

Science and Technology sample unit: Move It!

Early Stage 1

Duration: 10 weeks

Term 1

Booragul Public School



Unit context

Using various toys and experiments, students will explore the way objects move and how it depends on a variety of factors.

Target outcomes

Early Stage 1 A student:

STe-1VA shows interest in and enthusiasm for science and technology, responding to their curiosity, questions and perceived needs, wants and opportunities

STe-4WS explores their immediate surroundings by questioning, observing using their senses and communicating to share their observations and ideas

STe-5WT uses a simple design process to produce solutions with identified purposes

STe-6NE identifies that the way objects move depends on a variety of factors

Unit overview

In this unit, students will explore our world and how everything in it constantly changing and moving. They will investigate concepts of movement and change through exploring toys and objects. Students will have the opportunity to consider how pulls and pushes can make things move. Students will also participate in activities to develop an understanding of the concepts of force and energy.



Content	Teaching and learning	Eval/Reg
<p>STe-4WS exploring and making observations by using their senses to gather information about objects and events in their immediate surroundings (AC SIS011, ACSHE013)</p>	<p>MOVING and GROOVING 1 Lesson</p> <p>Learning Objective - Students will be exploring the different ways the body can move and stay still.</p> <ul style="list-style-type: none"> - As a class play a game of 'Simon' says. Students will explore movement of body parts through activities eg running, jumping, giggling, waving via command. - Have students break into pairs and play 'Simon' says. Discuss what parts of the body moved? What sort of movement did they see? What parts of the body stayed still, if any? (eg waving - hand and arm moved but body stayed still) - Ensure students have an understanding of staying still. What does it look like? How does it sound? - Explore the school behavior expectations 5L's. (Look, Listen, Laps, Legs, Lips) Discuss how these 5 things need to occur to stay still whilst sitting on the floor. - As a class play a game of Musical Statues. Allow students to move freely to the music and stop and be still when the music stops. 	
<p>STe-4WS engaging in discussions about observations and using drawings to represent ideas (AC SIS233)</p> <p>STe-6NE identify that the way an object moves depends on its size</p>	<p>EXPLORING THINGS THAT MOVE 1-2 Lessons</p> <p>Learning Objective - Students observe and explore objects that move.</p> <ul style="list-style-type: none"> - Revisit moving and staying still. - Discuss and explore things that move in the classroom. Create a word bank of things that move. - Explore things that are still in the classroom. Add the words to a word bank. Explain to students that they are going to complete a task sheet about things that move and things that are still in our classroom. 	



and shape, eg tennis balls and blocks

STe-4WS
using a range of methods to share observations and ideas, such as drawing, informal and guided discussion, role-play, contributing to joint construction of short texts and/or using digital technologies (AC SIS012)

Things that Move	Things that are Still

- Following the completion of this sheet, allow students to share their findings with a partner.
- Explain that student will be working in pair to explore how different object move. Provide students with a large range of objects (balls, block, book, spinning top, toy car etc)
- Have students choose an object and explore the way their object can move. Have students construct a short video using an iPad to record their findings of how their object moves.
- Students report their findings to the class by showing their video.

STe-6NE
observe the way a variety of familiar objects move, eg sliding, rolling, spinning and bouncing on the ground

STe-4WS
making predictions resulting from their questions engaging in discussions about observations and using drawings to represent ideas (AC SIS233)

STe-1VA
develop interest and positive, informed values and attitudes towards science and technology

TOYS THAT MOVE
1 lesson

Learning Objective- *Students will be investigating various toys and how they move.*

- Have students bring in a toy to show and investigate. Have students predict what makes the toys move. Discuss where does the energy come from? (push, battery etc)
- Have students record how far their toy can move? Discuss and record what form of energy assisted the toy to move.
- Use the toys to explore the concepts of still/moving, slow/fast. Classify toys according to the way they move, eg roll, spin, slide, fly.
- Identify the parts of the object that move.
- Explore the effect of a push or a pull (force) on a toy. Predict how a variation in the push/pull makes it go slower and faster. Apply different forces to the same objects to test predictions.



	<ul style="list-style-type: none"> - Have student analyses the data found from exploring the toys. Have students make statements about their investigation. Eg What did we find out? What was the most common form of energy to move a toy? 	
<p>STe-5WT discussing the purpose and main features of what they need to produce and suggesting the materials they could use</p> <p>STe-5WT following a series of steps to draw or model ideas or construct solutions</p>	<p>DESIGN AND MAKE A TOY 2 Lessons</p> <p>Learning Objective- <i>Students will design and make a toy.</i></p> <ul style="list-style-type: none"> - Generate ideas for students to create a toy. Revise the various toys previously explored as a model or guide. Consider whether the toy would be used indoors/ outdoors; what materials would be needed to make it; would it move; what would be its source of energy. - Add various toy photographs to a word wall. Labelling how the toys move (slide, push, roll, spin etc) - What the Youtube clip about toys. http://www.youtube.com/watch?v=yvBFSqkwajo - Discuss what types of toys were in the video clip. How did they move? What where they made of? How where they used? - Show students a picture of olden day toys. Eg wooden plane. Compare the wooden plane to the new plane seen on the video. Discuss how technology has changed our lives as we now have equipment that can make new exciting and engaging toys for kids. - In small groups have students make a sketch or design of their toy. Have students report their design back to the class and see if others have any suggest to the design. 	



Resources	Assessment overview
<p>Lesson 1: Music for Musical Statues</p> <p>Lesson 2: Things that move and things that are still sheet.</p> <p>Lesson 3: Toys that students bring in.</p> <p>Lesson 4: Youtube clip</p> <p>http://www.youtube.com/watch?v=yvBF5qkwajo</p>	<p>All lessons: Teacher Observations</p> <p>Lesson 3: Record student's statements about their investigation from TOYS THAT MOVE lesson.</p>



Things that move and are still in our
classroom

Things that move	Things that stay still



My Toy

My toy is a

It can move.....

**how far can it move?*

What type of energy helps my toy to move?

.....

Do I push or pull my toy to move it?

.....



My Toy Design



