



THINGS THAT HELP US SEE ACTIVITIES

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Invent a Laser Maze

Draper develops highly advanced technologies for space missions and is planning for communication at light speed using lasers. Lasers can replace slower-moving radio signals that can take up to 24 minutes to travel from Mars to Earth. Creating a path for light to carry a message to Mars could certainly make life easier for astronauts traveling to the red planet. Invent a way to bounce the laser beam around obstacles to hit the target on the other side.

Freeze Time with Light

Harold "Doc" Edgerton used powerful strobe lights to freeze moments in time. Many of Edgerton's photos are not only scientifically fascinating, they are also beautiful. Some of his most famous images include a balloon in mid pop and the splash from a drop of milk. During World War II Edgerton's strobe technology was also used on allied planes to take aerial reconnaissance photos. Connect and arrange triggers and a flash to freeze a high-speed event.

Invent an Image Projector

Images at movie theaters are projected across a room onto the screen. One of the first film projectors was called the Eidoloscope. It was created by Woodville Latham in 1895. Just like the Eidoloscope, projectors today still use bright lamps

and lenses to transfer images to the silver screen. Invent a way to make an image show up on a screen using a bright lamp and some lenses.

Re-Invent the Lamp

Even with 1,093 US patents to his name, Thomas Edison is most often remembered as the inventor of the incandescent light bulb. The invention of the electric light changed the way we live. Before its creation, open flame was the only source of light once the sun went down. As electrical grids were put in place, people began to illuminate their homes and businesses. With this illumination came the development of lamps that were not only practical but stylish as well. Use the materials here to create your own style of lighting.

Use Sound to See

Aircraft, ships, and even bats use sonar, a way to “see” objects that are not visible by using sound. Ultrasonic sound can also show us places where it is not safe for humans to go. In response to the 1979 Three Mile Island nuclear plant accident, a team of engineers used sound to create a map of the inside of a dangerously radioactive environment, so that they could find the problem area without harming any people. Invent a way to use an ultrasonic device to hear obstacles.

Invent a Light Beacon

Coastal lighthouses, like the one at Bolivar Point near Galveston, Texas, use lights and lenses to shine the way for ships. Tall buildings and monuments use lights to warn aircraft of their presence. Sometimes, individuals may also use lights and lenses to signal for help or to warn others. Create an invention that uses light as a signal to let others know where you or an object are located.

Invent a Machine that Sees

Jerome Lemelson filed a 150-page patent for an idea he called “machine vision.” His patent outlined the use of sensors to make machines that could see what was around them. This patent eventually led to the development of technology that can be found in laser scanners at the checkout and face recognition in cameras. Invent a machine that can perform based on a person’s movement.

Create Illuminated Art

Throughout our history light has been used to create art. Cameras expose chemicals that create images. Glassblowers use gases to create vibrant neon signs. The strobe flashes of inventor Harold Edgerton froze time. Use materials that give off light to invent an eye-catching visual display.