

Name \_\_\_\_\_

Date \_\_\_\_\_

**Interpreting Illustrations**  
Section 5.3

Use with textbook pages 190-193.

### Light rays and lenses

<p>1. Will the image be (a) larger, smaller, or the same size as the object? _____</p> <p>(b) upright or upside down? _____</p>	<p>more than 2 focal lengths</p>
<p>2. Will the image be (a) larger, smaller, or the same size as the object? _____</p> <p>(b) upright or upside down? _____</p>	<p>between 1 and 2 focal lengths</p>
<p>3. Will the image be (a) larger, smaller, or the same size as the object? _____</p> <p>(b) upright or upside down? _____</p>	<p>between 1 and 2 focal lengths</p>
<p>4. Will the image be (a) larger, smaller, or the same size as the object? _____</p> <p>(b) upright or upside down? _____</p>	<p>more than 2 focal lengths</p>

Name \_\_\_\_\_

Date \_\_\_\_\_

**Applying Knowledge**  
Section 5.3

Use with textbook pages 190-193.

### Concave lenses and convex lenses

Compare and contrast concave lenses and convex lenses.

	Lenses	
	Concave	Convex
Draw the lens.		
Do light rays converge or diverge?	diverge	converge
Is the image upright or upside down?	upright	inverted
Is the image smaller or larger than the object?	smaller reep	larger on distance

Name \_\_\_\_\_

Date \_\_\_\_\_

Vocabulary Section 5.3

Use with textbook pages 167-193.

### Lenses puzzle

Use the clues to help you solve the crossword puzzle.

Name \_\_\_\_\_

Date \_\_\_\_\_

Assessment Section 5.3

Use with textbook pages 190-193.

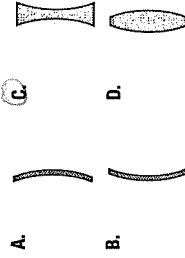
### Using lenses to form images

Term	Descriptor
1. <u>B</u> lens	A. point where the converging light rays meet
2. <u>F</u> focal length	B. a piece of transparent material that bends light
3. <u>D</u> convex lens	C. lens that is thinner in the middle than at the edge
4. <u>C</u> concave lens	D. lens that is thicker in the middle than at the edge
	E. distance from the centre of the lens to the focal point

Circle the letter of the best answer.

5. What happens to the light rays that pass through a convex lens?  
 A. all the light rays diverge  
 B. all the light rays converge  
 C. all the light rays are absorbed by the lens  
 D. some light rays diverge and some light rays converge
6. Describe the image that is produced by a concave lens.  
 A. it is upright and larger than the object  
 B. it is upright and smaller than the object  
 C. it is upside down and larger than the object  
 D. it is upside down and smaller than the object

7. Which of the following is a concave lens?



8. A concave lens reflects light rays

- A. towards the normal  
 B. away from the normal  
 C. along the normal  
 D. none of the above

9. A convex lens reflects light rays

- A. towards the normal  
 B. away from the normal  
 C. along the normal  
 D. none of the above

10. Light rays converge

- A. at the focal length  
 B. at the focal point  
 C. inside the lens  
 D. on the edge of the lens

11. If the object is more than two focal lengths from a convex lens, the image will be

- A. upside down and smaller  
 B. upside down and larger  
 C. upright and larger  
 D. no image forms