

Smooth moves

Level 2 and 3 investigating outcomes

Student	Stage	Key Learning Area	Date
		Science	

Task	Students plan and conduct an investigation to compare the effect of different-sized forces on the motion of objects.
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	Investigating unit outcomes	Beginning	Developing	Achieving
Level 2	Identify some variables that can be investigated.	Students identify that an investigation involves variables.	Students identify a variable in the investigation.	Students identify some variables that can be investigated.
	Make and record observations and measurements.	Students make limited observations.	Students make some observations and measurements.	Students make and record observations and measurements.

	Investigating unit outcomes	Beginning	Developing	Achieving
Level 3	Plan investigations showing an awareness of the need for fair testing.	Students show limited understanding of the investigation process.	Students plan investigations with some awareness for fair testing.	Students plan investigations showing an awareness of the need for fair testing.
	Plan investigations showing an awareness of the need for fair testing.	Students show limited understanding of the investigation process.	Students plan investigations with some awareness for fair testing.	Students plan investigations showing an awareness of the need for fair testing.
	Make and record observations and measurements using tables and column graphs.	Students record measurements in a table.	Students record observations and measurements in a table and construct an inaccurate column graph.	Students make and record observations and measurements using tables and column graphs.
	Describe the relationship between two variables plotted as a column graph.	Students describe two variables in an investigation.	Students construct a column graph using two variables in an investigation.	Students describe the relationship between two variables plotted as a column graph.

Smooth moves

Level 2 and 3 conceptual outcomes

Student	Stage	Key Learning Area	Date
		Science	

Task	Students represent what they know about forces and motion and to reflect on their learning during the unit.
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	Conceptual unit outcomes	Beginning	Developing	Achieving
Level 2	Use force-arrows to show the direction in which forces are acting on an object.	Students identify forces acting on an object.	Students represent forces acting on an object.	Students use force-arrows to show the direction in which forces are acting on an object.
	Explain that forces can make things start moving.	Students identify that forces act on objects.	Students describe forces acting on objects.	Students explain that forces can make things start moving.
	Identify examples of forces that act in direct contact and at a distance.	Students identify examples of forces.	Students identify that forces can act in direct contact or at a distance.	Students identify examples of forces that act in direct contact and at a distance.
	Explain the effect of forces on the movement of an object.	Students identify examples of forces.	Students explain that forces affect objects.	Students explain the effect of forces on the movement of an object.

	Conceptual unit outcomes	Beginning	Developing	Achieving
Level 3	Use different-sized arrows to represent and compare different-sized forces acting on the direction of movement of an object.	Students use arrows to represent forces acting on an object.	Students use different-sized arrows to represent forces acting on an object.	Students use different-sized arrows to represent and compare different-sized forces acting on the direction of movement of an object.
	Explain that forces can make things stop moving.	Students identify that forces act on objects.	Students describe forces acting on objects.	Students explain that forces can make things stop moving.
	Explain that a larger force has a greater effect on an object and a smaller force has less effect on the same object.	Students explain that forces act on objects.	Students explain that forces acting on an object can be large or small.	Students explain that a larger force has a greater effect on an object and a smaller force has less effect on the same object.