**Science 8 - Light & Optics 1 Review**

1. The branch of physics dealing with light and vision is called **Optics**.

2. Objects that radiate light are **Luminous**.

3. A **Light Year** is the distance that light travels in a vacuum in one year.

4. A lens or mirror curved outward is called **Convex**.

5. A **reflecting** telescope enlarges the image with mirrors.

6. The angle of **incidence** is connected to the angle of **reflection** because both angles are exactly the same.

7. **Concave** lenses are NOT similar to **Convex** lenses because one causes light rays to converge and the other causes them to diverge.

8. **Refraction** is connected to **density** because light travels faster through some substances than others making the image appear bent or broken.

9. **Mirrors** are NOT similar to **prisms** because one reflects light and the other causes light to be refracted.

10. **Prisms** are connected to **refracting light** because these angled pieces of glass or crystals break light into a spectrum of seven colours.

**True False**

1. ____False____ Lenses can only converge light.
2. ____True______ Light travels in straight lines.
3. ____True______ The study of optics deals with light and vision.
4. ____True______ Light travels in the vacuum of space.
5. ____True______ Refraction bends light.

**Multiple Choice**

1. When light travels, it does so in straight lines. What creates a shadow?
   - A. The absence of a light source
   - B. The absence of light
   - C. The reflection of light
   - D. The refraction of light
2. This illustration demonstrates how light travels and is referred to as a ...

A. light sketch  
B. light diagram  
C. ray sketch  
D. ray diagram

3. When light interacts with a substance, different things can happen to the light because of the type of material it is made of. Opaque materials do this to light ...

A. reflect  
B. transmit  
C. block  
D. diffuse

4. When a light bulb in a lamp receives electrical energy, it will produce light. The term that that is used to indicate that the light source produces light is ...

A. brilliant  
B. electricity  
C. luminous  
D. intensity

5. This illustration demonstrates a type of reflection referred to as ...

A. regular  
B. crooked  
C. diffuse  
D. spectacular
6. When parallel rays of light hit the surface of this type of mirror, they are reflected back to a focal point in front of the mirror. The type of mirror that does this is called a …

A. bubble mirror
B. convex mirror
C. concave mirror
D. plane mirror

7. Cosmetic mirrors, flashlights, reflecting telescopes, and the headlights in a car are all examples of practical applications for these type mirrors …

A. bubble mirror
B. convex mirror
C. concave mirror
D. plane mirror

8. If an object is placed far away from the focal point in a concave mirror, it will appear

A. Upright and smaller
B. Upright and larger
C. Inverted and smaller
D. Inverted and larger

9. If an object is placed between the focal point in a concave mirror and the mirror itself, the image will appear

A. Upright and smaller
B. Upright and larger
C. Inverted and smaller
D. Inverted and larger

10. When light is refracted, the angle of incidence increases and the angle of refraction

A. depends on the intensity of the light
B. increases, depending on the material
C. decreases, but only by one half
D. increases by double