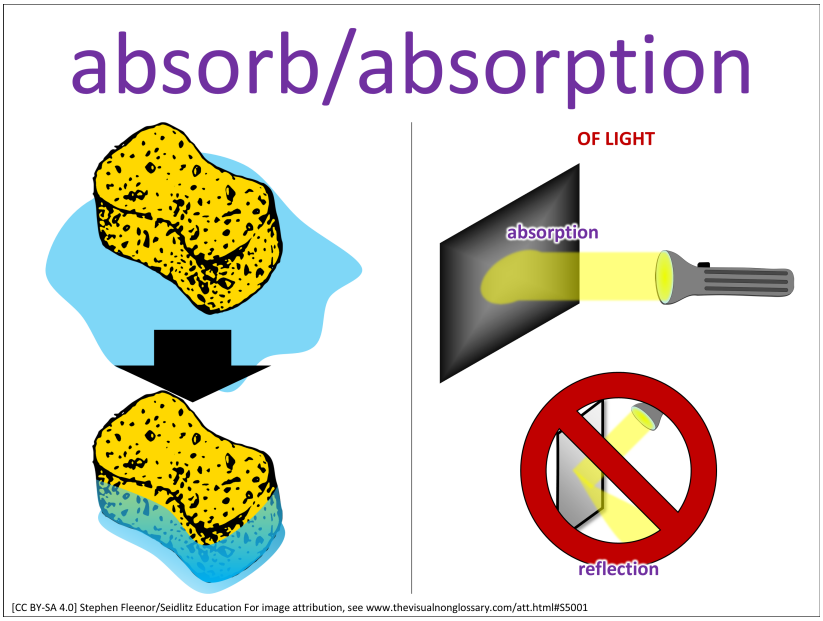
The Visual Non-Glossary™

Absorbing Light Energy

The purpose for reading is to understand what happens when light energy is absorbed and how that helps us identify absorbing materials.

Pay Attention To:

- What is absorption of light energy
- Examples of objects that absorb light
- How shadows are formed



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Have you ever worn black clothes on a hot day and felt really warm? That's because black clothes take in more **light energy**. When light hits something, it can bounce off, bend, or go into it. When it goes in, that's called **absorption**.

When something **absorbs** light, it gets warmer. It also doesn't bounce the light back. Things like black shirts, dark paper, and rubber tires **absorb** light. Things like mirrors, shiny metal, and white paper bounce light instead.

Shadows happen when light is blocked or **absorbed**. If the light is taken in, the space behind the object stays dark. That makes a shadow.

Knowing how light works helps in real life. Sunglasses **absorb** sunlight to keep your eyes safe. Solar panels **absorb** sunlight and turn it into power.

Light always moves in a straight line. But what it does next depends on what it hits. It might be **absorbed**, and that changes what we see.

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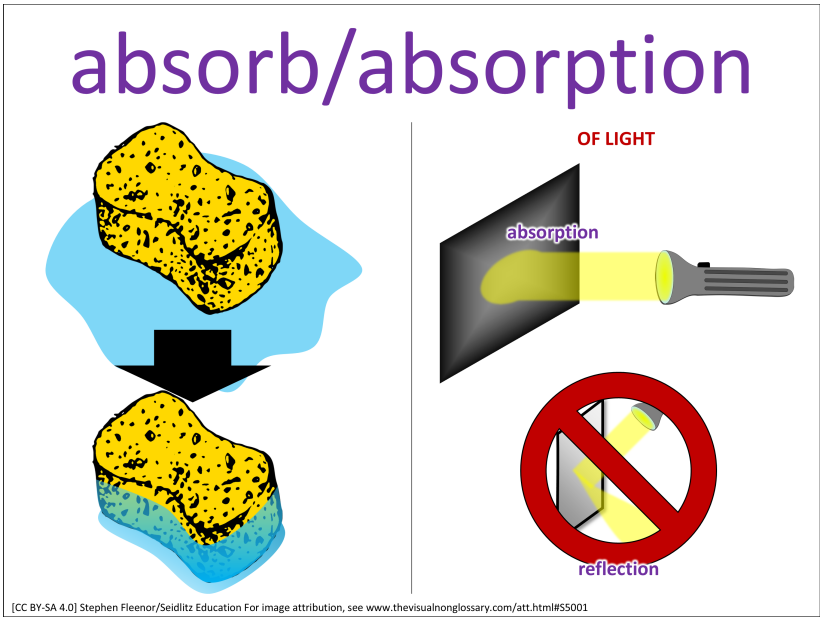

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Have you ever worn a black shirt on a sunny day and felt extra hot? That's because black clothing absorbs more **light energy** than lighter colors. When light hits an object, it can be reflected, refracted, **absorbed**, or pass through. If the light is absorbed, it goes into the object instead of bouncing off. This process is called **absorption**.

When an object **absorbs** light, it often becomes warmer. It also means less light bounces off the object. That's why materials that absorb light tend to look darker. A black t-shirt, dark construction paper, or a rubber tire are good examples of things that absorb light well. On the other hand, mirrors, shiny metal, and white paper reflect light instead of absorbing it. Clear materials like glass and some plastic allow light to pass through.

Shadows happen when light is blocked or absorbed. If an object absorbs the light that hits it, the space behind it doesn't get light, and a shadow forms. This is why an umbrella, a tree, or even your hand can create a shadow when it blocks light.

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In both nature and design, it's important to know how light behaves. Sunglasses use special lenses to absorb some of the sunlight to protect your eyes. Solar panels are designed to absorb as much light as possible and turn it into electricity.

Light always travels in a straight line, but what happens after it hits something depends on the object. Whether light is absorbed, reflected, or passes through can change how we see and experience the world around us.

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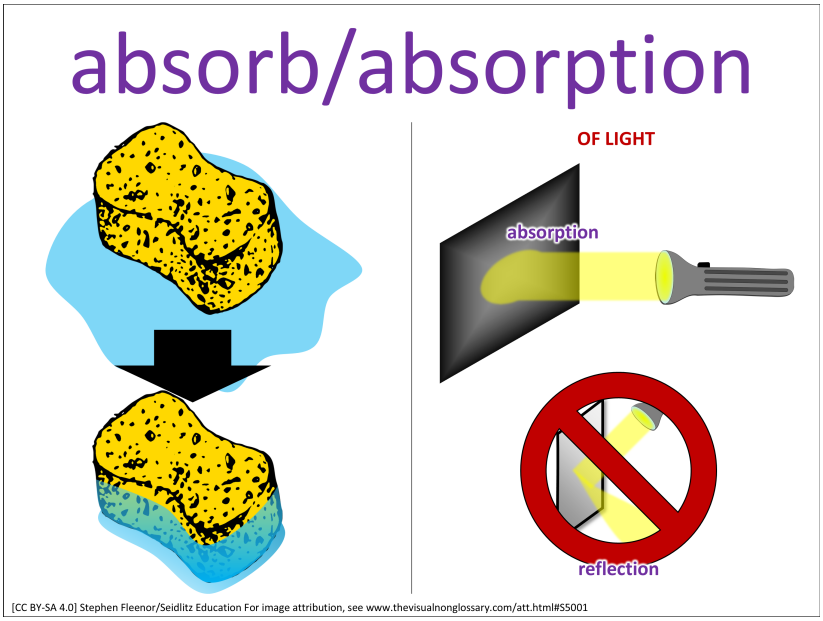

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Have you ever noticed how wearing dark clothes on a sunny day can make you feel hotter? That's because dark colors absorb more **light energy**. When light strikes an object, it can bounce off, bend, go into it, or even pass through. This process of taking in light is called **absorption**.

When an object **absorbs** light, it becomes warmer and reflects less light. Dark materials like black clothing, dark paper, and rubber tires are great at absorbing light. In contrast, mirrors, shiny metals, and white paper mostly reflect light. Transparent materials such as glass and clear plastic allow light to pass through, which is called transmission.

Shadows are created when light is blocked or absorbed. If an object absorbs the light instead of letting it pass through, no light reaches the area behind it. This lack of light creates a shadow.

Understanding absorption helps us in science and everyday life. Sunglasses are made to **absorb** sunlight to protect your eyes. Solar panels use special materials to

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absorb light and convert it into electricity.

While light always moves in a straight path, the outcome depends on what it hits. Whether light is absorbed, reflected, or transmitted affects how we view and interact with our surroundings.

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