

# Lesson 3 Mirrors, Lenses, and the Eye

**Skim** Lesson 3 in your book. Read the headings and look at the photos and illustrations. Identify three things you want to learn more about as you read the lesson. Record your ideas in your Science Journal.

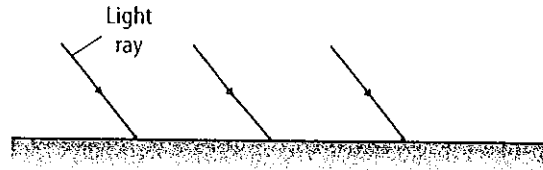
## Main Idea

**Why are some surfaces mirrors?**

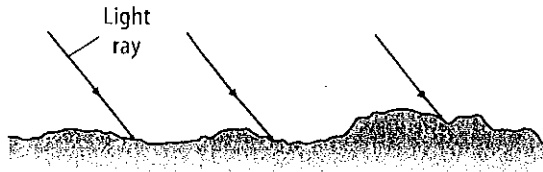
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## Details

**Draw** the path of light rays in regular reflection and diffuse reflection.



Regular reflection



Diffuse reflection

**Compare** the 3 kinds of mirrors in the chart below.

| Mirror  | Direction of Curvature | Direction of Reflected Light | Type of Image Rays Formed |
|---------|------------------------|------------------------------|---------------------------|
| Plane   |                        |                              |                           |
| Concave |                        |                              |                           |
| Convex  |                        |                              |                           |

## Types of Mirrors

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### Main Idea


#### Types of Lenses

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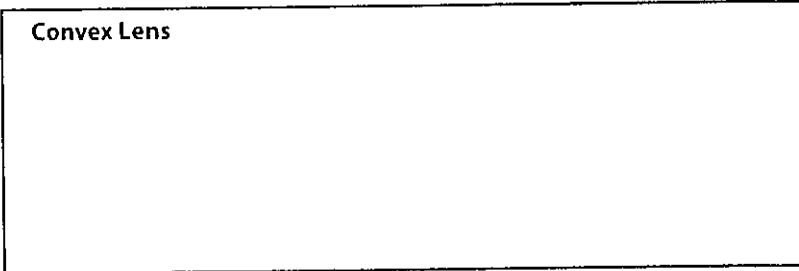
#### Light and the Human Eye

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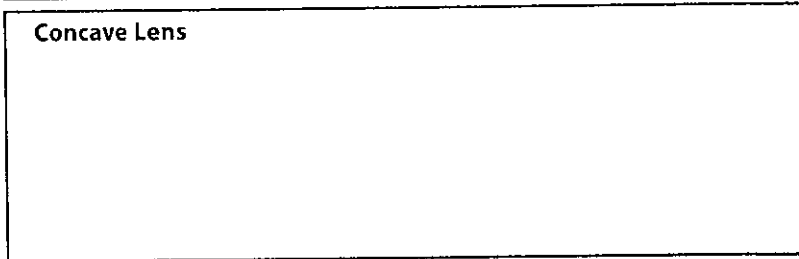
### Details


 **Contrast** convex lenses and concave lenses. Draw how light rays travel through each type of lens. Label the focal point and focal length of the convex lens.

**Convex Lens**



**Concave Lens**



 **Identify** the function of each part of the human eye.

Lens: \_\_\_\_\_

Iris: \_\_\_\_\_

Cornea: \_\_\_\_\_

Pupil: \_\_\_\_\_

Retina: \_\_\_\_\_

contains 2 light-sensitive cells:

a. rod cells: \_\_\_\_\_

b. cone cells: \_\_\_\_\_

### Main Idea

#### The Colors of Objects

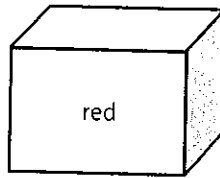
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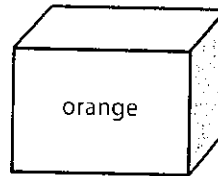
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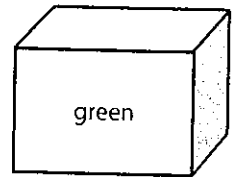
**Distinguish** the color reflected from the colors absorbed by each block. Part of the table has been completed for you.



Block A



Block B



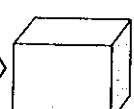
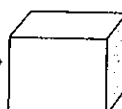
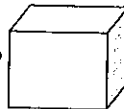
Block C

| Colors(s) | Block A   | Block B | Block C |
|-----------|---|---------|---------|
| Reflected |   |         |         |
| Absorbed  | orange, yellow,<br>green, blue,<br>indigo, violet |         |         |

**Evaluate** how a prism separates white light.

Different \_\_\_\_\_ of light are \_\_\_\_\_ by different amounts as they \_\_\_\_\_ the prism and again when they \_\_\_\_\_ the prism.

**Identify** the color that the blue block will appear under different colored lights. Color each block the color you would see under each light.



**Connect It** Describe how a rainbow would look if viewed through an indigo filter. Explain why the rainbow would appear this way.

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