Hi there!

I'm glad you're using this resource. Continue to check our website (realsciencechallenge.com) to find more resources. And, sign up for our newsletter to receive updates on materials that will be available soon.

I spend countless hours writing, researching, editing and generating graphics/charts for each question. I want to continue creating useful content for you to use - however, I also want to ensure my work is fairly compensated.

Therefore, below are the terms and conditions for use of our materials.

What is allowed:
- photocopying our content for your students to use.
- posting a copy of our content (ie. questions, rubrics) on a password protected site for your students to access and/or complete.
- copying our questions into your tests or assignments. Please give credit in this case.

What is not allowed:
- Selling our content.
- Repackaging our content in your own materials and then selling it. NOTE: giving credit to us still does not make this okay.
- Distributing and/or posting our content online (for example, on social media or a blog.

Thank you for supporting us. And, we look forward to helping you with your teaching practice. Please feel free to reach out to us if you have any questions or suggestions.

Sincerely,

Kent
REAL Science Challenge Founder
Science Department Head (Burnaby South Secondary)

Teachable Machine Assignment

GOAL
- Can you program a machine to identify a predator or prey?

PROCEDURE

1. Choose an animal
- ☐ Seagull
- ☐ Raccoon
- ☐ Northern Alligator Lizard
- ☐ Sea otter
- ☐ Orca

2. Go to Teachable Machine
- ☐ Click on "Get Started" and choose the image challenge. Then,select the standard image model.
- ☐ Change Class 1 and Class 2 titles to "Predators" and "Prey"

3. Find images of predator and prey animals for your chosen animal.
- ☐ Upload images to their respective folders

4. Train and test your machine
- ☐ Click "Train Model"
- ☐ In the Preview section, click the drop down button and change "webcam" to "file".
- ☐ Now, upload images to test the accuracy of your machine. Images may include (1) animals you may have already uploaded but photographed at a different angle, (2) predator or prey animals that are not included in your original list but are likely predator or prey as well, or (3) other objects, living or nonliving, that your organism would encounter in their environment

5. Modify your machine
- ☐ Create a 3rd class and rename as "Neutral"
- ☐ Upload images of objects, living or nonliving, that your organism would encounter in their environment nd would not be considered predator or prey (ex. Trees, boats, etc.)
- ☐ Click "Train Model"

6. Further Testing (Optional).

- ☐ Get students to modify images of both predator and prey animals and give these images to the machine to Preview to see what modifications would be needed to turn a prey image into a predator or vice versa.
- ☐ Or, students could also black out an image and gradually reveal it to see what minimum information would be needed for the machine to correctly classify something as predator or prey.

7. Download project.

- ☐ Go to the 3 bars at the upper left hand corner. Select Download as File.