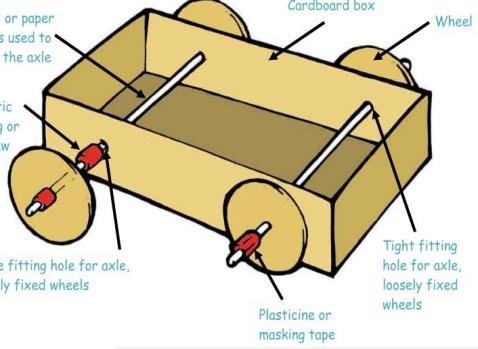
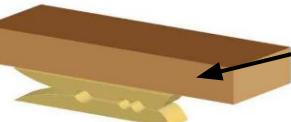
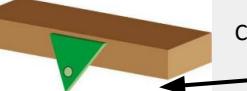
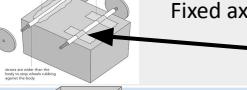
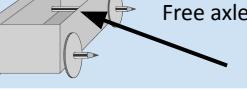
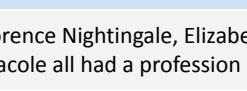


# Grange Park Primary School Year 2 Summer 1 Design and Technology

## Wheels and Axles: Design, make and evaluate a moving ambulance

Key People and Events		Key Knowledge and Skills		Key Vocabulary	
1822-1873	Robert William Thomson invented the first inflatable tyre.	Two different ways to fix wheels	 <p>Dowel or paper sticks used to make the axle</p> <p>Cardboard box</p> <p>Wheel</p> <p>Plastic tubing or straw</p> <p>Loose fitting hole for axle, tightly fixed wheels</p> <p>Tight fitting hole for axle, loosely fixed wheels</p> <p>Plasticine or masking tape</p>	vehicle	Something used to carry and move people or things. <i>Cars, buses and airplanes are vehicles.</i>
1886	Karl Benz invented the first vehicle powered by a gas engine.	Ways to hold the free moving axle	 <p>Pegs glued with PVA glue</p>	wheel	A circular object that turns round. It can be fixed to a vehicle like a car or bicycle to allow the vehicle to move easily on the ground.
			<p>Card triangles with holes for the axle</p>	axle	A rod that enables a wheel to rotate. The wheel can rotate freely on the axle or be fixed to, and turn with the axle.
			<p>Large paper/plastic straws fixed with masking tape to the underside of a box.</p>	free axles	The axles go through the vehicle.
<p>Crimean War started in 1845 AD. Only a few ambulances were taken to the war.</p> <p>Florence Nightingale, Elizabeth Garrett Anderson and Mary Seacole all had a profession in the medical industry.</p>			<p>Fixed axles are fixed underneath.</p>	washer	A flat ring of rubber, metal or other material used with a nut and bolt to make a tight fit.
<p>Real World Examples</p>			<p>Free axles – the axle goes through the vehicle.</p>	chassis	The frame or base on which a vehicle is built.
<p>Real World Examples</p>			<p>Tools</p>	moving parts	A part in a machine or product that has power to move.
<p>Real World Examples</p>			<p>Durable</p>	saw	A tool with a thin metal blade that has sharp teeth along the edge. Saws are used for cutting hard materials such as wood or metal.
<p>Real World Examples</p>			<p>Functional</p>	clamp	A device used to fasten, support or press together two or more objects or pieces.
<p>Real World Examples</p>			<p>Wood/card/MDF</p>	cotton reels	An instrument that is usually held with the hands and helps one to do something.
<p>Real World Examples</p>			<p>Plastic</p>	foam covered reels	Not easily broken or worn out, lasting and sturdy.
<p>Real World Examples</p>			<p>Cotton reels</p>	Types of wheels	Having a practical purpose.
<p>Real World Examples</p>			<p>Foam covered reels</p>		