

Name: _____

The Magic of Rainbows

By Lydia Lukidis

Rainbows are multi-colored arcs that appear in the sky. They are made up of seven different colors. These colors are always in the same order. They are: red, orange, yellow, green, blue, indigo, and violet. An easy way to remember them is by the name ROY G. BIV. The letters in the name stand for each color.



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look white. But inside that light, there are other colors. Can you guess which ones? It's the seven colors of the rainbow! We can't see them with our eyes. When a beam of sunlight shines down, we see white light. But if that beam of light hits a raindrop at a certain angle, it bends. This is called reflection and refraction. When this happens, the colors that make up the beam separate. Then they form a rainbow.

Let's get a bit more scientific. Light acts like a wave that vibrates. Every color has its own wave. The colors slow down at different speeds when they go into the raindrop. When they get reflected, they bend at different angles. So the light that

enters the raindrop is white. But when it exits, it is a different color. Each raindrop actually makes its own rainbow. And when there are many raindrops, they create a bigger rainbow that we can see.

These seven colors are also called the spectrum of light. It was the scientist Sir Isaac Newton who first discovered this. He figured out that white light contains these



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Another fun fact about rainbows is that they're not located at a specific distance. If you try to follow or approach it, it won't get any closer. The rainbow will always be visible at the angle the raindrops bend the light. So don't try to chase a rainbow, because it's impossible!

About the Author



Lydia Lukidis is a published children's author with a multi-disciplinary background that spans the fields of literature, theater, and puppetry.

Lydia's picture book, *Gerbs in the House: The Dilly Dally Bedtime Routine*, is now available. Find out if Mocha will ever get his silly son to sleep!

Lukidis, Lydia. *Gerbs in the House: The Dilly Dally Bedtime Routine* ISBN: 978-0-9917402-7-7

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1. Based on the information you read in the article, what does the acronym ROY G. BIV stand for? In your answer, make sure you list one word for every letter of the acronym.

2. Which two things are required to produce a rainbow?
- a. light and oxygen
 - b. water and light
 - c. wind and clouds
 - d. rain and wind



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4. In the article you read, you learned that white light is actually made up of the seven colors of the rainbow. Why can't we see those colors when the sunlight is shining down on us on a clear day?
- a. The colors are only visible once they've bent and separated by passing through a raindrop at different speeds.
 - b. The colors are only visible when the sunlight reflects off glass or ice.
 - c. You can only see the colors when the sun peeks through a snow storm.
 - d. You can only see the colors in certain parts of the world, such as the tropics.

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Match each vocabulary word from the article with the correct definition.

_____ 1. indigo

a. semi-circles; curves

_____ 2. reflection

b. a band of colors, such as in a rainbow

_____ 3. separate

c. come near to something; move closer



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_____ 7. conducted

g. able to be seen

_____ 8. approach

h. dark blue color

_____ 9. rare

i. divide; come apart

_____ 10. visible

j. moves back and forth quickly and rapidly

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In the article, "The Magic of Rainbows," you learned what causes a rainbow to form in the sky.

On the lines below, tell about a time when you saw a rainbow.



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ANSWER KEY

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