

Unit Title	Forces and motion				
Subject group and discipline	Sciences	MYP year	2	Unit duration (hrs)	18

Inquiry: Establishing the purpose of the unit

Key concept	Related concept(s)	Global context choose 1 and then drill down to exactly which aspect of these the unit will focus on
Relationships	Movement Models	Scientific and technical innovation

Statement of inquiry

Movement and changes in relationships between objects can be represented by models which have led to scientific and technical innovation.

Inquiry questions

Factual— What effect do forces have on the motion of objects?
What effect does friction have on our life?
How is speed calculated?
How is motion represented graphically?

Conceptual—What are the relationships between forces and motion?
What effect would force have when spread over different surface areas?
What determines the stretchiness of a spring?
How do we describe/understand hidden forces?

Debatable— How is friction helpful or unhelpful when motion occurs?
Do hidden forces exist on their own?

Objectives	Summative assessment <i>This does not always have to be a GRASPS task but it does need to involve students demonstrating progress by transferring the skills and knowledge they have learnt to a real-life context. An analytical essay or practice exam questions (not quizzes) counts as real life context. Students need to construct a response using the knowledge and skills they practised in the unit.</i>
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<p><i>Learning objectives for the unit</i></p> <p>A ii apply scientific knowledge and understanding to solve problems set in familiar situations and suggest solutions to problems set in unfamiliar situations</p> <p>B ii outline a testable prediction using scientific reasoning</p> <p>B iv design scientific investigations.</p> <p>C iii discuss the validity of a prediction based on the outcome of the scientific investigation</p> <p>C v describe improvements or extensions to the method.</p>	<p>Assessment 1: Aii exam style questions</p> <p>Assessment 2: Biv Ciii GRASPs discussing road safety and ramp surfaces.</p> <p>Assessment 3: Bii and Cv Working scientifically investigation into the extension of springs.</p>	<p>Students use models of forces to answer questions set in different contexts including technical innovation.</p>
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Approaches to learning (ATL) *These can be listed or you could offer some explanation of how they will be developed*

Thinking

Communication

Social

Research

Self management