Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Class \_\_\_\_\_

Bill Nye: Light Optics

1. Without \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, you wouldn’t see yourself.
2. Light can be \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_,\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, or \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
3. You see light \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ off things.
4. Light bounces straight \_\_\_\_\_\_\_\_ and straight \_\_\_\_\_\_\_\_. This is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
5. Light can travel through things like \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, but if it is curved, it

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ or bends the light.

1. When light is reflected or refracted, it changes \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
2. Light travels in a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ unless it hits something.
3. Light travels in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
4. The way a lens is curved affects how it \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ light.
5. If a lens is curved in, it is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. Things look \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

1. If the sides of a lens are curved out, it is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. Things look

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

1. You have \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ lenses in your eyes.
2. Light in a mirror is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ off the object, then the mirror, and then it

enters your \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

1. When a mirror is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, it bends the light.
2. If you aim for something underwater, you miss because of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
3. When light enters something, it \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ a little bit and

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ direction.

1. The beams come together at the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ point.
2. Fiber \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is how we receive phone calls.
3. Infrared light is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Bill Nye: Light Optics

1. Without reflection, you wouldn’t see yourself.
2. Light can be bent, absorbed, or reflected.
3. You see light bouncing off things.
4. Light bounces straight on and straight off. This is reflection.
5. Light can travel through things like windows, or glass, but if it is curved, it refracts or bends the light.
6. When light is reflected or refracted, it changes directions.
7. Light travels in a straight line unless it hits something.
8. Light travels in waves.
9. The way a lens is curved affects how it bends light.
10. If a lens is curved in, it is called concave. Things look smaller and farther

away.

1. If the sides of a lens are curved out, it is convex. Things look bigger.
2. You have convex lenses in your eyes.
3. Light in a mirror is bounced off the object, then the mirror, and then it enters

your eye.

1. When a mirror is curved, it bends the light.
2. If you aim for something underwater, you miss because of refraction.
3. When light enters something, it slows down a little bit and changes direction.
4. The beams come together at the focal point.
5. Fiber optics is how we receive phone calls.
6. Infrared light is heat.