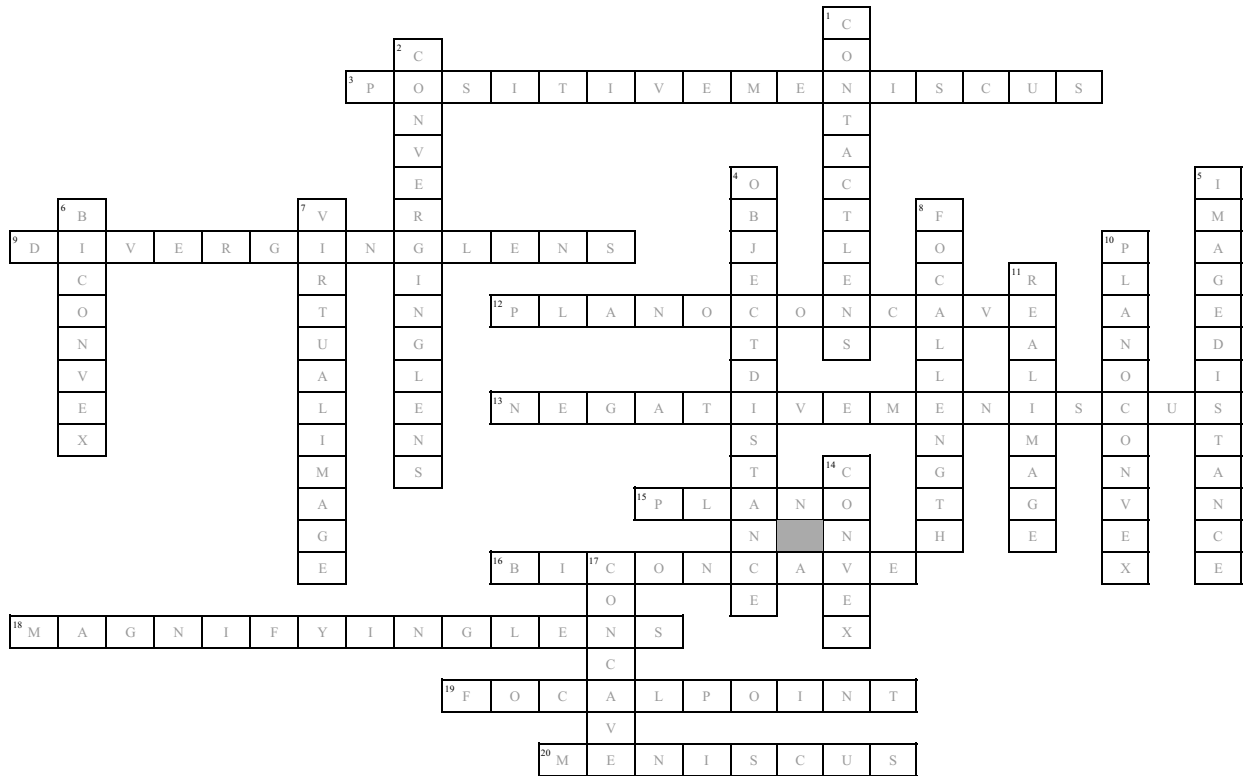


# Refraction and Lenses



**Across**

- 3. "Fisheye" used in photography for a curve look; is thicker at the center than at the edges.
- 9. a lens that causes a beam of parallel rays to diverge after refraction, as from a virtual image
- 12. pertaining to or nothing a lens that is plane on one side and concave on the other.
- 13. common element in beam expanding applications; consist of a convex surface and a concave surface where the concave surface.
- 15. pertaining to eyeglasses that do not contain a curvature for correcting vision, such as sunglasses.
- 16. concave on both sides
- 18. microscopes are an example of this; convex lens that is used to produce a magnified image of an object
- 19. A "perfect" lens or mirror would send all light rays through one \_\_\_\_\_ which would result in the clearest image; the center of interest or activity.
- 20. A lens with one convex and one concave side is convex-concave.

**Down**

- 1. a thin plastic lens placed directly on the surface of the eye to correct visual defect
- 2. used in a refracting telescope to focus the image
- 4. the distance from the actual object being reflected to the point of incidence on the mirror where it's reflected as an image.
- 5. the distance from the point of incidence on the mirror, the where the image is reflected to.
- 6. Lenses can be used to focus light; convex on both sides
- 7. formed by diverging lenses or by placing an object inside the focal length of a converging lens
- 8. The light enters the lens and it bends as it goes through the lens to cross at a point in front of the lens.
- 10. lenses are used in imaging, lasers and fiber optics; being flat on one side, and convex on the other
- 11. movies presented are an example; light actually converges
- 14. refracting telescope uses two (of these lenses) to magnify images in the sky; surface curved like the exterior of a circle or sphere.
- 17. including in eyeglasses; curving inward.