



Ice Age

Learning Outcome:

Demonstrate and explain how solids melt.

You will need:

- Ice egg
- Warm/cold water
- Materials
- Tools

What to do:

1. Place a dinosaur toy inside a balloon and fill the balloon with water.
2. Place the filled balloon in the freezer.
3. Rotate the balloon every couple of hours to ensure the toy freezes in the middle of the balloon.
4. Once frozen remove the ice egg from the balloon. Learners should experiment with the various materials and substances available to determine what melts the ice and releases the toy.



Ice Age

I can apply my knowledge of how water changes state to help me understand the processes included in the water cycle in nature over time. **SCN 2-05a**

- *Discusses the necessity of water for life, for example, for the growth of crops, for drinking and in river formation/flow.*
- *Demonstrates understanding of the processes involved in the water cycle.*



Fizzing Fossils

Learning Outcome:

Investigate how to make a dissolvable solid.

You will need:

- Baking soda Tray
- Cornstarch Pipettes
- Food colouring Water
- Freezer bags
- Vinegar

What to do:

- Add 3 tablespoons of baking powder and 1 teaspoon of cornstarch into a cup.
- Add 3 tablespoons of water.
- Add a couple of drops of food colouring.
- Mix until paste like.
- Mould into an egg shape.
- Freeze for 2-3 hours until hard.
- Place in plastic tray and add vinegar to reveal the dinosaur.



Fizzing Fossils

I can make and test prediction about solids dissolving in water and can relate my findings to the world around me. **SCN 1-16a**

- *Predicts, investigates and records how solubility is affected by heat and stirring.*
- *Links new knowledge of dissolving to real-life examples of things that dissolve and things that don't dissolve.*



Dinodoh

Learning Outcome:

Demonstrate and explain forces by changing the shape of an object.

You will need:

- Playdoh
- PowerPoint with word commands and timer

What to do:

1. Remove the Playdoh from the container and shape it into a ball.
2. Watching the timed PowerPoint follow the commands on the screen (push, pull, twist).
3. Using the commands push, pull and twist shape the playdoh into a dinosaur.



Dinodoh

By investigating forces on toys and other objects, I can predict the effect on the shape or motion of objects. **SCN 1-07a**

- *Predicts and then investigates how a force can make an object change speed, direction or shape, and uses vocabulary such as pushing, pulling, stretching, squashing and twisting to describe forces.*
- *Investigates balanced forces and explains that if a push and pull are equal in strength and opposite in direction then there is no change in movement.*



Sand Sort

Learning Outcome:

Separate mixtures using different techniques and apparatus.

What you will need:

- Variety of sieves
- Sand
- Dinosaurs
- Variety of solids - dried peas, chickpeas, raisins etc.
- Timer

What to do:

1. Mix the sand with the dinosaurs and other solids.
2. Select a sieve to separate the mixture to find the dinosaurs.
3. Set the timer and start to separate the mixture.
4. The winner is the person with the most dinosaurs.
5. Why were they winner? What sieve did they choose? What process is this like in everyday life?



Sand Sort

I have participated in practical activities to separate simple mixtures of substances and can relate my findings to my everyday experience.

SCN 2-16a

- *Draws on findings from practical investigations to explain how a mixture of solids of different sizes can be separated using a sieve or magnet, for example, sand and peas or salt and iron filings.*
- *Selects the most appropriate practical technique for separating insoluble solids, for example, filtering or sieving.*
- *Explains why a dissolved solid cannot be separated from the solvent by filtering but can be separated by evaporation.*
- *Uses scientific vocabulary such as 'soluble', 'insoluble', 'dissolve' and 'solution' in context.*
- *Relates findings of practical investigations about dissolving to everyday experiences, for example, recycling, salt production and water purification.*



Tangram-osaurus

Learning Outcome:

Construct a dinosaur using 2D shapes.

What you will need:

- Set of 7 shapes
- Geometric dinosaur shape
- Extension tangram sheet

What to do:

1. Using the 7 shapes provided recreate the image of the dinosaur. All shapes must be used.
2. Challenge: Once finished create a perfect square using all 7 shapes.



Tangram-osaurus

I enjoy investigating objects and shapes and can sort, describe and be creative with them. **MTH 0-16a**

Recognises, describes and sorts common 2D shapes and 3D objects according to various criteria, for example, straight, round, flat and curved.

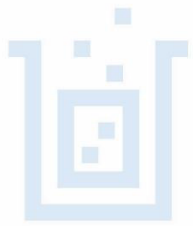
I have had fun creating a range of symmetrical pictures and patterns using a range of media. **MTH 0-19a**

Understands and correctly uses the language of position and direction, including in front, behind, above, below, left, right, forwards and backwards, to solve simple problems in movement games.

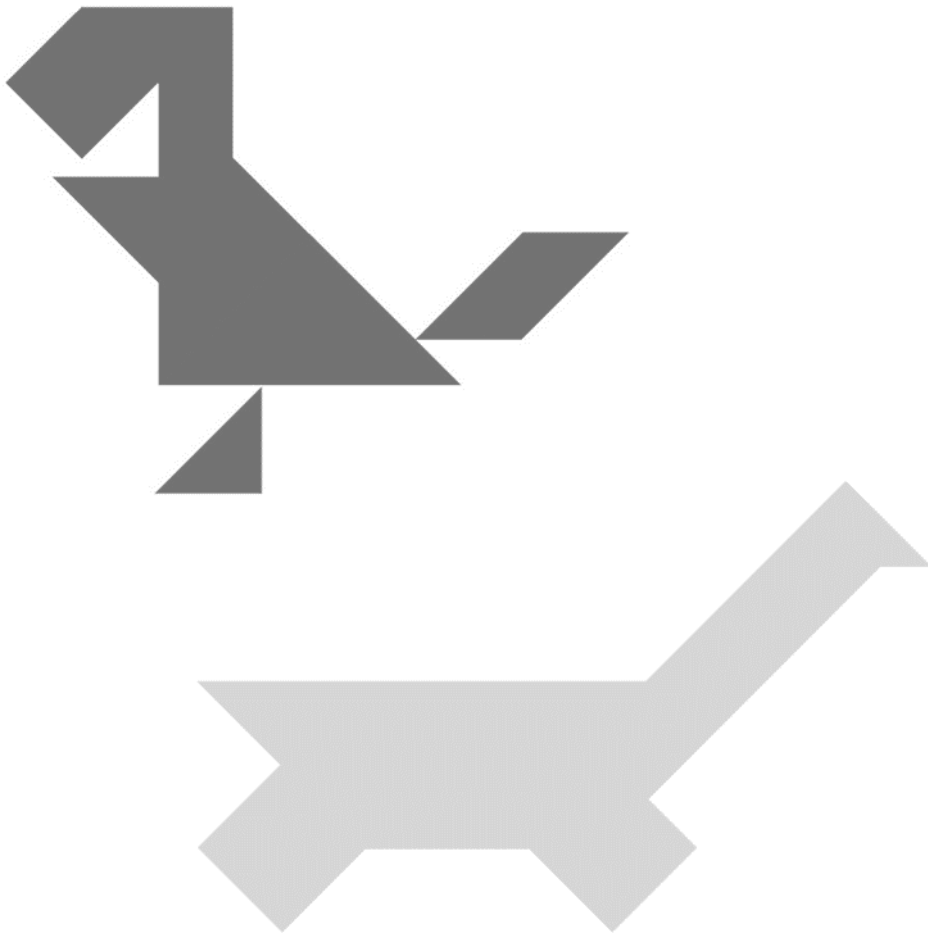
I can explore and discuss how and why different shapes fit together and create a tiling pattern with them. **MTH 1-16b**

Identifies examples of tiling in the environment and applies knowledge of the features of 2D shapes to create tiling patterns incorporating two different shapes.

I have explored symmetry in my own and the wider environment and can create and recognise symmetrical pictures, patterns and shapes. **MTH 1-19a**



Tangram-osaurus



Tangram-osaurus

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Pterodactyl Nest Drop

Learning Outcome:

Experiment with different materials to construct a nest.

You will need:

- Cups
- String
- Paper Clips
- Art Straws
- Pipe Cleaners
- Cardboard
- Tinfoil
- Paper

What to do:

1. Using the materials provided create a safe way for the egg to travel from the top to the base of the tube.
2. Your solution must prevent the pterodactyl egg from breaking when it hits the ground.
3. Experiment with different materials to change the speed at which the egg drops.



Pterodactyl Nest Drop

I can recognise a variety of materials and suggest an appropriate material for a specific use. **TCH 1-10a**

Identifies different materials. States the properties of materials (hard, soft.....) Recognises different materials and why they have been selected for a task. Selects materials to use in a specific task.

I explore and discover engineering disciplines and can create solutions.
TCH 1-12a

Recognises and identify different engineering disciplines. Builds a solution to a specific task, which has moving parts.

I can extend my knowledge and understanding of engineering disciplines to create solution. **TCH 2-12a**

Understands the difference between different engineering disciplines.
Understands different energy types. Builds/simulates solutions to engineering problems.