## Knowledge Organiser

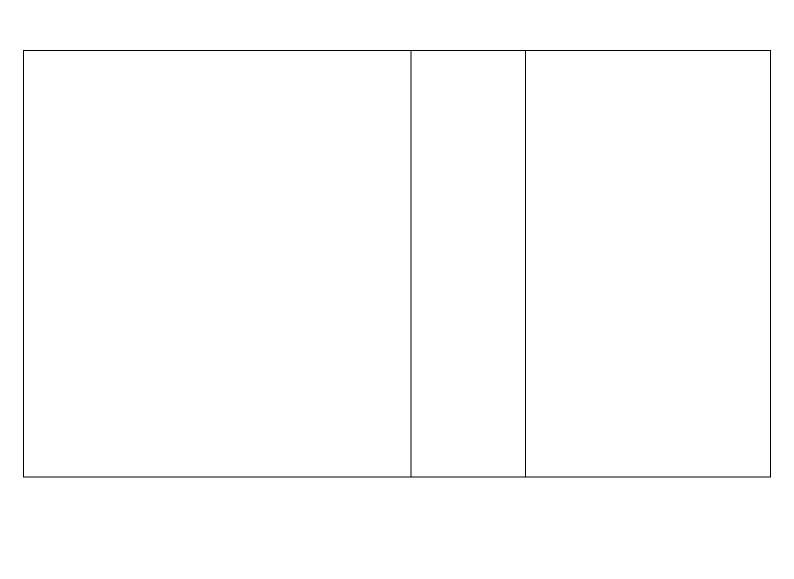
Subject: Design & Technology Unit: Playgrounds

#### Overview

Children will be learning about playground equipment and the materials they are made from. They will make models focussing on strength and sturdiness. The children will design and make a piece of playground equipment.

What should I already know?	Vocabulary:	
Design	Key	
<ul> <li>Can identify the key features of an existing product and generate ideas to make their own</li> </ul>	construction	to build or make something
<ul><li>product</li><li>Can make a plan of a picture with a mechanism</li></ul>	design	a drawing to show what something looks like
using pictures and labels and list the materials they will need	evaluate	to make a judgement about
Make		something
<ul> <li>Can cut out using scissors</li> <li>Can join components to make a wheel mechanism and follow a design</li> </ul>	demonstrate	to show
Working with tools	join	to link two items together
Join two pieces of paper/card together with glue and select appropriate and tools and use them safely	identify	to find
Evaluate	equipment	tools you need to construct
Can identify what has gone well with their product and how they could improve their work		something
<ul> <li>Say what they like and feel about their own and others' work</li> </ul>	frame	a rigid structure that surrounds something
Technical Knowledge		
<ul> <li>Know that construction means to make something (EYFS)</li> </ul>	spring	an elastic device that can be pressed or pulled but returns to
Know what a pivot and lever are and how they are used to make a mechanism work.		its original shape when released
What will I know by the end of the unit?		

#### Design supplementary Can identify the key features of an existing product put (something) in a steady Can make a plan of an existing product and label it balance position so that it does not fal Can generate ideas for different ways of strengthening models to make them sturdy turn or cause to turn or whirl Can say whether their models are strong or not. round quickly spin Can make a labelled plan of their design and list the tools and materials they need. from the centre of something Make central point Can cut out using scissors Can follow a design to make a piece of playground having an even and regular equipment surface; free lumps, or smooth Can join materials together to make a sturdy indentation surface structure Working with tools strongly and solidly built Join two pieces of paper/card together with glue and tape a base which is wide to improve sturdy Can select appropriate and tools and use them stability safely wide-base Evaluate Can identify what has gone well with their product. Can say how they could improve their work Say what they like and feel about their own work Can say what they like about others' work and give them positive feedback (I like.....about your product) Technical Knowledge Know that to make a structure more stable it needs reinforcing e.g., more tape to hold it together



# Playgrounds - by the end of the unit children: -

### Construction

- Will cut materials using scissors
- Will describe the materials they have used and why they have chosen them using different words

- Be able to use their knowledge to design a product according to a design brief
- Be able to make their product using their design and knowledge of materials and construction
- Will be able to say why they have chosen materials and design aspects, explain their function and how they work together in their final product

Developing, Planning and Communicating Ideas	Working with tools, equipment, materials and components to make quality products	Evaluating processes and products
<ul> <li>Can they identify the key features of an existing product?</li> <li>Can they think of some ideas of their own?</li> <li>Can they plan an outcome through pictures with labels?</li> <li>Can they explain their ideas orally?</li> </ul>	<ul> <li>Can they explain what they are making?</li> <li>Can they select appropriate resources and tools?</li> <li>Can they explain which tools are they using and why?</li> <li>Can they use tools safely?</li> </ul>	<ul> <li>Can they describe how their product works?</li> <li>Can they identify success and next steps?</li> </ul>
DESIGN AND DEVELOP - Can they	MAKING - Can they	PRODUCT AND EVALUATION - Can they
<ul> <li>Generate ideas from their own experience</li> <li>Talk about their ideas and say what will be done</li> <li>Describe what they want to do using pictures and words</li> <li>Make lists of materials they will need</li> </ul>	<ul> <li>Know the features         of some familiar         products</li> <li>Join two materials         together, often with         glue</li> <li>Use scissors or a knife to         cut, sometimes with help</li> <li>Make simple models,         not necessarily with a         purpose</li> <li>Use simple construction         kits - e.g. Lego</li> <li>Know about basic safety</li> </ul>	<ul> <li>Recognise the characteristics of familiar products</li> <li>Know how some moving objects work</li> <li>Use simple terms to talk about their own and others' work</li> <li>Identify materials and mechanisms in familiar products</li> </ul>

Children are still learning this information and vocabulary. (working below the expected standard)	Children know this information and vocabulary (at the expected standard)	Children know this information and vocabulary and more (working above the expected standard.)