

Overview of Biological sciences STEM projects

CARD	TASK	SUGGESTED MATERIALS
1. Koala enclosure	Design and create a model of a zoo enclosure for a koala.	A3 piece of cardboard, cardboard tubes, clay/plastic modelling clay/play dough, coloured paper
2. Owl mask	Design and create an owl mask with binocular vision.	2 short cardboard tubes, empty cereal boxes, elastic, paint, feathers
3. Hermit crab home	Design and create a home for a hermit crab that caters for its needs.	1 medium-sized rectangular plastic tub, water, sand, twigs, leaves, rocks
4. Salt dough salad sculpture	Design and create a salad sculpture using salt dough.	1 small paper plate, salt dough, plastic knives, paint, oven (Teacher)
5. Potato maze	Design and create a potato maze to see how plants grow features to meet their needs.	1 shoebox, cardboard, 1 potato, water spray bottle, 50c coin
6. Human movement video	Design and create a video that names and demonstrates different types of human movement.	1 digital camera, play equipment, grassed area
7. Class farmyard	Design and create a papier-mâché farm paddock to add to a class farmyard scene. The class farmyard scene must have a different type of farm animal in each paddock.	1 A3-sized piece of thick cardboard, newspaper, PVA glue mix, paint, small plastic farm animals

Biological sciences

Project 1

Koala enclosure

TASK:

Design and create a model of a zoo enclosure for a koala.

CRITERIA:

- It must be the size of an A3 piece of cardboard.
- It must have a model koala made from clay, plasticine or playdough, holding onto a tree.
- It must have model *Eucalyptus* trees for the koala to eat.

SUGGESTED MATERIALS:

- A3 piece of cardboard
- cardboard tubes
- plastic modelling clay or playdough
- coloured paper



Aluminium foil tower

TASK:

Design and create a model of the Eiffel Tower using aluminium foil.

CRITERIA:

- It must have beams made by folding, twisting and scrunching the aluminium foil.
- It must be as tall as a one-metre ruler.
- It must stand on its own and hold the weight of 5 people figurines for 30 seconds.

SUGGESTED MATERIALS:

- aluminium foil
- one-metre ruler
- 5 people figurines



Aluminium foil tower

- Find out what the Eiffel Tower looks like.
- Plan and draw a diagram of your aluminium foil tower. Label the changes you will make to the foil.
- Collect the materials you will need, including aluminium foil, a one-metre ruler and 5 people figurines.
- Create your aluminium foil tower to look like your plan.
- Check that your aluminium foil tower meets the criteria.
- Create a video or give an oral presentation as a tour guide explaining how you made your aluminium foil tower.



Day and night felt board

TASK:

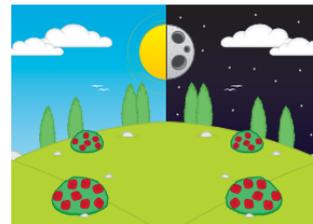
Design and create a felt board that has a day and night scene.

CRITERIA:

- It must have removable features for both day and night sky.
- The felt board must be the size of an A3 piece of cardboard.
- It must include people and landscape features that tell a story.

SUGGESTED MATERIALS:

- felt
- A3 piece of cardboard
- scissors
- digital camera or iPad®



Earth and space sciences

Project 1

Day and night felt board

- Find out what features you will see during the day and at night.
- Plan and draw a diagram of your day and night felt board. Label the features you will need to make for day and night.
- Collect the materials you will need, including felt, an A3 piece of cardboard and scissors.
- Create your day and night felt board to look like your plan.
- Check that your day and night felt board meets the criteria.
- Create a story using your day and night felt board and film it using a digital camera or an iPad®.



Physical sciences

Project 1

Stained-glass window

TASK:

Design and create a model of a stained-glass window that uses sunlight to shine coloured shapes into the classroom.

SUGGESTED MATERIALS:

- craft materials
- black card

CRITERIA:

- It must show at least five different 2D shapes.
- It must be the size of an A4 piece of paper and have a border around it made from black card.
- It must be flat and windproof like a window.



Physical sciences

Project 1

Stained-glass window

- Find out how to make stained-glass windows using craft materials.
- Plan and draw a diagram of your stained-glass window. Label the shapes and the materials you will use to make each part.
- Collect the materials you will need, including craft materials and black card.
- Create your stained-glass window to look like your plan.
- Check that your stained-glass window meets the criteria.
- Give a presentation explaining how you made your stained-glass window and how our eyes see the sunlight as different colours when looking through the stained-glass window.

