

Bending Light

Wow, look at all the colors of the rainbow! Maddie and Enrique name the colors. Can you name them? Red, orange, yellow, green, blue, indigo, and violet. Maddie and Enrique wonder how a rainbow is made.

They go to see Uncle Rufus. He will know. He knows everything about what happens outside.

Uncle Rufus is happy to explain that rainbows are all about light. Did you know that white light is actually a rainbow of colors all mixed together? It's true!

The light from the sun passes through droplets of water in the air. The droplets spread the light out into the colors of a rainbow.

When light passes through something that slows it down, the light bends.

Each color of the rainbow bends a different amount because each one has its own amount of energy. The white light bends into all the colors of the rainbow--just like what you can see in the sky!

Uncle Rufus shows the kids how to make their own rainbow.

He hands Enrique a triangular prism. It has equal triangles on each side, and all the sides are flat.

What do you think will happen when Maddie turns on the flashlight?

Maddie shines the flashlight on the prism. And look! There's a rainbow on the wall.

The prism caused the white light of the flashlight to bend into all the colors of the rainbow.

Uncle Rufus tells the kids that there is another way to bend light. He shows them a pencil in a water glass.

Water slows down the light and causes the pencil to look like it's bent or cut in half.

Finally, Uncle Rufus shows the kids a mirror.

What do you think will happen when the light shines on the mirror?

Maddie shines the flashlight on the mirror. The light bounces off the mirror and back into the room.

Light can do so many interesting things. What light explorations will you do next?
