

K6.1.1

K6.1.1

Pigments can make things colorful. Colors have the principles of reflection and absorption in them. The color of an object is the color of the light that is reflected from it. If an object absorbs all the colors of light except red and only reflects red light, it looks red to our eyes.

## Worksheet

We are setting the global standard of mathematics education. We are always making our best efforts to realize learner-centered education. Please feel free to reach out to us with the contact information provided below if you are interested in our education.

Copyright © 2024 by David Ann

All rights reserved. No part of this book may be reproduced, distributed, or transmitted in any form or by any means without the written permission of the author.

This edition is published by GOS EDUCATION INC.  
Suite 457, 5201 Great America Pkway, Santa Clara, CA 95054  
Website : [www.gosedusoft.com](http://www.gosedusoft.com)  
E-Mail : [davidann819@gmail.com](mailto:davidann819@gmail.com)

Written by David Ann

Printed in the United States of America  
ISBN : 979-8-89533-032-6



GM Kids Series

GM Kids Series

# The Secret of Light, Life, and Beautiful Colors





### Check Problem 01

Living organisms have shapes and colors that help them survive in nature. Insects like grasshoppers and crickets blend in with grass. Chameleons and octopuses can change their colors to match their surroundings. This is a smart way to avoid being seen by predators or prey. However, the male peacock is hard to understand because it has such bright and colorful patterns, even when it should be hiding. Why do you think male peacocks have such vibrant colors?



Answer

---

---

### Check Problem 02

What happens when sunlight shines on an object? Some light reflects off the object, while some is absorbed. When the reflected light enters our eyes, we see its color. For example, when blue light enters the eye, the object appears blue. If an object reflects all the light, it looks white, and if it absorbs all the light, it looks black. On hot summer days, wearing black clothes can make us sweat more. Can you explain this by talking about light reflection and absorption?



Answer

---

---

### Check Problem 03

Pigments are substances that give color to objects. Many living things have pigments that create unique colors. The iris of the human eye also has a pigment called melanin. Melanin pigment makes the iris brown or black. Do blue eyes come from a blue pigment? Share your thoughts freely!



Answer

---

---

---



#### Check Problem 04

What happens when light passing through the air meets water? Some of the light reflects off the water's surface, while some is absorbed. The absorbed light bends as it moves forward, which is called "refraction." When light moves from water to air, it also reflects and refracts. Fish in a pond may be deeper than they appear to us. Can you explain why this happens in terms of light refraction?



Answer

---

---

#### Check Problem 05

Lighting greatly affects people's feelings and actions. That is why it is very important to choose the right lighting for each place. For example, bright white lighting works well in areas where people study or work. This is because strong light stimulates brain activity. In bedrooms, which are meant for relaxation, soft yellow lighting is more appropriate. A slightly dimmer light is better for places that need a calming atmosphere. So, where would it be good to install red lighting?



Answer

---

---

### Check Problem 06

A rainbow is a colorful arc that appears in the sky. It happens when light bends as it passes through raindrops. Before science advanced, people believed that the gods created natural phenomena. In the past, people believed that rainbows held magical meanings. In ancient Greece, people believed the rainbow was the goddess Iris appearing to humans. Can you think of other mysterious meanings that rainbows might have?



Answer

---

---