

Motion and Pressure		<b>Curriculum Checkpoints: What do students know and what can they do?</b>				YT Clips
Year 8						
Summative Comment		Developing	Securing	Mastering	Excelling	
Substantive Knowledge		<p>I need to.....state the equation for speed  .....define relative motion .  .....describe simply what a distance-time graph shows  .....use a distance-time graph to describe a journey qualitatively  .....state the equation of pressure  .....use ideas of pressure to describe familiar situations qualitatively  .....state simply what happens to pressure with depth  .....describe characteristics of some objects that float and some that sink ... state two things that can affect gas pressure  .....state the cause of atmospheric pressure  .....describe the effects of atmospheric pressure</p>	<p>I can.....state the equation for speed  .....define relative motion  .....describe simply what a distance-time graph shows  .....use a distance-time graph to describe a journey qualitatively .....state the equation of pressure  .....use ideas of pressure to describe familiar situations qualitatively .  .....state simply what happens to pressure with depth  .....describe characteristics of some objects that float and some that sink .  ..... state two things that can affect gas pressure  .....state the cause of atmospheric pressure  .....describe the effects of atmospheric pressure</p>	<p>I can.....calculate speed using the speed equation  .....describe relative motion  .....calculate pressure  .....apply ideas of pressure to different situations .describe how liquid pressure changes with depth  .....explain why some things float and some things sink, using force diagrams .....describe the factors that affects gas pressure  .....describe how atmospheric pressure changes with height</p>	<p>I can.....use the speed equation to explain unfamiliar situations  .....explain what is meant by relative motion and how it can be calculated.  .....calculate pressure in multistep problems  .....compare pressure in different situations, explaining the differences in pressure using scientific knowledge .....explain why liquid pressure changes with depth  .....explain why an object will float or sink in terms of forces or density  .....explain gas pressure in different situations  .....compare some of the effects of atmospheric pressure</p>	<p><a href="https://www.youtube.com/watch?v=511rdc8K_TU&amp;list=PLupoLr9nAYyQIPmP8UJWkOd7Y8T7sRYVc">https://www.youtube.com/watch?v=511rdc8K_TU&amp;list=PLupoLr9nAYyQIPmP8UJWkOd7Y8T7sRYVc</a></p>
	Disciplinary Knowledge	<p>I need to.....present data given on a distance-time graph  .....predict qualitatively the effect of changing area and/or force on pressure  .....predict if water pressure will increase, decrease or stay the same in a familiar context</p>	<p>I can.....present data given on a distance-time graph .....predict qualitatively the effect of changing area and/or force on pressure  .....predict if water pressure will increase, decrease or stay the same in a familiar context</p>	<p>I can.....interpret distance-time graphs  .....calculate speed from a distance-time graph  .....plot data on a distance-time graph accurately  .....confidently predict quantitatively the effect of changing area and/or force on pressure  .....predict how water pressure changes in a familiar context, using scientific knowledge and understanding .  .....interpret observations of atmospheric pressure</p>	<p>I can..... draw distance-time graphs for a range of journeys  .....analyse journeys using distance-time graphs  .....manipulate data appropriately to present in a distance-time graph  ..... expertly predict quantitatively the effect of changing area an/or force on pressure in a range of situations.  .....predict how water pressure changes in an unfamiliar context, using detailed scientific knowledge and understanding  .....predict the changes to the effects of atmospheric pressure at different altitudes or temperature</p>	<p><a href="https://www.youtube.com/watch?v=YtdEN-40tUJ">https://www.youtube.com/watch?v=YtdEN-40tUJ</a></p>

Energy Year 8		<b>Curriculum Checkpoints: What do students know and what can they do?</b>				YT Clips
Summative Comment		Developing	Securing	Mastering	Excelling	
	Substantive Knowledge	<p>I need to.....describe simply what happens in conduction and convection</p> <p>....state that insulators reduce heat loss compared to conductor .... state some sources of infra red radiation</p> <p>....partially describe how how energy is transferred by radiation</p> <p>.....name renewable and non-renewable energy resources</p> <p>....state one advantage and one disadvantage of fossil fuels</p> <p>.....state how work is calculated</p> <p>....state that machines conserve energy</p>	<p>I can.....describe simply what happens in conduction and convection</p> <p>....state that insulators reduce heat loss compared to conductor .... state some sources of infra red radiation</p> <p>....partially describe how how energy is transferred by radiation</p> <p>.....name renewable and non-renewable energy resources</p> <p>....state one advantage and one disadvantage of fossil fuels</p> <p>.....state how work is calculated</p> <p>....state that machines conserve energy</p>	<p>I can.....describe how energy is transferred by particles in conduction and convection</p> <p>.....describe how an insulator can reduce energy transfer</p> <p>.... confidently describe some sources of infra red radiation</p> <p>.....partially explain how energy is transferred by radiation .</p> <p>....describe the difference between a renewable and non-renewable energy resource</p> <p>....describe how electricity is generated in a power station .</p> <p>.....calculate work done</p> <p>.....apply the conservation of energy to make simple machines</p>	<p>I can..... explain in detail the process involved during heat transfers</p> <p>.....explain why certain materials are good insulators</p> <p>.....expertly describe some sources of infra red radiation</p> <p>.....confidently explain how energy is transferred by radiation</p> <p>.....compare energy being transferred in different ways.</p> <p>....compare the advantages and disadvantages of using renewable and non-renewable energy resources</p> <p>....explain how a range of resources generate electricity, drawing on scientific concepts</p> <p>.....compare the work done in different scenarios and by different machines</p> <p>.....explain how conservation of energy applies in an example</p>	<p><a href="https://www.youtube.com/watch?v=kNZ120V9Xc">https://www.youtube.com/watch?v=kNZ120V9Xc</a></p>
	Disciplinary Knowledge	<p><i>I need to</i> .....state the pattern in conduction shown in results .....use one source of information .....state one way of improving the experiment</p>	<p>I can.....state the pattern in conduction shown in results .....use one source of information .....state one way of improving the experiment</p>	<p>I can.....describe the pattern in conduction shown by results, using numerical data to inform a conclusion</p> <p>.....choose an appropriate source of secondary information</p> <p>.....evaluate results from the practical</p>	<p>I can.....explain the pattern in conduction shown by experimental results</p> <p>.....justify my choice of secondary information</p> <p>.....evaluate results (including random and systematic errors) and suggest how the experiment can be improved</p>	<p><a href="https://www.youtube.com/watch?v=Rnnadk7b3VY">https://www.youtube.com/watch?v=Rnnadk7b3VY</a></p>