Reflection and Refraction Sort

1. What is refraction?	The bending of a wave as it crosses a boundary between two media at an angle.
2. How does a sound wave become refracted?	It is refracted when it travels at uneven winds or when it is traveling through air of uneven temperature.
3. Why the sounds travel a farther distance at night?	The layer of warm air on top of a layer of colder air near the ground causes a bending of the sound waves towards Earth.
4. What is reflection?	The reflection of light from a smooth surface that bounces predictably into the original medium
5. What is diffuse reflection?	The reflection of light from a rough surface that bounces randomly into the original medium.
6. What makes a surface "rough"?	The surface bumps are bigger than the wavelengths it reflects.
7. What makes a surface "smooth"	The surface bumps are smaller than the wavelengths it reflects.
8. What causes refraction?	The change in speed of light as it passes from one medium to another, or variations in temperatures and densities of the same medium.
9. What direction do light rays bend when they enter a medium in which their speed decreases?	Towards the normal
10. What direction do light rays bend when they enter a medium in which their speed increases?	Away from the normal
11. What is a mirage?	An imaged caused by the refraction of light in Earth's atmosphere.
12. What is dispersion?	The separation of light into colors arranged according to their frequency.
13. What needs to happen in order for a person to see a rainbow?	The sun must be shining in one part of the sky, and the water droplets in a cloud or falling rain must be in the opposite part of the sky.
14. What is total internal reflection? What is an excellent example of it?	The complete reflection of light back into its original medium. A diamond sparkles beautiful due to this phenomenon.