Teach a machine to play Scissors, Paper, Rock

Open https://teachablemachine.withgoogle.com

- Click **Get Started**, **Image Project**, **Standard image model**

*Gather samples (You can close the how-to videos - **click on the X**)*

- Rename 'Class 1'. Click on the name and call it **scissors**.

- Rename 'Class 2' to **paper**.

- Click **Add Class**, and call it **rock**.

- On **scissors** click on **Webcam**
  Give the computer permission to use the camera - Allow / OK.

- **Scissors**: Make a scissors sign with your hand in front of the camera, filling the image. Press **Hold to record** about 1000 images, moving your hand around a bit.

- **Paper**: Now hold your hand up flat, "talk to the hand" style. Press **Hold to record** on **paper**, and record a similar number of images. Remember to move around.

- **Rock**: Make a fist to the camera, and press **Hold to record** on **rock**. Record a similar number of images, moving around.

- Click **Train Model** - a progress bar shows you how long it takes.

- In the preview panel, test that it recognises scissors, paper, and rock.
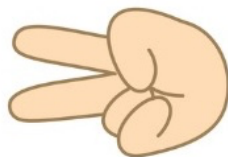
- If you're happy it works, Click on **Export Model** then **Upload my model.**

- When it's finished, copy the sharable link using the copy button next to it.

- Paste the link into a new tab and bookmark it for luck!

Open: https://playground.raise.mit.edu/main/

- Delete the sprite.
- Add extensions for **Video Sensing** and **Teachable Machine** and allow it to use the camera if it asks.
- Add code to **use the model**, delete "Paste URL here!" and paste in the link from above.
- Click the **green flag** to run it.
- Create variables for **human** and **computer**.
- Add code to recognise **human** input when you press the space key.
- **Make a list** of **objects**, and add **scissors**, **paper**, **rock**.
- Add the **computer** choice, picking one at random.
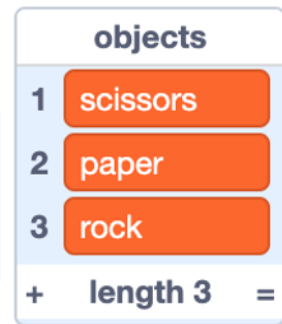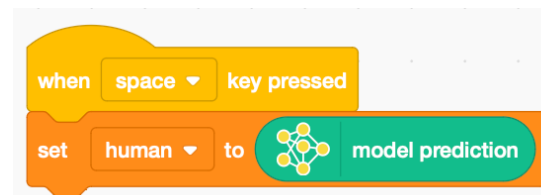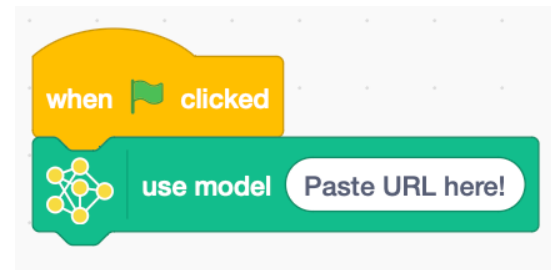
- Create a variable for the **winner**.
- Add code to decide who wins, or if it's a draw.
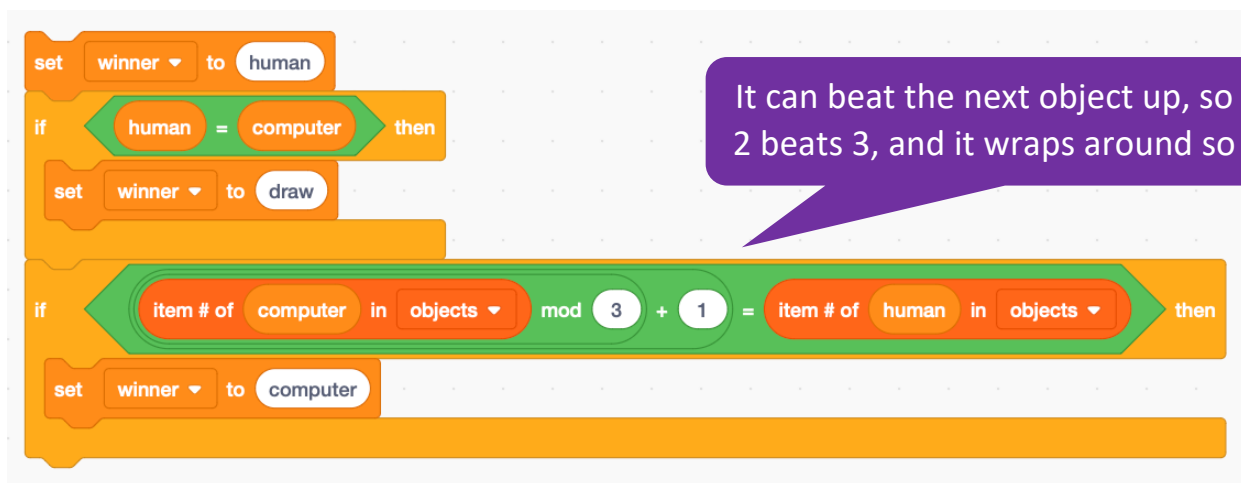
It can beat the next object up, so 1 beats 2, 2 beats 3, and it wraps around so 3 beats 1.

Your code isn't saved to Scratch. **Save it on a USB drive.**