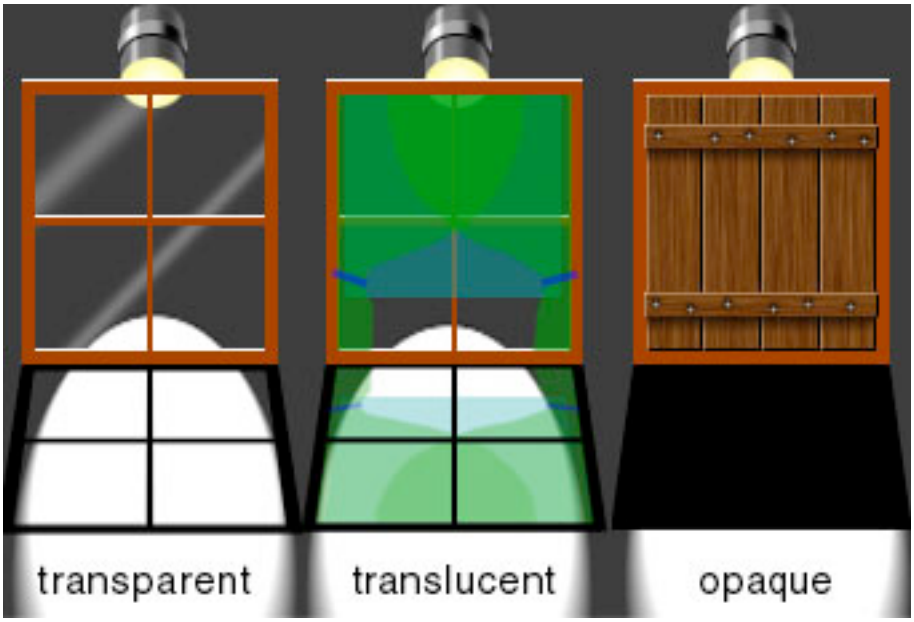
Light Energy: Reflection & Refraction

based on *Physical Science: Light Energy* by Trisha Callella & Marilyn Marks

Light energy travels in a wave motion at incredibly high speed until it bumps into something. When light strikes an object, it can do three things: the light can bounce off, pass through it, or be absorbed by it and changed into heat.

Most objects reflect some of the light that hits them. When a lot of reflected light from an object reaches our eyes, it makes the object appear shiny. Dull-looking surfaces are not very smooth, and they scatter the light in different directions.

The light that passes through an object may pass through directly, or it may be bent, or refracted, as it passes through. **Transparent** objects reflect some of the light that strikes them, but most of the light passes directly through, and we can see clearly what is on the other side. An example of this is clear window glass. **Translucent** objects allow only some of the light to pass through. However, this light is refracted and scattered in many directions, so that we cannot see clearly what is on the other side. An example of this is light coming through thin window curtains. **Opaque** objects do not let any light pass through. When the light is refracted, the light waves are always bent toward the thicker part of the material it is passing through. An example of this is a wooden door.



images from various online sources

images from various online sources