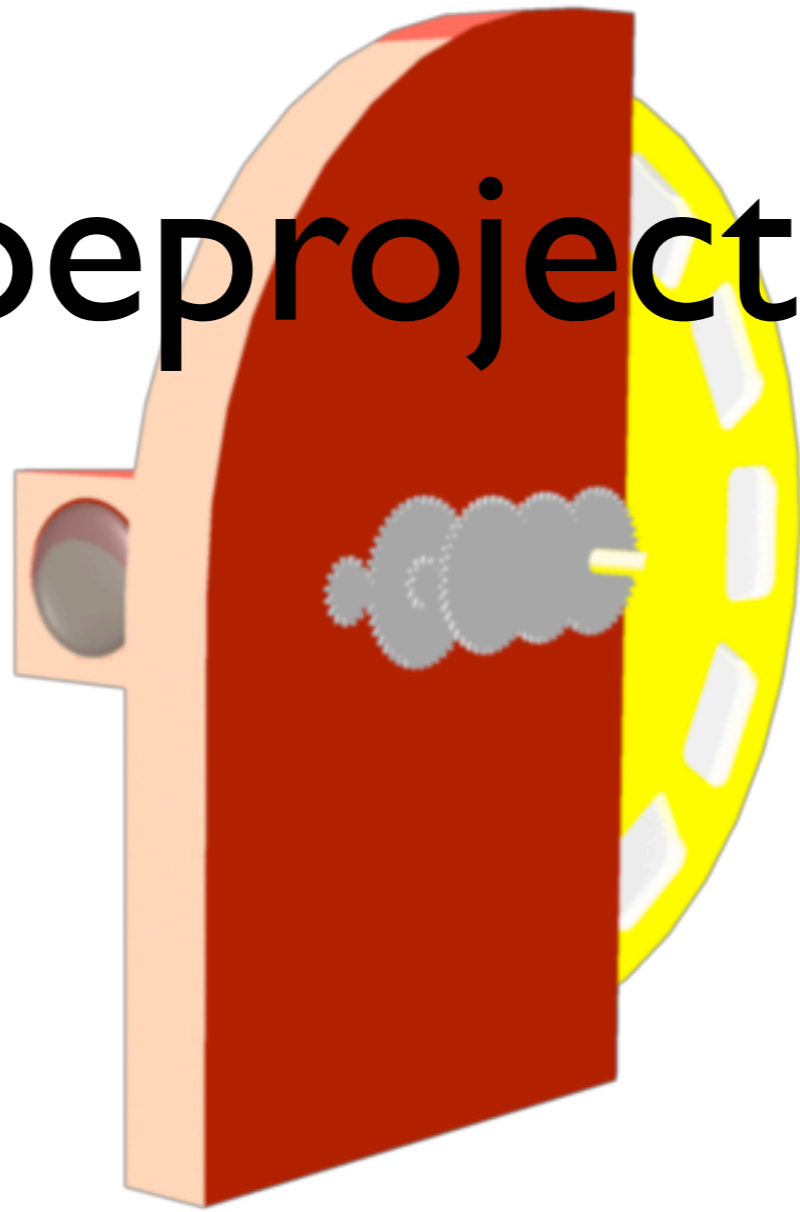
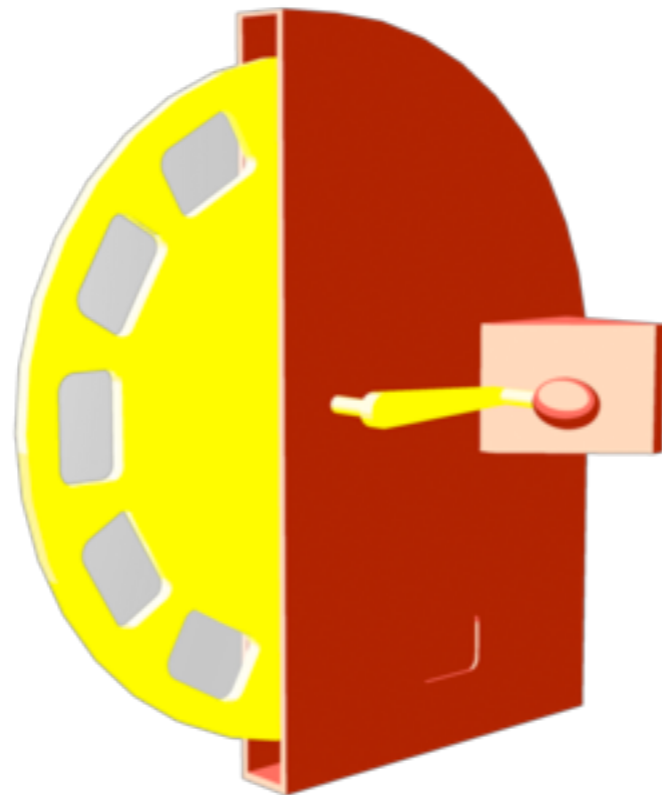


The Zoeprojectoscope



Elie Zananiri
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ITP

A mechanical toy designed to teach kids the main concepts of frame-by-frame animation



Why?

Animation is a fascinating concept, especially for kids who watch a lot of it. It's always exciting to understand how the shows they watch are made.

How It Works?

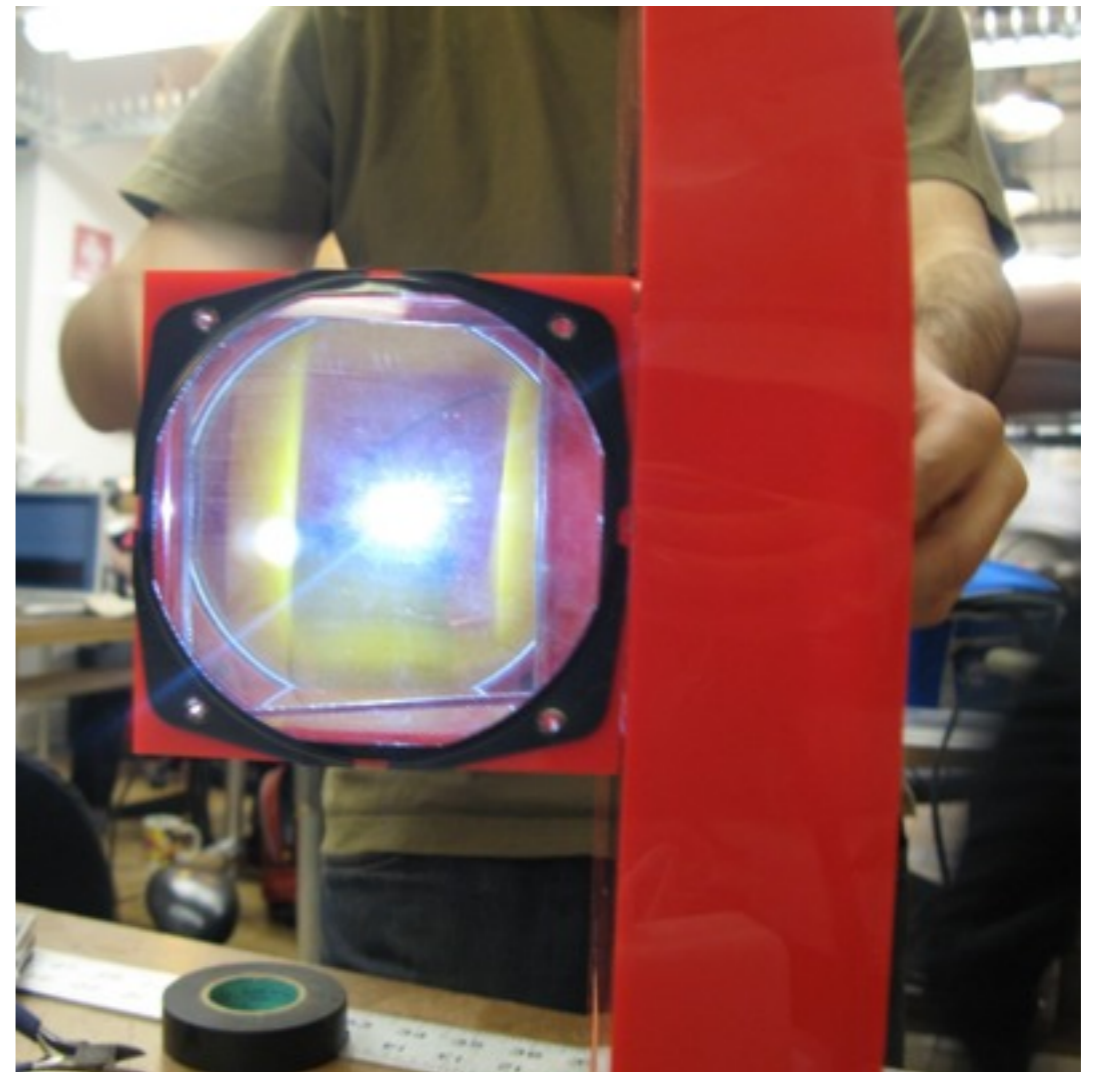
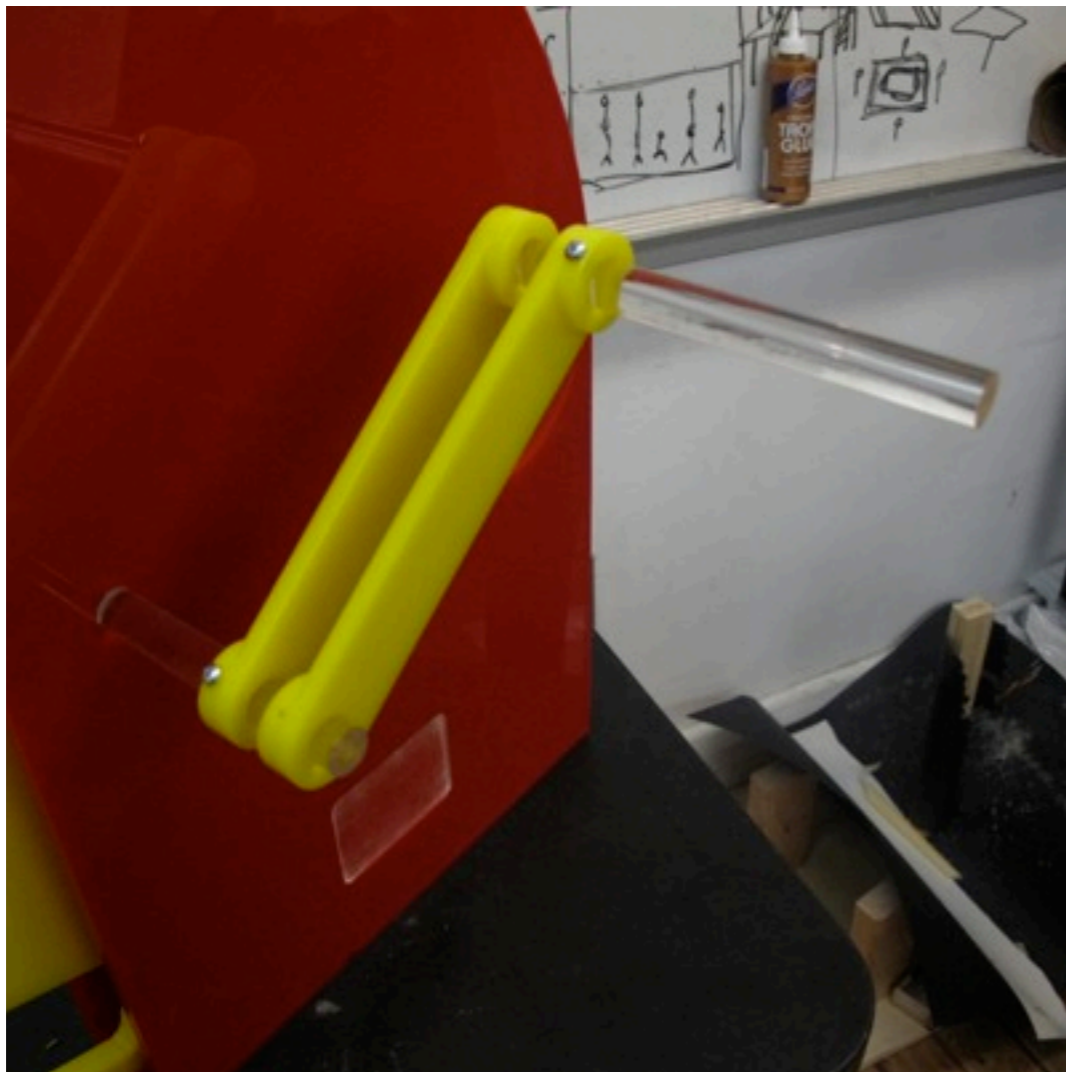
Each frame is a piece of acetate which is drawn on.

The acetate is sandwiched between two clear pieces of acrylic and placed in the wheel, which holds slots for 12 frames.



How It Works?

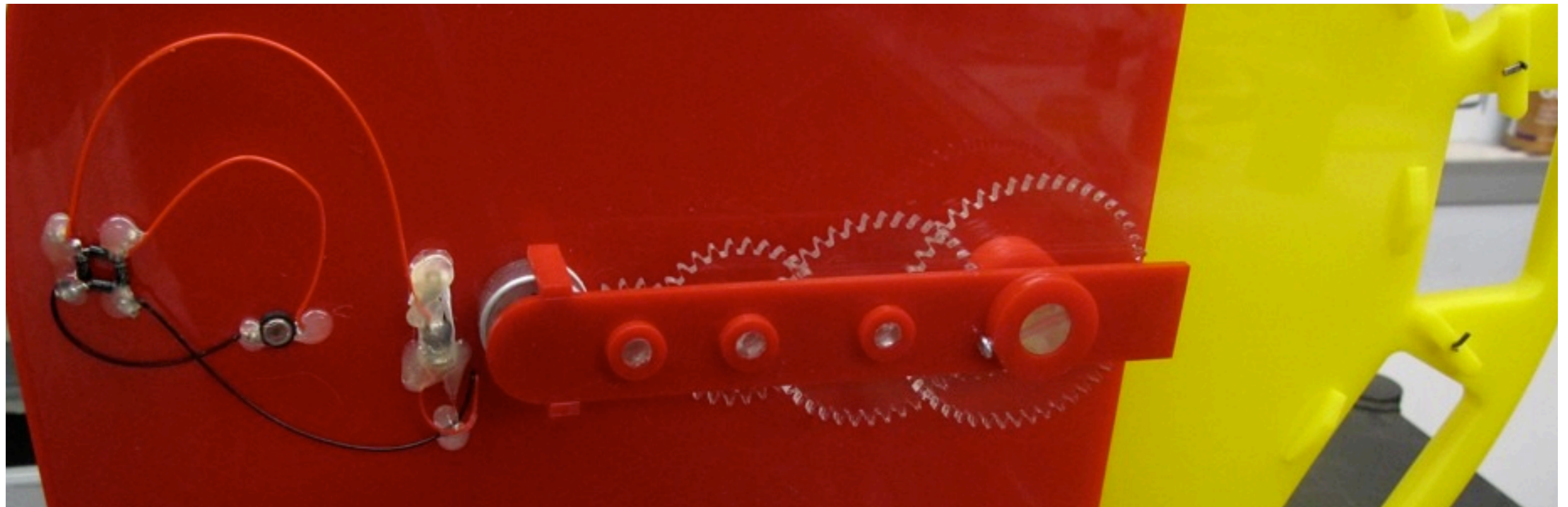
To animate the drawings, the user turns the crank, which makes the wheel turn, and places the frames in front of the optics in the right order.



A light shines through each frame at the right moment, powered using the energy generated by turning the crank.

How It Works?

A system of gears attached to the crank spin a motor at high speed, generating enough electricity to power a set of LEDs.



A contact switch is positioned in front of the wheel so that the light is only turned on when each frame is perfectly aligned with the optics. This simulates the shutter from a real projector.

Kid Testing

Apr 17 2009

6 year olds



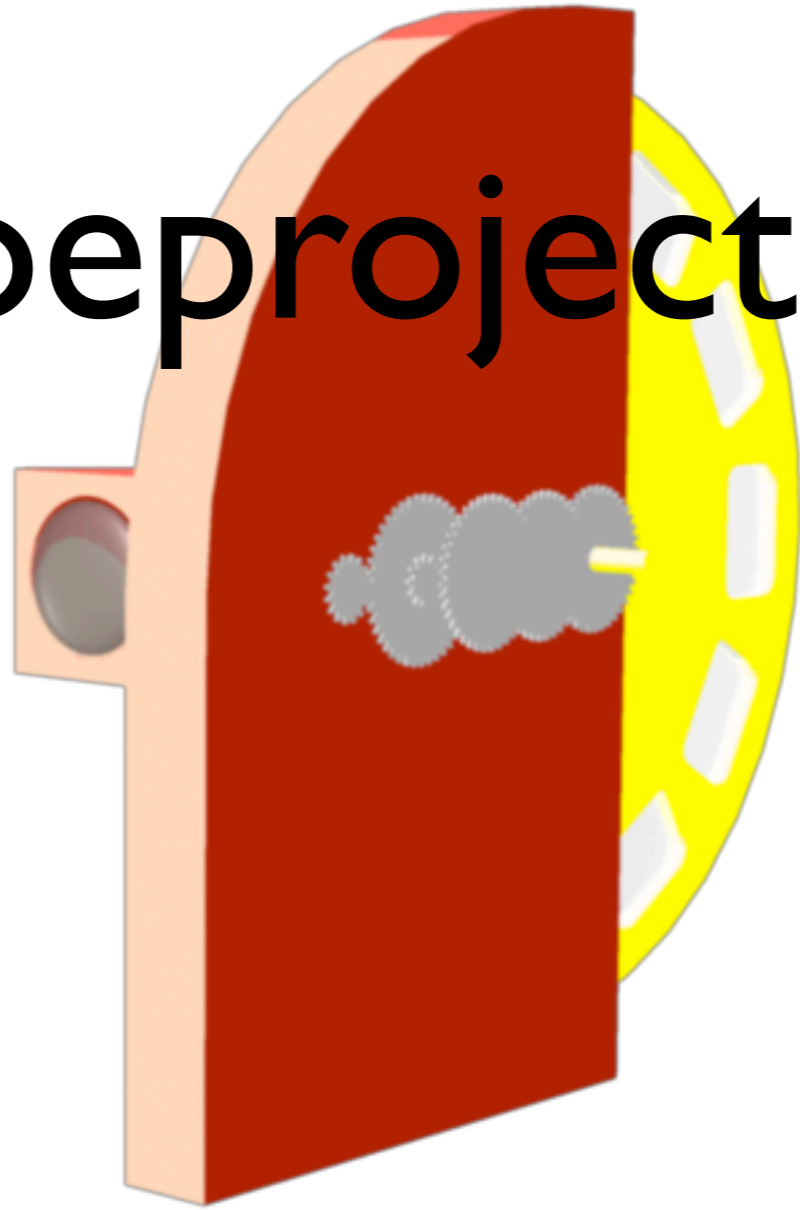
- Like to work in pairs
- Want to find and recognize their drawings in the wheel
- Understood the idea of frame differences fairly quickly
- Seem more interested by drawing and less by animation

Next Steps



- Fix the optics to make the projection work
- Add legs on the side to make the production surface usable
- Make the whole thing lighter by using a thinner wheel
- Add a base to increase stability

The Zoeprojectoscope



Thank you!