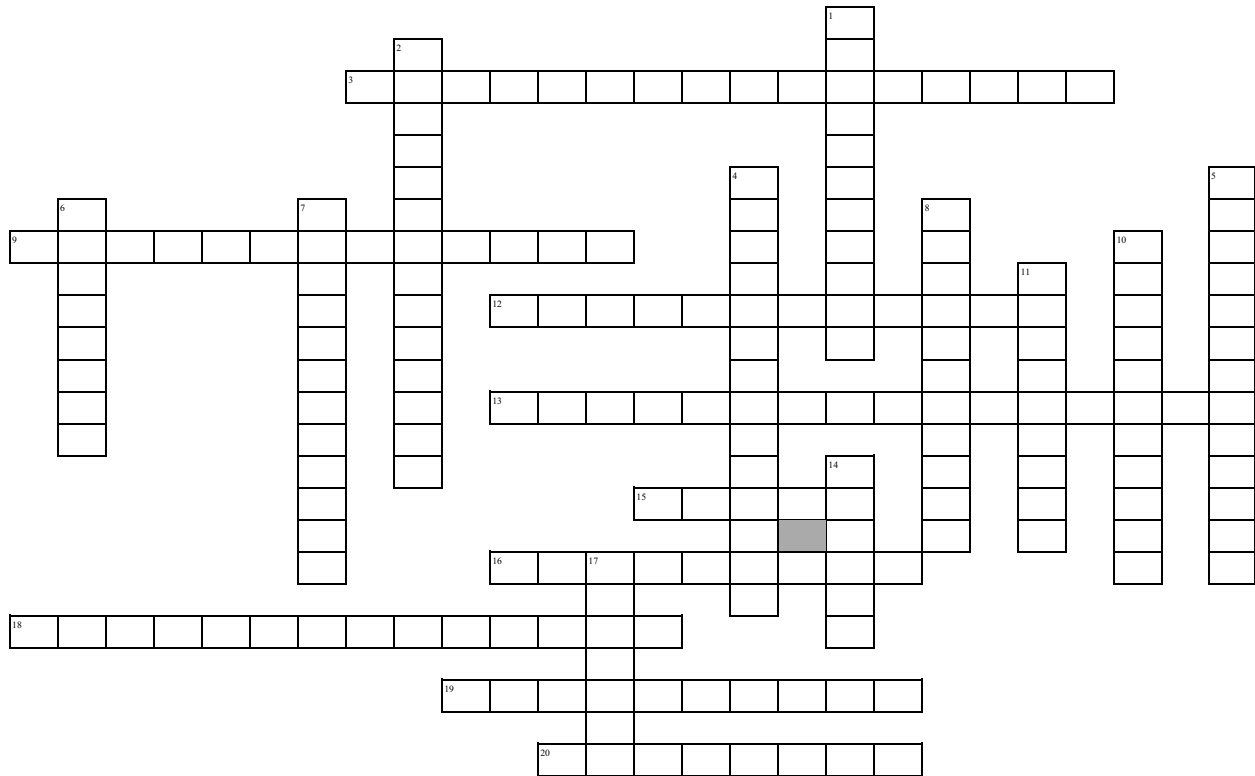


Refraction and Lenses



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.