

## Physical Sciences – Reception – Term 1 - Forces and Motion

*Australian Curriculum Achievement Standard - Students describe the properties and behaviour of familiar objects*

As Receptions investigate Units of Science, their focus will be primarily on the Inquiry process, which enables them to study the world around them, ask questions, investigate problems and find explanations based on what they find out.

### Science Understanding

- The way objects move depends on a variety of factors, including their size and shape

### Science Inquiry Skills

- Consider questions relating to the home and school and objects used in everyday life
- Participate in guided investigations and make observations using sight, hearing, touch, taste and smell to gather information about the world around them
- Engage in discussions about observations and represent ideas
- Use drawings to represent observations and ideas and discussing their observations with others
- Share observations and ideas and work in groups to describe what students have done & what they have found out
- communicate ideas through role play and drawing

### Science as a Human Endeavour

- Recognise that observation is an important part of exploring and investigating the things and places around us
- Share observations with others and communicate their experiences
- Explore and observe using hearing, smell, touch, sight and taste

Learning Intentions	Exploring through Inquiry	Success Criteria
<p><b>MOVEMENT OF LIVING THINGS</b> How the movement of different living things depends on their size and shape.</p>	<p>Explore human movement by playing games, where students can discuss and observe voluntary and involuntary movements (breathing, heart beating, blinking).</p> <p>Predict, compare and explore experiences of things that move in the classroom, in the school grounds and outside the schools grounds by direct observation.</p> <p>Ask why animals move differently, make observations and discuss how their size and shape may impact on how they move.</p> <p>Represent their understanding of different types of movement such as pushing, pulling, bouncing, sliding &amp; spinning, in games.</p>	<p>Discussion, questions and answers about why living things have voluntary and involuntary movements and why it is important to them.</p> <p>Make predictions on a chart before walk. When return from walk around the school grounds, compare predictions to what was actually observed.</p> <p>Match labels of types of movement to different animals.</p> <p>Through role play, represent specific movement with partners in 'chance dance' game.</p>
<p><b>MOVEMENT OF DIFFERENT SHAPES</b> How different shaped objects such as balls, blocks and tubes move.</p>	<p>Predict, observe, describe, and identify the ways in which toys can move. Explore by playing and observing the movement of toys.</p> <p>Grouping toys according to specific features of movement and discussing whether a toy can move in more than one way. How can we change the way a toy moves?</p>	<p>Physically group toys according to specific features of movement. Able to recognize when a toy can employ more than one type of movement.</p> <p>Able to recognize how they can change the way a toy moves in a drawing or diagram.</p>
<p><b>INQUIRY INVESTIGATIONS</b> Investigate and compare the way different sized, but similar shaped objects such as tennis balls, golf balls, marbles and basketballs roll and bounce.</p> <p>How can we safely get an elf off the shelf and onto the floor?</p>	<p>Students discuss, predict and conduct an investigation of the effect of surface on how far things roll.</p> <p>Students then repeat this investigation using different sized balls and same sized balls of different weights</p> <p>Students use different materials and designs to find a way to safely help their elf get from a shelf onto the floor.</p>	<p>Collect data on the investigation, produce a simple graph to represent how far each object rolls and determine which one has rolled further and a possible explanation as to why.</p> <p>Students create a device to enable their elf to get from a shelf onto the floor, recording their observations and making adjustments to move it faster or slower.</p>