadow shows the shape of the object that's blocking the light. Shadows change size and shape depending on how close the object is to the light source and how the light hits it. So, shadows are created when light can't pass through something, making a darker area behind the object.

Preview



Transparent, Translucent & Opaque

Transparent: Think of transparent like a clean window. When something is transparent, it means that light can easily pass through it, and you can see clearly on the other side. Examples of transparent things are clear glass, clean water, or a clean plastic bag.

Translucent: Now, imagine a frosted glass window. It's not as clear as a clean window, right? When something is translucent, it means that some light can pass through it, but you can't see through it very clearly. It's like trying to see through a foggy window. Examples of translucent things are frosted glass, wax paper, or some types of plastic bags.

Opaque: Lastly, let's think about a brick wall. You can't see through it, right? When something is opaque, it means that light cannot pass through it, and you can't see through it at all. Examples of opaque things are walls, books, or a wooden door.





Refraction



Imagine you have a straw in a glass of water. When you look at the straw from the side, it seems like it's bent, right? Well, that's because of refraction!

Refraction happens when light travels through different materials, like air and water. When light goes from one material to another, like from air to water, it can change direction a little bit. This makes things look like they're in a different place than they really are.

So, when you look at the straw in the water, the light from the straw bends a little as it goes from the water into the air before it reaches your eyes. This bending of light makes the straw look like it's bent, even though it's not really.

Refraction happens all around us, not just with straws and water. It's why things sometimes look a little funny when you look through water or a magnifying glass. It's like light is playing a little trick on our eyes!



Preview

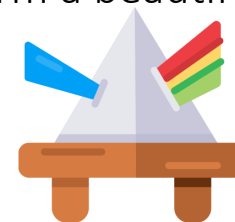


Rainbows



The light from the Sun is made up of all of the colours of the rainbow – red, orange, yellow, green, blue, indigo & violet. When it rains, the light from the Sun passes through the rain droplets, it's like each droplet becomes a tiny prism, spreading the light apart into its different colours. This happens because as the light moves from the air into the water of the raindrop, it slows down and bends (refracts) a little. Inside the raindrop, the different colours of light get separated. They spread out like a colourful fan with each colour taking its own path. When the colours leave the raindrop they are still spread apart. As they leave, they form a beautiful circle of colours in the sky – a rainbow!

Preview



So, when you see a rainbow after the rain, it's like you're seeing sunlight that has been split into its different colours by the raindrops. It's like a natural light show, courtesy of the Sun and a little bit of rain!



Light Report

Your task is to write a report about light, covering various topics related to this fascinating natural phenomenon. Below are some possible topics to include in your report.

Introduction to Light: Explain what light is and how it enables us to see the world around us.

Properties of Light: Describe the characteristics of light, including its speed, wavelength, and frequency.

Sources of Light: Discuss different sources of light, such as the Sun, stars, and artificial light sources like lamps and torches.

Reflection: Explain what reflection is and provide examples of how it occurs in everyday life, such as in mirrors and shiny surfaces.

Refraction: Explore the concept of refraction and how it causes light to bend when passing through different materials, like water and glass.

Rainbows: Investigate how rainbows are formed and the science behind their colourful appearance.

Shadows: Describe how shadows are created when objects block light and explore the relationship between light sources, objects, and shadows.

Preview



Light Report



Transparent, Translucent, and Opaque: Differentiate between transparent, translucent, and opaque materials and provide examples of each.

Optical Illusions: Discuss optical illusions and how they trick our eyes by playing with light and perspective.

Uses of Light: Explore the various practical applications of light, such as in photography, communication through optical fibres, and medical technologies like lasers.

History of Light: Research the historical discoveries and advancements in our understanding of light, from ancient civilizations to modern scientific breakthroughs.

Remember to include interesting facts, examples, and diagrams to make your report engaging and informative. Also, use reliable sources for your research. Have fun exploring the captivating world of light!

Preview



Report Structure



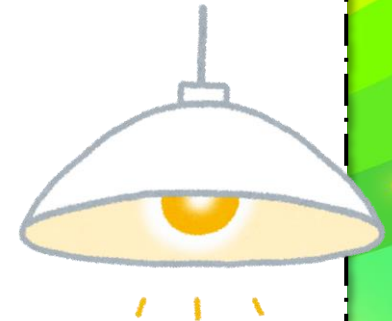
Remember to structure your report clearly. Here are some ideas.

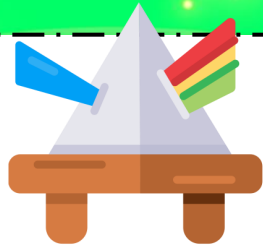
- P1. Basics of light
- P2. Shadows
- P3. Refraction
- P4. Rainbows
- P5. Conclusion

- P1. Light facts
- P2. Sources of light
- P3. Reflection
- P4. Uses of light
- P5. Conclusion

- P1. Light introduction
- P2. Properties of light
- P3. History of light
- P4. Rainbows
- P5. Conclusion

Preview





Vocabulary

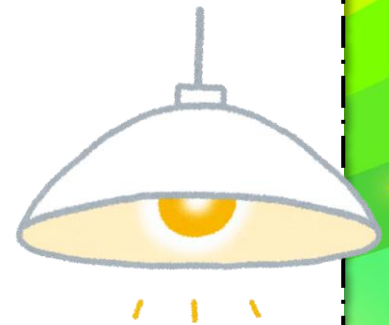


- Transparent
- Translucent
- Opaque
- Refraction
- Reflection
- Prism
- Photon
- Radiant

Preview



- Luminous
- Clare
- Wavelength
- Dispersion
- Fluorescent
- Incandescent
- Spectrum
- Source



Report Writing Planner



Opening Paragraph



Mini Topic 1



Mini Topic 2



Mini Topic 3

Preview

Topic

