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| Subject: | Science  |
| Title: | Light Hockey |
| Grade Level: | 4 |
| Purpose: | Students experiment with reflecting and directing light in a playful setting.  |
| CurricularConnections: | * Recognize that light can be reflected and that shiny surfaces, such as polished metals and mirrors, are good reflectors.
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| Materials: | * Mirrors (at least 5 per group)
* Strong flashlights
* A classroom that can get relatively dark
* **Hockey net printout**
* Modeling clay to hold up net and mirrors if necessary.
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| Activity: | 1. Review with students what they have learned so far about the properties of light.
2. Students predict what happens to light when it is directed toward a reflective surface.
3. Explain to students the game of **Light Hockey**. Each team gets a chance to “shoot” on the net. Show them how to set up the game:

Mirrors: (Students will set up the mirrors wherever they think will work.) 🡨---------- 1 Meter------------🡪

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| **🡨Flash Light** |

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| **NET** |

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1. Each “team” (teacher may determine the size of groups based on available supplies) wants to score a goal on the net.
2. To score a goal they must pass the light **5 times** from **mirror** **to mirror** and **illuminate** the net.

Varying levels of difficulty:**Easy** – With the lights off students place the mirrors strategically, one at a time, adjusting as needed to reflect the light in the right direction. **Medium** – With the lights off students place the mirrors strategically, but they are not allowed to adjust any mirror once it is placed down. **Hard** - Students place all the mirrors down with the lights on. They turn the lights off and the flashlight on to check to see if they scored a goal. |
| Extension: | Students play a game of 2-sided **Light Hockey** by doubling the size of the playing field and adding another net. The flashlight is placed in the center. Teams play in the dark and take turns placing their mirrors down trying to intercept the other teams “light pass”.  |
| Assessment: | Student is able to:* Demonstrate an understanding of reflecting light.
* Successfully apply scientific knowledge of reflecting light.
* Communicate understanding to others, and work cooperatively.
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