**REFLECTION, DIFFRACTION, REFRACTION**

**GLOSSARY**



**Westminster College**

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| **Angle of incidence** | The angle between an incoming ray of light and the normal line |
| **Angle of reflection** | The angle between the reflected light ray and the normal line |
| **Angle of refraction** | The angle between a refracted light ray and the normal line |



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| **Concave lens** | Lens with an inward curving surface that causes light rays to diverge, or spread out; this lens is thicker at the edges than at the Center. |
| **Convex lens** | Lens with an outward curving surface that causes light rays to converge, or meet a focal point; this lens has a thick center and thin edges. |
| **Diffraction** | The spreading out of light or any wave after it passes through a small opening or slit. Diffraction can cause interference among waves when waves spreading out form one light meet waves spreading from another. |
| **Diffraction grating** | Metal, glass or plastic plate with thousands of parallel lines per inch; the interference that results when light passes through the grating causes light to seem to be broken into a “ rainbow” or spectrum of all the different colors in the light. |

 *GLOSSARY*

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| **Diffraction grating, reflection type** | Transparent acetate with a thin coating of aluminum on the groove side that leaves the grating semi-transparent and able to reflect a spectrum. |
| **Diffraction grating** | Diffraction grating made of transparent acetate; embossed |
| **Transmission type** | With at least 13,4400 grooves per inch, it diffracts light and produces a spectrum |
| **Dispersion** | Separating of a light ray into the color spectrum. |
| **Focal point (focal length** | Distance from the center of a lens or mirror to the point where light rays converge, or appear to converge. |
| **Light ray** | A beam of light |
| **Luminous** | Source of light energy |
| **Nonluminous** | Does not give off light; visible only when object reflects light back to our eyes |
| **Normal** | A line drawn perpendicular to another line or to a surface |
| **Opaque** | An object that absorbs, or stops, light rays |
| **Perpendicular** | At right angles to a given plane or line |
| **Plane mirror** | Smooth, polished, flat surface that reflects light |
| **Prism** | Transparent solid that refracts and/or reflects light rays; the standard prism has equal, parallel triangles at the ends and 3 rectangular sides |
| **Real Image** | Image formed when light rays intersect; a real image can be focuses on a screen. |
| **Reflection** | The action of light striking a surface and bouncing off |
| **Refraction** | The bending of light rays as they pass throughout different mediums |
| **Spectroscope** | Instrument used to produce an/or observe the spectrum |
| **Spectrum** | Range of colors produced when light passes through a prism or diffraction grating; white light produces the ROY G BIV color sequence (Red, Orange, Yellow, Green , Blue, Indigo, Violet) |
| **Translucent** | Light rays are diffused as they pass through an object; although light goes through the object, a real image cannot be seen |

 *GLOSSARY*

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| **Transparent** | Light rays are easily transmitted through an object; a real image can be observed through the object |
| **Virtual Image** | An image that appears to be formed by the intersection of light rays, but the image doesn’t actually exist and cannot be focused on a screen. For example: when you look in the mirror you see a virtual image of yourself that appears to be standing behind the mirror. But there is really no image behind the mirror |