Fantastic Fireworks

Create your own virtual Canada Day fireworks and share online!

What is a Phenakistoscope?

Invented in 1831, the phenakistoscope was the first animation technology that created the illusion of motion. It is a slotted disc with a handle and a sequence of images placed around the slots on the disc. The viewer would hold the disc up to a mirror at eye level, spin the disc, and look through the slots to see the reflected images appearing to move.

What you will need:

- print out a template
- cardboard (i.e. cereal box)
- pencil crayons or markers
- glue stick
- scissors or Xacto knife (adults only)
- safe cutting surface/cutting board
- a short screw
- cork
- mirror

Instructions:

Print out a template and colour it in or create your own design with the blank template provided.

Glue the paper to the cardboard and smooth out from the center to ensure a flat surface. Cut out the disc and cut out the slots and center hole either using scissors or Xacto knife (ask an adult for help).

Put the screw through the center hole (from the front) and screw it into the cork on the other side leaving a small amount of 'wiggle' room so that the disc can easily twirl.

Hold the cork in one hand, hold the disc up to a mirror so that the image is facing the mirror, spin the disc and look through the slots. You will see your fireworks explode!

An adult will need to help with this next step. Set up your phone so that the lens is looking through the slot. Spin the disc and record your fireworks going off.

Share on social media using #pomocanadaday for all to enjoy on Canada Day.

Tip: It is easier to first lightly colour in the design with a pencil crayon to distinguish each firework.

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Create a digital version of your phenakistoscope and turn it in to a GIF to share online.

What you will need:

- coloured firework template
- a photograph of your template
- a photo editing program that allows arbitrary rotations*
- a GIF maker*

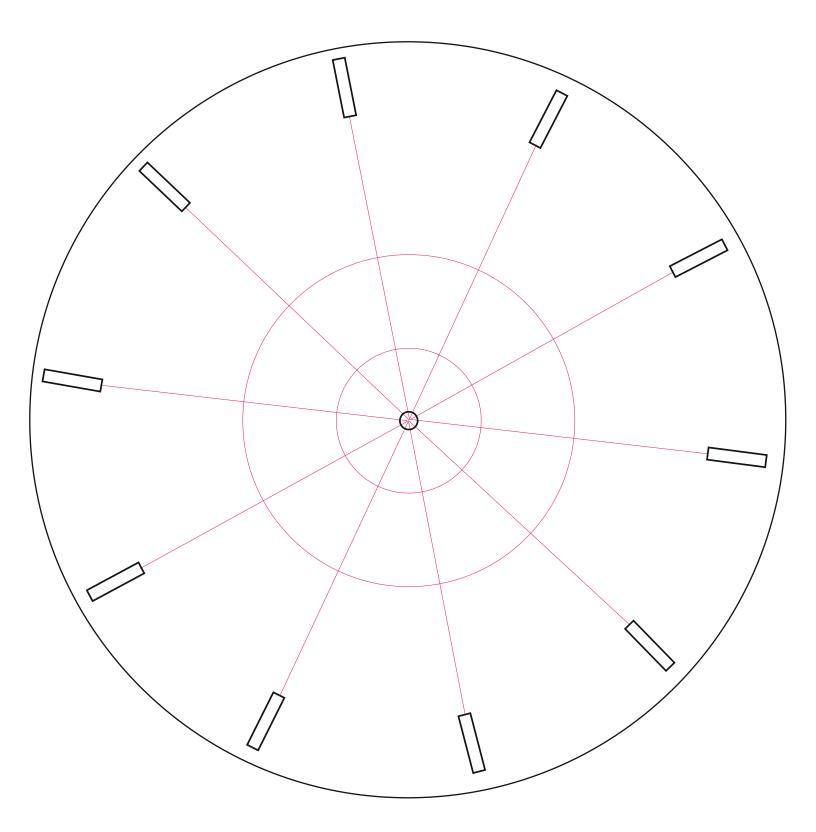* If you do not have a photo editing program or a GIF maker, these two websites provide free tools:

- https://onlinejpgtools.com/rotate-jpg
- https://ezgif.com/maker

Steps:

1. Print out a template and colour it in or create your own design with the blank template.

2. Take a close up photo of your template. Taking the picture outside will provide even lighting.

3. Crop to a square format.

4. Using either a photo editing program or the free online program. Open photograph and rotate your image 36 degrees. Make sure to '*Save As*' Image_01.jpg. Repeat this process until you have 10 images.

5. Next go to the GIF maker free online program. Upload your 10 images and press '*make a gifbutton.*'

6. You have an option to speed up your GIF. Increased the % of speed from 150 to 200 and save. GIF will be saved as a series of PDF's.

7. To view your saved gif, share on social media using #pomocanadaday for all to enjoy on Canada Day.

Tip:

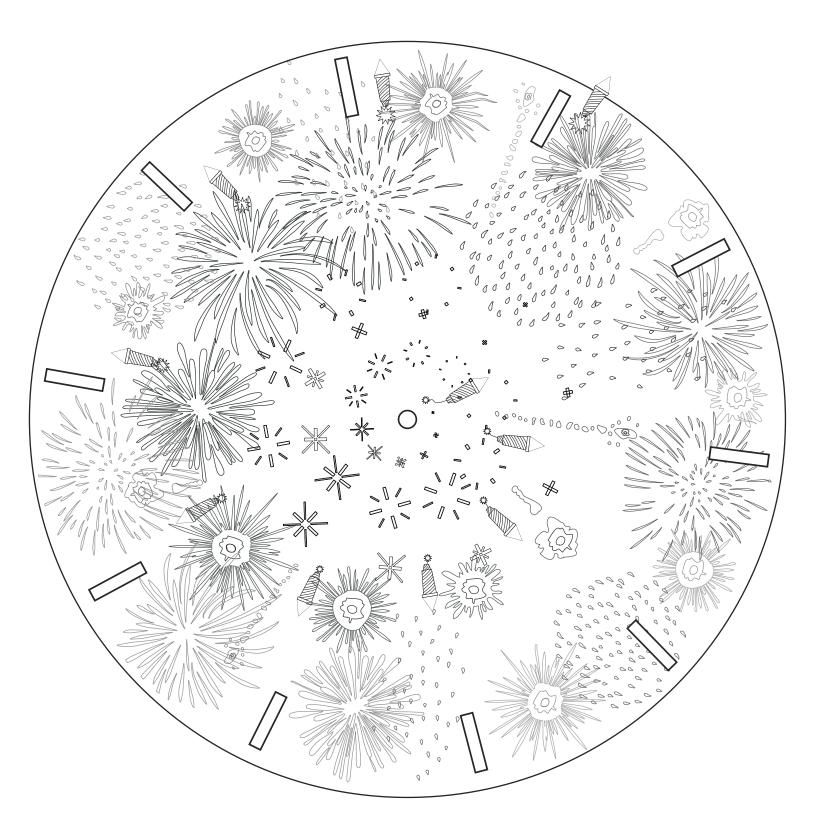In the GIF maker tool website under effects in colour presets you can invert (create a negative) of your GIF to mimic night time.