

Smooth moves overview

		SCIENCE OUTCOMES	LITERACY OUTCOMES	LESSON SUMMARY	ASSESSMENT OPPORTUNITIES
		Students will be able to	Students will be able to		
ENGAGE	Lesson 1 Games galore	represent their current understanding as they <ul style="list-style-type: none"> describe forces and motion observe the effect that different-sized forces have on objects caption their annotated drawing with descriptions of the forces used in their game. 	<ul style="list-style-type: none"> contribute ideas to a class discussion about ways to move a marble understand the purpose and features of a science journal create an annotated drawing of their game use talk to describe their game and contribute to a team discussion about forces record observations in the class science journal. 	<ul style="list-style-type: none"> play a game in cooperative learning teams describe how to play the game create an annotated drawing of their game, using captioning to describe forces acting on objects. 	Diagnostic assessment Science journal entries Class discussions Word wall contributions Annotated drawings
	Lesson 2 Making moves	<ul style="list-style-type: none"> observe, compare and record the use of different-sized forces to move tin cans make predictions and give reasons about the movement of objects draw conclusions about the effect of different-sized forces on the movement of objects. 	<ul style="list-style-type: none"> understand the purpose and features of a storyboard contribute to a class discussion about different-sized forces represent their understanding of different-sized forces using different-sized arrows. 	<ul style="list-style-type: none"> explore the effect of different-sized forces on rolling cans contribute to a class discussion about how to represent different-sized forces use arrows to represent different-sized forces. 	Formative assessment Science journal entries Class discussions Word wall contributions Storyboards

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EXPLORE	Lesson 3 Feeling friction	<ul style="list-style-type: none"> identify forces that act in direct contact investigate frictional forces between an object and different surfaces observe and describe ways of reducing and increasing friction. 	<ul style="list-style-type: none"> contribute to a class discussion about friction use oral, written and visual language to describe observations of pulling objects across different surfaces. 	<ul style="list-style-type: none"> observe how friction is different with different surfaces explore what more or less friction feels like use arrows to represent frictional forces. 	Formative assessment Science journal entries Class discussions Word wall contributions Drawings
	Lesson 4 Faraway forces	<ul style="list-style-type: none"> identify forces that act at a distance explore gravity's effect on an object discuss gravity and the different ways they experience it in their lives. 	<ul style="list-style-type: none"> contribute to a class discussion about gravity use oral and visual language to represent their understanding of gravity. 	<ul style="list-style-type: none"> participate in a class game: 'Going up' observe how gravity makes objects fall participate in a discussion about gravity around the world represent gravity acting on objects around the world. 	Formative assessment Science journal entries Class discussions Word wall contributions Drawings

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EXPLAIN	Lesson 5 Figuring out forces	<ul style="list-style-type: none"> develop an explanation for forces acting on objects in a game use different-sized arrows to represent different-sized forces identify and explain the role of forces present in a real-life scenario. 	<ul style="list-style-type: none"> understand the purpose and features of a narrative understand the purpose and features of a role-play participate in a role-play to explain the forces present in a real-life scenario understand the purpose and features of a force-arrow diagram contribute to a class discussion about forces and motion. 	<ul style="list-style-type: none"> explain their understanding of the forces acting in their game from Lesson 1 use role-play and narrative to describe and represent forces acting in a real-life scenario. 	Formative assessment Science journal entries Class discussions Word wall contributions Role-plays Narratives Force-arrow diagrams

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ELABORATE	Lesson 6 Catapult capers	<ul style="list-style-type: none"> plan and conduct an investigation of the effect of different-sized forces on the movement of an object construct a graph to represent their results summarise and compare results of the investigation. 	<ul style="list-style-type: none"> understand the purpose and features of a table understand the purpose and features of a graph use written language to represent and record findings using a table and column graph record observations and measurements. 	<ul style="list-style-type: none"> plan and conduct an investigation of the effect of different-sized forces on the movement of an object discuss variables to change, measure and keep the same observe and record the results of their investigation create a table and column graph to represent and compare measurements. 	Summative assessment Science journal entries Class discussions Word wall contributions 'Forces investigation planner' (Resource sheet 1) Tables Graphs

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EVALUATE	Lesson 7 Forces finale	<ul style="list-style-type: none"> identify and describe different forces explain that forces can act through direct contact or at a distance represent different-sized forces using different arrow lengths. 	<ul style="list-style-type: none"> contribute to team discussions about forces acting on objects use visual and oral language to represent and describe forces using arrows use oral, written and visual language to describe forces and reflect on their learning during the unit. 	<ul style="list-style-type: none"> review the unit, using the class science journal, word wall and 'Smooth moves' information wall create a game representing their understanding of forces acting on objects draw an annotated drawing of their new game reflect on their learning during the unit. 	Summative assessment Science journal entries Class discussions Word wall contributions Annotated drawings