

# Year 1 - Playgrounds

## National curriculum:

### TECHNICAL KNOWLEDGE

Build structures, exploring how they can be made stronger, stiffer and more stable.

Explore and use mechanisms for example levers, sliders, wheels and axles in their products.

### DESIGN

Design purposeful, functional, appealing products for themselves and others based on design criteria.

Generate, develop, model and communicate their ideas through talking, drawing, templates, mock ups and where appropriate, ICT.

### MAKE

Select from and use a range of tools and equipment to perform practical tasks e.g. cutting, shaping, joining and finishing.

Select from and use a wide range of materials and components, including construction materials, textiles and ingredients according to their characteristics.

### EVALUATE

Explore and evaluate a range of existing products

Evaluate their ideas and products against design criteria.

## Vocabulary:

Design, make, knowledge, evaluate, structures, mechanisms, levers, sliders, wheels, axles, joining, shaping, finishing, construction, facilities, mock ups, force, motion, swing, frame, roundabout, zip wire, climbing frame, monkey bars.

## Snapshot Overview - Playgrounds

### Technical knowledge

Children to have experience of, swings, pulleys, roundabouts and seesaws. Moving them to make them work and then looking at smaller version mock ups to see how they can recreate them.

Children then to practise making and joining art straws/ pipe cleaners/ split pins



### Design

Children to design their own playground, taking into account the equipment that we saw when we went to the playground.



### Make

Children to create their playgrounds, using the joints and materials that they experimented with during design.

Children to evaluate their own work, describing how they could improve it.



### Evaluate and improve

Children to look at each other's playgrounds and then go back to their own and make any changes, or adaptations to improve it.

# Year 1 - Playgrounds

## DT Medium Term Planning

Year Group: 1

Term:

Topic: DT

	Learning Objective	Input (including key questions and vocabulary)
Technical Knowledge	I can look at playground equipment and talk about the way each piece works.	Go to the local playground Briefly Consider the various items of playground equipment. Discuss and name the positive and negative points of the facilities. Questions to ask include:- Why do we have playgrounds? Is play equipment safe and fun to use? Why? What are the correct names of play equipment? What materials have been used? What force/ motion does it use? How have they been joined together? Show chn how to join straws with pipe cleaners to make a climbing frame structure. They can experiment with long and short pieces of straws or pipe cleaners. Set a challenge or number of challenges where chn have a time limit 5/10 mins e.g. Can they make something that will hold up a certain load e.g. a book/lego man? Can they make a structure only using triangles - who's is the best/why? Can they make a ladder? Can chn make a cube? Can you make a seesaw? Ask them to find out which is the strongest. Compare and contrast the different designs.

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Design	I can design a playground.	<p>Children to do a sketch of a playground</p> <p>Teach - show chn several different ways to make a frame for a swing/ climbing frame - show different models. Children discuss and explain the effects of different methods.</p> <p>Teach how to join materials to make a frame. Discuss why a frame is used. What makes a strong shape? Children to analyse and explain the effectiveness of this join. Show chn how to strengthen materials.</p> <p>Show them how to make the frames more stable and stand greater loads, e.g by adding kit parts or materials such a card or supports. Show the children how a seat could be made e.g. from a small cardboard box or milk lid. Show how the seat can be made to swing by attaching it to the frame using string, wool, thread, or hooked pipe cleaners. Children then design and create their model.</p> <p>Teach children how to make a bridge for the wobbly bridge or monkey bars. Children then to have a go adapting their design to make it stronger thinking about the frames and how to use that to create the bridge.</p> <p>Teach children how to use a pivot to create a roundabout or seesaw. Children then to have a go at making a pivot.</p>
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# Year 1 - Playgrounds

<p>Make</p>	<p>I can construct 3 pieces of play equipment.</p>	<p>Chn to follow their design and make 3 pieces of playground equipment. 1 from each of the following lists</p> <table border="0" style="width: 100%;"> <tr> <td style="width: 33%;"><b>Bridge</b></td> <td style="width: 33%;"><b>Frame</b></td> <td style="width: 33%;"></td> </tr> <tr> <td><b>Pivot</b></td> <td></td> <td></td> </tr> <tr> <td>Wobbly bridge</td> <td>climbing frame</td> <td></td> </tr> <tr> <td>roundabout</td> <td></td> <td></td> </tr> <tr> <td>Monkey bars</td> <td>swing</td> <td>seesaw</td> </tr> </table> <p>(Some chn will also have design ideas as they make and can add to their original design.)</p> <p>Encourage the children to incorporate other materials <i>eg card, string or reclaimed materials</i></p> <p>Encourage the children to use the correct vocabulary for naming the construction kit components that they are using, and the parts of the playground equipment that they are creating.</p> <p>Give chn a chance to test their playground models with model figures to see if they work and show appropriate strengthening techniques where necessary.</p> <p>At certain stages gather the children together to reflect on and evaluate their work so far. How will you make it stable? How could you make it stronger? What's the best way to make it move? Compare and contrast with other pupils' models.</p> <p>What do you like about your model or another child's model? What could you add to improve it? Refer back to the design criteria - Does it fit with the design</p>	<b>Bridge</b>	<b>Frame</b>		<b>Pivot</b>			Wobbly bridge	climbing frame		roundabout			Monkey bars	swing	seesaw
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# Year 1 - Playgrounds

Evaluate	I can improve my playground.	Children to look at each other's play grounds and then go back to their own and make any changes or adaptations to improve it.
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This will take approximately 4 sessions.

## **Impact:**

All children can name mechanisms for play equipment.

All children can create a frame, pivot and bridge.

All children can improve on their work.