

# STEM Program      Years P- 10

## Overview Years Prep

### Physical Sciences, Science Inquiry Skills, Science as a Human Endeavour

Australian Curriculum	Concept	Activity	Worksheets	Resources Required
<p><b>Scientific Inquiry</b>                      -- Respond to questions about familiar objects and events</p> <p>-- Explore and make observations by using the senses</p> <p>-- Engage in discussions about observations and use methods such as drawing to represent ideas</p> <p>-- Share observations and ideas</p> <p><b>Scientific Understanding</b>                      The way objects move depends on a variety of factors, including their size and shape</p> <p><b>Science Human Endeavour</b>                      Science involves exploring and observing the world using the senses</p> <p><b>Technology</b>  <b>Digital</b> Identify and use digital systems.  <b>Design</b> Explore how technologies use forces</p> <p><b>Mathematics</b>                      Compare size of: weight, push speed, time                      Group Objects</p>	<p>There are many different types of motion – slide, turn, spin, walk, vibrate, up and down.</p> <p>Things move faster downhill, if pushed and on smoother surfaces.</p> <p>Speed can be measured with a stopwatch.</p> <p>Things stop because of friction (rubbing).</p> <p>Things go because of pushing and pulling (gravity).</p> <p>To and Fro motion comes in different forms and eventually stops because of friction.</p> <p>Heavy objects are harder to push but keep moving longer.</p>	<p>Observe various motions - car wheels, walking, swing, seesaw, Bungy Jumper.</p> <p>Students make a car (Duplo or LEGO) and determine how to make it faster.</p> <p>Students make a swing and a seesaw and see what keeps them moving.</p> <p>Make a Bungy Jumper</p> <p><b>STEM Project</b>                      From the students learning discuss the rides they like best and explain their final task will be to design and build a playground ride for their dolls.</p>	<p>Motion Lessons</p> <p><i>0.1 Moving on Wheels.doc</i></p> <p><i>0.2 To and Fro Motion.doc</i></p> <p><i>0.3 Spinning Motion</i></p> <p><i>0.4 What motion is that?</i></p> <p>Construction</p> <p><i>0.5 LEGO car Construction.doc</i></p> <p><i>0.6P Make a Playground Ride</i></p>	<p>LEGO/Duplo Toy Cars</p> <p>Other:</p> <p>Pendulum- string                      Bungy Jumper-loose rubber band or elastic, string, ruler and doll/toy                      Spinner - cardboard, pencil.                      Digital Stopwatch</p> <p>Other building materials as required</p>