

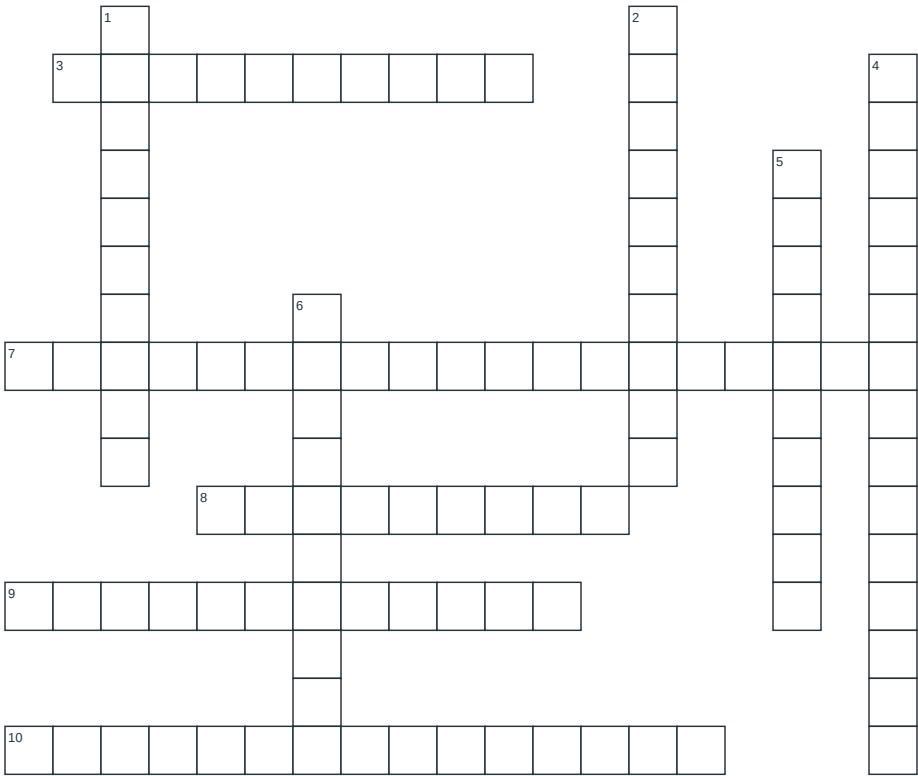
Light and Optics Crossword

Easy | 10 clues | Student Worksheet

Name: _____

Date: _____

Directions: Use the clues to complete the grid. Omit spaces, punctuation, and hyphens.



ACROSS

- 3. Point where parallel rays converge after passing through a converging lens.
- 7. Wave of changing electric and magnetic fields that can travel through a vacuum
- 8. An image formed where light rays actually converge
- 9. Image at a location from which light rays appear to originate.
- 10. Range of electromagnetic wavelengths detectable by human vision.

DOWN

- 1. Lens generally converges parallel rays in air
- 2. Returns some light into the original medium
- 4. Rule that the incident and reflected angles are equal when measured from the normal.
- 5. A change in propagation direction associated with a change in wave speed
- 6. Line perpendicular to a surface at the point where a ray strikes.

Light and Optics Crossword

Easy | 10 clues | Teacher Answer Key

TEACHER ANSWER KEY

Completed grid and numbered answers. Spaces and punctuation are omitted in the grid.



ACROSS

3. Focal point
7. Electromagnetic Wave
8. Real Image
9. Virtual image
10. Visible spectrum

DOWN

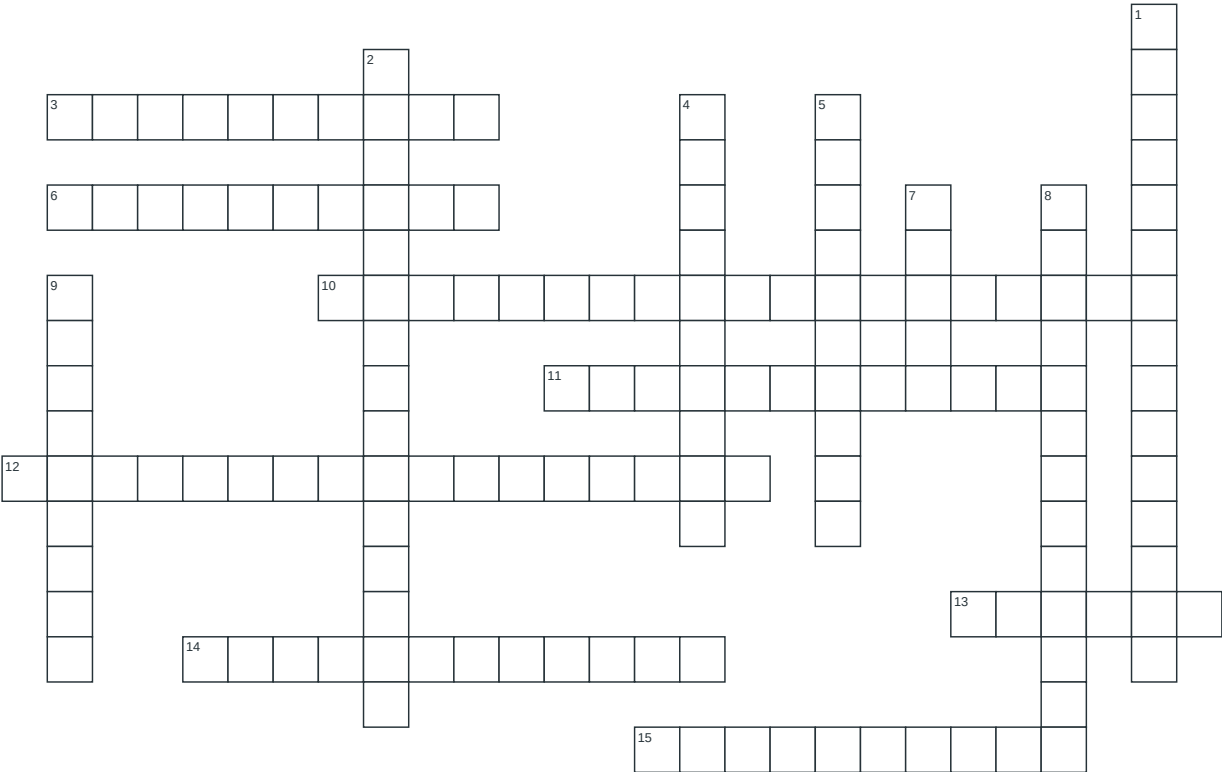
1. Convex Lens
2. Reflection
4. Law of reflection
5. Refraction
6. Normal line

Light and Optics Crossword

Medium | 15 clues | Student Worksheet

Name: _____ Date: _____

Directions: Use the clues to complete the grid. Omit spaces, punctuation, and hyphens.



ACROSS

- 3. Point where parallel rays converge after passing through a converging lens.
- 6. Returns some light into the original medium
- 10. Wave of changing electric and magnetic fields that can travel through a vacuum
- 11. Image at a location from which light rays appear to originate.
- 12. Reflection in many directions from a rough surface.
- 13. Region where light is blocked by an object.
- 14. Object that blocks light from passing through it.
- 15. Line perpendicular to a surface at the point where a ray strikes.

DOWN

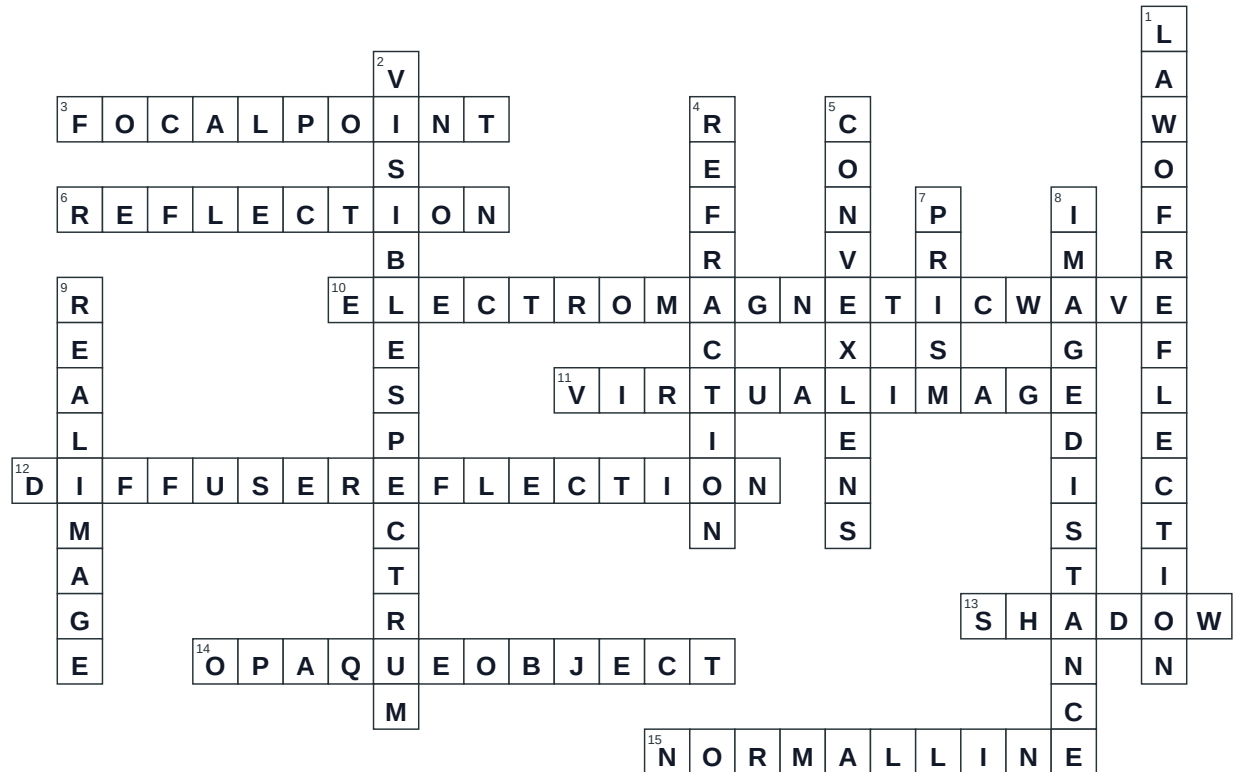
- 1. Rule that the incident and reflected angles are equal when measured from the normal.
- 2. Range of electromagnetic wavelengths detectable by human vision.
- 4. A change in propagation direction associated with a change in wave speed
- 5. Lens generally converges parallel rays in air
- 7. Transparent optical object that can separate light by wavelength-dependent refraction.
- 8. Distance from an optical element to the image it forms.
- 9. An image formed where light rays actually converge

Light and Optics Crossword

Medium | 15 clues | Teacher Answer Key

TEACHER ANSWER KEY

Completed grid and numbered answers. Spaces and punctuation are omitted in the grid.



ACROSS

3. Focal point
6. Reflection
10. Electromagnetic Wave
11. Virtual image
12. Diffuse reflection
13. Shadow
14. Opaque object
15. Normal line

DOWN

1. Law of reflection
2. Visible spectrum
4. Refraction
5. Convex Lens
7. Prism
8. Image distance
9. Real Image

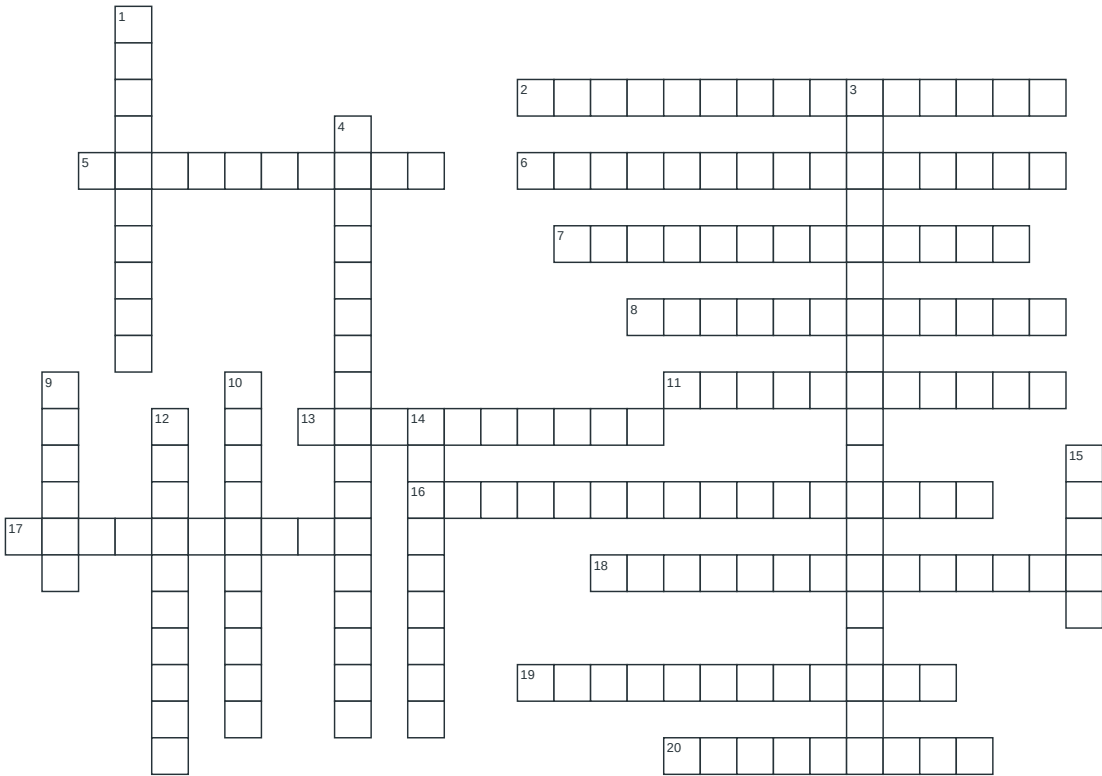
Light and Optics Crossword

Hard | 20 clues | Student Worksheet

Name: _____

Date: _____

Directions: Use the clues to complete the grid. Omit spaces, punctuation, and hyphens.



ACROSS

2. Range of electromagnetic wavelengths detectable by human vision.
5. Returns some light into the original medium
6. Rule that the incident and reflected angles are equal when measured from the normal.
7. Distance from an optical element to the image it forms.
8. Object that blocks light from passing through it.
11. Reference line through the center of a lens or mirror.
13. A change in propagation direction associated with a change in wave speed
16. Angle between an incoming ray and the normal to a surface.
17. Line perpendicular to a surface at the point where a ray strikes.
18. Lens that brings parallel incoming rays together in the usual ray model.

ACROSS (continued)

19. Image at a location from which light rays appear to originate.
20. The number of cycles per unit time

DOWN

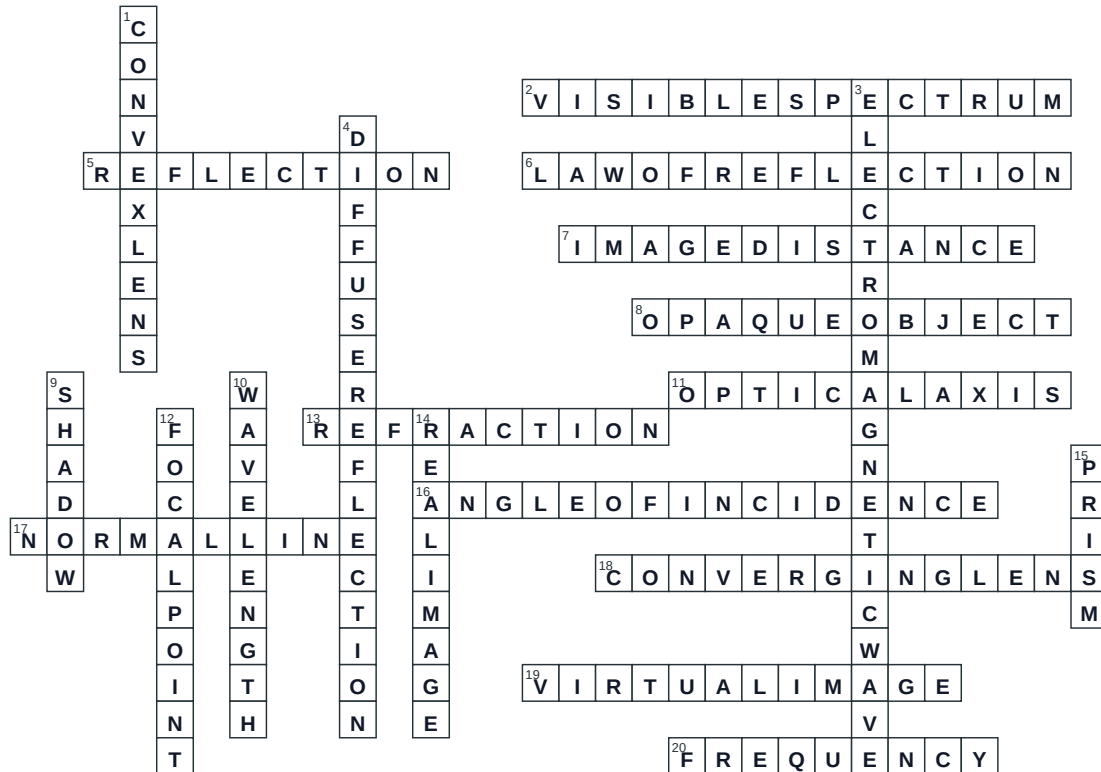
1. Lens generally converges parallel rays in air
3. Wave of changing electric and magnetic fields that can travel through a vacuum
4. Reflection in many directions from a rough surface.
9. Region where light is blocked by an object.
10. Distance between corresponding points on adjacent wave cycles.
12. Point where parallel rays converge after passing through a converging lens.
14. An image formed where light rays actually converge
15. Transparent optical object that can separate light by wavelength-dependent refraction.

Light and Optics Crossword

Hard | 20 clues | Teacher Answer Key

TEACHER ANSWER KEY

Completed grid and numbered answers. Spaces and punctuation are omitted in the grid.



ACROSS

2. Visible spectrum
5. Reflection
6. Law of reflection
7. Image distance
8. Opaque object
11. Optical axis
13. Refraction
16. Angle of incidence
17. Normal line
18. Converging lens
19. Virtual image

ACROSS (continued)

20. Frequency

DOWN

1. Convex Lens
3. Electromagnetic Wave
4. Diffuse reflection
9. Shadow
10. Wavelength
12. Focal point
14. Real Image
15. Prism