

Biological sciences

Project 1

Antarctic memes

TASK:

Design and create a series of memes using images of animals that live in Antarctica.

CRITERIA:

- Five memes must be created.
- The memes must feature an animal that lives in the Antarctic environment.
- The images must be obtained from the internet.
- The memes must be created in a digital platform.

SUGGESTED MATERIALS:

- internet images
- program to create a meme such as Microsoft® PowerPoint® or Word®



Biological sciences

Project 1

Antarctic memes

- Research which animals live in the Antarctic environment and how they are able to survive in such an extreme environment. Explore recent memes and the writing style they generally follow.
- Plan and draw a sketch of the animals that could be used, and plan topics that may be humorous for these animals.
- Collect the materials you will need, including a computer to access internet images, and compile the memes.
- Create the five memes to look like the plan.
- Check that the memes meet the criteria.
- Give a presentation of the five chosen animals that live in/around Antarctica. Describe how they are able to survive and how their surroundings have affected their body features. Share the memes with the class and what makes them funny.



Egg menu

TASK:

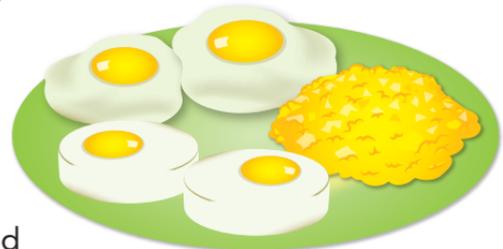
Design and create a breakfast menu for a cafe, featuring all the ways an egg can be cooked.

CRITERIA:

- At least four different ways of cooking eggs must be included.
- The menu is for breakfast only and must list 10 different options, all featuring eggs.
- The menu should be created using a computer and printed out and laminated like a real menu.
- A name must be created for the cafe and featured on the menu.

SUGGESTED MATERIALS:

- computer
- printer
- laminator



Chemical sciences

Project

Egg menu

- Find out the ways that eggs can be cooked and understand why they are irreversible changes. Research breakfast recipes and look at other cafe menus to understand what kind of breakfast items are offered and what the menus look like.
- Plan and draw a diagram of the menu and write a list of the menu items.
- Collect the materials you will need, including a computer, printer and laminator.
- Create the menu to look like the plan.
- Check that the menu meets the criteria.
- Give a presentation to the class, displaying your menu, and describing the four different ways that an egg can be changed irreversibly, and how they feature in your ten menu items.



DIY seismograph

TASK:

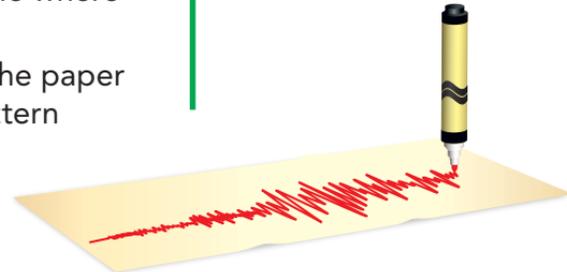
Design and create a simple seismograph that measures shaking from an earthquake.

CRITERIA:

- The seismograph should be no taller than 40 cm.
- The seismograph must consist of a cardboard frame that a suspended pen hangs from and acts as a pendulum. The pendulum must be weighted with something like sand.
- The pen must touch the bottom of the frame where a piece of paper should be placed.
- When the box is shaken from left to right, the paper should be pulled so the pen can draw a pattern on the paper.

SUGGESTED MATERIALS:

- cardboard/cereal box
- plastic cups
- sand
- pen
- string
- tape
- strips of paper/card



Physical sciences

Project 1

Robot artist

TASK:

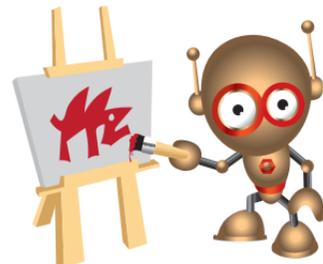
Design and create a simple robot that can draw a pattern as it moves.

CRITERIA:

- Three markers must be attached to an upside-down cup, like a tripod.
- The DC motor should be inserted into a piece of an eraser, which will create a 'wobble effect'.
- The wires from the motor should be attached to the negative and positive sides of the coin cell battery correctly.
- The battery and motor should be securely attached to the upside-down cup.
- A piece of card must be placed under the robot so it can wobble and move to create the artwork.

SUGGESTED MATERIALS:

- cup
- 3 markers
- tape
- 3V coin cell battery
- DC motor
- eraser
- piece of card



Physical sciences

Project 1

Robot artist

- Research how a simple circuit works from a DC motor to a battery source. Explore other simple battery-powered robots.
- Plan and draw a diagram of the robot artist, as well as a plan of how the DC motor will be attached to the battery.
- Collect the materials you will need, including a cup, 3 markers, tape, a 3V coin cell battery, a DC motor, eraser and a piece of card.
- Create the robot artist to look like your plan.
- Check that the robot artist meets the criteria.
- Display your finished artwork to the class and explain how the battery powered the robot to create the art. Discuss any changes made to the robot in order to get it to move more or become more 'wiggly'.

