



DT—Structures—Half term

Section A: Key vocabulary	
Tier 3 Vocabulary	Definition
Orthographic	A 2D drawing of two or more sides of an object
Tier 2 Vocabulary	Definition
Forces	A physical action or movement
Stresses	The point of pressure on an object
Prototype	A model/ trial run of a design
Scale	The ratio of the size of a model or drawing, to the actual size of the object
Experiment	To test ideas to discover info
Assess	Evaluate something
Refine	To remove the unwanted and make something clearer
Feasible	Ideas that are realistic
Culminate	To use all your knowledge learnt to develop ideas
Strengthen	To make something stronger or withstand more pressure
Fortify	To add to something to make it stronger

Section B:	
Forces	<p>Whether you sit in a chair, or fall back into it, it will have an impact on the forces or stresses it has to withstand. Products are developed to withstand the maximum expected stresses to be safe and reliable (functional and don't break).</p> <ul style="list-style-type: none"> • Compression: pushing at both ends • Tension: pulling at both ends • Bending: tension and compression happen either side • Torsion: twisting <p>Shear: when a material is being</p>
Orthographic projection	<p>An orthographic projection is used as part of the planning of the final product because it gives a good idea of what the product will look like from different sides (elevations). A good drawing will :-</p> <ul style="list-style-type: none"> • Be drawn in pencil with a ruler • Have construction lines to help accurate drawing • Be drawn to a scale that is appropriate • At least 2 elevations, preferably 3 <p>Measurements added to the drawing</p>

FORCES

TYPES OF BRIDGES

ORTHOGRAPHIC



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Stresses	The point of pressure on an object
Prototype	A model/ trial run of a design
Scale	The ratio of the size of a model or drawing, to the actual size of the object
Column	A vertical pillar used for support
Resist	To withstand a force
Fragile	Easy to break
Solution	The answer to a problem
Steady	Standing without easily falling
Weak	Opposite of strong
Strengthen	To make something stronger or withstand more pressure

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Forces	<p>Whether you sit in a chair, or fall back into it, it will have an impact on the forces or stresses it has to withstand. Products are developed to withstand the maximum expected stresses to be safe and reliable (functional and don't break).</p> <ul style="list-style-type: none"> • Compression: pushing at both ends • Tension: pulling at both ends • Bending: tension and compression happen either side • Torsion: twisting <p>Shear: when a material is being pushed/ pulled at different parts</p>
Orthographic projection	<p>An orthographic projection is used as part of the planning of the final product because it gives a good idea of what the product will look like from different sides (elevations). A good drawing will :-</p> <ul style="list-style-type: none"> • Be drawn in pencil with a ruler • Have construction lines to help accurate drawing • Be drawn to a scale that is appropriate • At least 2 elevations, preferably 3 <p>Measurements added to the drawing</p>

FORCES

TYPES OF BRIDGES

ORTHOGRAPHIC