

# DT Curriculum Overview

Giles Junior School

Research (R) – Design (D) – Making (M) – Evaluate (E)

**GILES**  
Curriculum  
Intent



Leaves – what we want our children to leave with

Branches – our teaching pedagogy

Trunk – our core learning and skills content

Roots – underpin our curriculum

## Year 3 – Structures (Picture Frames)

Phase	Content and Title (Trunk)	What the child will “leave” with (Leaves)	Vocabulary (Branches)
1	(R) Exploring existing photograph frames	<ul style="list-style-type: none"> <li>- Can explain and give examples of what makes a photo frame stable.</li> <li>- Can explain the purposes of the component parts of a photo frame.</li> <li>- Can list the different features of a photo frame.</li> </ul>	<ul style="list-style-type: none"> <li>- Photograph</li> <li>- Features</li> <li>- Structure</li> <li>- Frame</li> <li>- Stability</li> <li>- Design</li> <li>- Display</li> <li>- Component</li> <li>- Prototype</li> <li>- Evaluate</li> </ul>
2	(D) Designing a photograph frame	<ul style="list-style-type: none"> <li>- Can explain the resources and materials they need for their photo frame.</li> <li>- Can explain how their photo frame will stand up</li> <li>- Can demonstrate their knowledge of structures by making a prototype</li> <li>- Can explain who photo frames are for and why they are made</li> </ul>	
3	(M) Making the photograph frame	<ul style="list-style-type: none"> <li>- Can measure and mark accurately in CM using a ruler with some adult support</li> <li>- Can explain how to stay safe when using equipment in DT such as a saw.</li> <li>- Can use a saw to cut through dowel with adult support.</li> <li>- Can assemble the photo frame using PVA glue and can strengthen the corners</li> </ul>	
4	(E) Evaluation of photograph frame against set criteria	<ul style="list-style-type: none"> <li>- Can identify which of the design criteria have been met by their product.</li> <li>- Can suggest one way in which they might improve their product next time in specific relation to strength and design.</li> </ul>	

Year 3 – Food and Nutrition (Vegetarian Noodles)

Phase	Content and Title (Trunk)	What the child will “leave” with (Leaves)	Vocabulary (Branches)
1	Food and its origins (Where food comes from)	<ul style="list-style-type: none"> <li>- Can explain what the word “reared” means and give 2 examples.</li> <li>- Can explain what the word “caught” means and give 2 examples.</li> <li>- Can explain what the word “grown” means and give 2 examples.</li> </ul>	<ul style="list-style-type: none"> <li>- Reared</li> <li>- Crops</li> <li>- Diet</li> <li>- Portion</li> <li>- Healthy</li> <li>- Nutrition</li> <li>- Recipe</li> <li>- Method</li> <li>- Ingredients</li> <li>- Savoury</li> </ul>
2	Nutrition of Food	<ul style="list-style-type: none"> <li>- Can identify the 5 main food groups</li> <li>- Can explain that people need at least 5 fruit/veg portions per day</li> <li>- Can give 3 examples of foods and drinks that would make up a healthy diet</li> </ul> <p>Cross curricular link to Science (Animals Including Humans) – The Eat Well Plate</p>	
3	Food Planning	<ul style="list-style-type: none"> <li>- Children can explain what a recipe is for and who would use one.</li> <li>- Can explain how recipes might differ</li> <li>- Can explain some of the key terminology associated with recipes</li> <li>- Can plan a healthy dish and list items that would be on it.</li> </ul>	
4	Preparation and Cooking (Vegetarian Noodles)	<ul style="list-style-type: none"> <li>- Can follow a given recipe.</li> <li>- Can use given appropriate utensils safely.</li> <li>- Can use techniques such as peeling, chopping, slicing and grating with support from an adult.</li> </ul>	

**Year 3 – Pneumatics (Moving Monsters)**

Phase	Content and Title (Trunk)	What the child will “leave” with (Leaves)	Vocabulary (Branches)
1	(R) To investigate a variety of familiar objects that use air to make them work.	<ul style="list-style-type: none"> <li>- Can recognise familiar objects that use air to make them work</li> <li>- Can describe how the objects use air to make them work</li> <li>- Can suggest alternative uses for these familiar objects</li> <li>-</li> </ul>	Pneumatics System Components Control Materials Pump Syringe Tubing Construct Evaluate
2	(R) To investigate techniques for making simple pneumatic systems.	<ul style="list-style-type: none"> <li>- Can explain how simple pneumatic systems work using appropriate vocabulary</li> <li>- Can create simple pneumatics systems</li> <li>- Can suggest ways of using these pneumatic systems in moving monsters</li> </ul>	
3	(D) To be able to gather ideas for creating moving monsters. Prototype lesson	<ul style="list-style-type: none"> <li>- Can investigate ways of using pneumatic systems with other materials to control movement</li> <li>- Can understand different techniques for joining and fixing components</li> <li>- Can make effective pneumatic systems</li> </ul>	
4	(D) To be able to design a monster including a moving pneumatic system.	<ul style="list-style-type: none"> <li>- Can use knowledge of pneumatic systems to design a moving monster part</li> <li>- Can describe what materials and components are needed to create a pneumatic monster</li> <li>- Can identify areas that could be improved upon in their design</li> </ul>	
5	(M) To be able to make a monster with a moving pneumatic part.	<ul style="list-style-type: none"> <li>- Can create a monster based on a design</li> <li>- Can construct an effective pneumatic system to control movement</li> <li>- Can work safely and effectively with a range of tools and techniques</li> </ul>	
6	(E) To be able to evaluate a finished product.	<ul style="list-style-type: none"> <li>- Can identify successful areas of their finished product</li> <li>- Can identify areas that could be improved upon</li> <li>- Can describe what they would do differently if they were to make their moving monster again</li> </ul>	

Year 4 – Electrical Systems (Alarms)

Phase	Content and Title (Trunk)	What the child will “leave” with (Leaves)	Vocabulary (Branches)
1	(R) What electrical systems are used for in everyday life.	<ul style="list-style-type: none"> <li>- Can explain the key components of a simple circuit</li> <li>- Can list 3 everyday uses of electrical systems including batteries and mains</li> <li>- Can explain 3 ways to keep safe when using electricity</li> <li>- Can explain why people use alarm systems and can articulate that they are controlled by an electrical system.</li> </ul> <p>Cross Curricular link to Science unit. Children will be making prototypes for a variety of circuits and explore how different components work.</p>	<ul style="list-style-type: none"> <li>- Circuits</li> <li>- Electrical</li> <li>- Appliance</li> <li>- Conductors</li> <li>- Insulators</li> <li>- Switches</li> <li>- Prototypes</li> <li>- Buzzer</li> <li>- Motor</li> </ul>
2	(D) Design an alarm system	<ul style="list-style-type: none"> <li>- Can choose the components needed and explain why they have chosen them</li> <li>- Can show consideration for what a user needs from an alarm system in their design.</li> <li>- Can use a mixture of free hand and precise measurement when drawing designs</li> <li>- The design makes clear where the electrical circuit is and why it has been placed there.</li> </ul>	
3	(M) Making an alarm system	<ul style="list-style-type: none"> <li>- Can plan out and explain their process for making their alarm system.</li> <li>- Can show, when making, they follow safety procedures discussed in previous lessons and in Science.</li> <li>- Can de-bug problems in a circuit and replace components where needed</li> </ul>	
4	(E) Evaluating alarm	<ul style="list-style-type: none"> <li>- Can create their own design criteria (minimum of 3 points) and then evaluate their product against this.</li> </ul>	

**Year 4 – Textiles (Money Boxes)**

Phase	Content and Title (Trunk)	What the child will “leave” with (Leaves)	Vocabulary (Branches)
1	(R) To explore a range of money containers and examine their features.	<ul style="list-style-type: none"> <li>- Can explain that money containers are designed for different purposes and users</li> <li>- Can identify features common to all money containers</li> <li>- Can draw, label and evaluate different money containers</li> </ul>	<b>Textiles</b> <b>Containers</b> <b>Wallet</b> <b>Fabric</b> <b>Fastenings</b> <b>Features</b> <b>Joins</b> <b>Thread</b> <b>Backstitch</b> <b>Templates</b> <b>Modifications</b> <b>Design criteria</b>
2	(R) To learn how to sew using a range of different stitches.	<ul style="list-style-type: none"> <li>- Can name some different types of stitching</li> <li>- Can use a range of different sewing stitches</li> <li>- Can prepare and finish off their stitching</li> </ul>	
3	(D) To be able to design a money container.	<ul style="list-style-type: none"> <li>- Can explain how they will create their money container</li> <li>- Can produce a detailed design for their money container</li> <li>- Can make a template including a seam allowance</li> <li>- Can mark out measurements accurately</li> </ul>	
4	(M) To be able to make a money container using textiles.	<ul style="list-style-type: none"> <li>- Can follow their design to create a money container</li> <li>- Can use accuracy and control when working with textiles</li> </ul>	
5	(E) To be able to evaluate a finished product.	<ul style="list-style-type: none"> <li>- Can evaluate their own finished products</li> <li>- Can suggest ways in which they could improve their work</li> </ul>	

**Year 4 – Food and Nutrition (Savoury Scones and Salad)**

Phase	Content and Title (Trunk)	What the child will “leave” with (Leaves)	Vocabulary (Branches)
1	Food and its origins	<ul style="list-style-type: none"> <li>- Can explain that food is reared, caught and grown and can recall what this means.</li> <li>- Can give examples for each and categorise a given food item.</li> <li>- Can explain that food is reared in the UK and the wider world and can give an example of each.</li> </ul>	<ul style="list-style-type: none"> <li>- Reared</li> <li>- Savoury</li> <li>- Technique</li> <li>- Dishes</li> <li>- Nutrition</li> <li>- Utensils</li> <li>- Hygiene</li> </ul>
2	Nutrition of Food	<ul style="list-style-type: none"> <li>- Can give an example of a healthy meal and identify that the 5 main food groups have been used.</li> <li>- Can explain what the word nutrition means and how this applies to food</li> <li>- Can give examples of nutrition that foods from the 5 different groups contain</li> <li>- Can explain that people need at least 5 Fruit/Veg portions per day and why they need this.</li> </ul>	
3	Food Planning	<ul style="list-style-type: none"> <li>- Can plan a nutritious dish that includes most of the main 5 food groups.</li> <li>- Can explain why their meal is healthy in relation to the food groups.</li> </ul>	
4	Preparation and Cooking	<ul style="list-style-type: none"> <li>- Can follow a more complex recipe.</li> <li>- Can begin to select required utensils and use them safely and hygienically.</li> <li>- Can measure ingredients broadly accurately using scales with adult support.</li> <li>- Shows increasing independence when carrying out skills such as grating, chopping, slicing, mixing, kneading and baking.</li> </ul>	

Year 5 – Food and Nutrition (Pizza with different toppings)

Phase	Content and Title (Trunk)	What the child will “leave” with (Leaves)	Vocabulary (Branches)
1	Food and its origins	<ul style="list-style-type: none"> <li>- Can explain that seasons may affect the food available.</li> <li>- Can explain why food is transported around the world.</li> <li>- Can begin to explain that some food is processed and why.</li> </ul>	<ul style="list-style-type: none"> <li>- Seasonal</li> <li>- Transported</li> <li>- Processed</li> <li>- Nutrients</li> <li>- Hygiene</li> </ul>
2	Nutrition of Food	<ul style="list-style-type: none"> <li>- Can recall the 5 main food groups</li> <li>- Can explain that a mixture of these is needed for a healthy diet</li> <li>- Can explain why a variety of fruit and veg portions per day is needed</li> <li>- Children will use the above to create a healthy balanced diet for a day</li> </ul>	
3	Food Planning	<ul style="list-style-type: none"> <li>- Can recall what the word nutritious means and go on to explain how this applies to planning a 2 course meal including the main 5 food groups.</li> <li>- Can explain, with reference to the food groups, why their 2 course meal is healthy.</li> </ul>	
4	Food Preparation and Cooking	<ul style="list-style-type: none"> <li>- Can show, when cooking, their understanding of food hygiene.</li> <li>- Can explain how a recipe can be changed by adding or taking away different ingredients.</li> <li>- Can use utensils and measuring implements to measure accurately to the nearest gram.</li> <li>- Can independently demonstrate techniques of peeling, chopping, slicing, grating, mixing, kneading and baking.</li> </ul>	

Year 5 – Structures and Axels (Moon Buggies)

Phase	Content and Title (Trunk)	What the child will “leave” with (Leaves)	Vocabulary (Branches)
1	(R) How buggies function	<ul style="list-style-type: none"> <li>- Can explain the history of the use of buggies</li> <li>- Can explain how buggies are used today</li> <li>- Can list the parts of a buggy</li> <li>- Can explain ways to keep safe when making a buggy</li> </ul>	<ul style="list-style-type: none"> <li>- Axels</li> <li>- Frame</li> <li>- Axel holders</li> <li>- Jinx joints</li> <li>- Wheels</li> <li>- Precise</li> <li>- Function</li> <li>- Modifications</li> </ul>
2	(D) Designing a buggy	<ul style="list-style-type: none"> <li>- Can understand the function of the parts of the buggy</li> <li>- Can show consideration for how changing the parts of a buggy can alter its function</li> <li>- Can use a mixture of free hand and precise measurement when drawing designs</li> <li>- The design makes clear the measurements needed for the buggy</li> </ul>	
3	(M) Making a buggy	<ul style="list-style-type: none"> <li>- Can explain their process for making a buggy</li> <li>- Can show, when making, they follow safety procedures discussed in previous lessons</li> <li>- Can use the saw and glue gun as instructed by the teacher</li> </ul>	
4	(E) Evaluating buggy	<ul style="list-style-type: none"> <li>- Can evaluate their product against their own 3-point design criteria</li> </ul>	

Year 5 – Levers and Pulleys (Mechanical)

Phase	Content and Title (Trunk)	What the child will “leave” with (Leaves)	Vocabulary (Branches)
1	(R) To investigate a variety of familiar objects that use levers and pulleys to make them work efficiently.	<ul style="list-style-type: none"> <li>- Can investigate and analyse a range of existing mechanical systems including pulleys and levers.</li> <li>- Can explain how levers and pulleys work using appropriate vocabulary.</li> <li>- Can describe how the pulleys and levers help the systems to work efficiently.</li> </ul>	<ul style="list-style-type: none"> <li>- Mechanical</li> <li>- Systems</li> <li>- Pulleys</li> <li>- Levers</li> <li>- Efficient</li> <li>- Prototype</li> <li>- Components</li> <li>- Design Criteria</li> </ul>
2	(D) To be able to gather ideas to design a mechanical system including levers and pulleys.	<ul style="list-style-type: none"> <li>- Can use knowledge of levers and pulleys to design a mechanical system.</li> <li>- Can communicate ideas through discussion and diagrams.</li> <li>- Can add annotations to a design to show how different components move.</li> </ul>	
3	(D) To be able to create a mechanical system. Prototype lesson.	<ul style="list-style-type: none"> <li>- Can create a mechanical system prototype which uses at least 2 pulley and lever mechanisms.</li> <li>- Can understand different techniques for joining and fixing components.</li> </ul>	
4	(M) To be able to make an efficient mechanical system with moving levers and pulleys.	<ul style="list-style-type: none"> <li>- Can make a mechanical system based on a design.</li> <li>- Can construct an effective mechanical system to control movement using levers and pulleys.</li> <li>- Can use tools and equipment to perform practical tasks accurately.</li> </ul>	
5	(E) To be able to evaluate a finished product.	<ul style="list-style-type: none"> <li>- Can identify successful areas of their finished product and what could be improved upon based on their design criteria.</li> <li>- Can describe what they would do differently if they were to make their mechanical system again</li> <li>- Can explain how they would use mechanical systems to make life easier.</li> </ul>	

Year 6 – Structures (Catapults Workshop from STEMpoint)			
Phase	Content and Title (Trunk)	What the child will “leave” with (Leaves)	Vocabulary (Branches)
1	Research How and why were catapults made?	<ul style="list-style-type: none"> <li>- To understand what key parts of a catapult allow it to be functional.</li> <li>- To describe how the design of catapults changed over time.</li> <li>- Sketch and annotate a design of a catapult noting key parts such as levers and mechanisms</li> </ul>	<ul style="list-style-type: none"> <li>- Prototype</li> <li>- CAD</li> <li>- Component</li> <li>- Fit for Purpose</li> </ul>
2	Design What is CAD and why is it used?	<ul style="list-style-type: none"> <li>- To understand what CAD stands for.</li> <li>- To be able to say why CAD is used and when it might be used.</li> <li>- To be able to use a CAD programme (TinkerCAD) to design a prototype catapult</li> </ul>	
3	STEMpoint Workshop	<ul style="list-style-type: none"> <li>- To create a prototype catapult</li> </ul>	
4		<ul style="list-style-type: none"> <li>- To use a range of materials and components to make catapults</li> <li>- To be able to explain how a structure can be re-enforced by adding different components</li> <li>- Understand how different parts of the catapult work together to allow it to perform its intended function.</li> </ul>	
5	Evaluation What makes an effective catapult? How effective was my design and creation?	<ul style="list-style-type: none"> <li>- To articulate whether their catapult was fit for purpose by comparing it to success criteria.</li> <li>- To suggest improvements to their design and creation.</li> <li>- To explore what replaced catapults in world history and how what came next was more effective at being fit for purpose.</li> </ul>	

<https://www.stempointeast.org.uk/primary-workshop/catapult-challenge/> (Workshop Link)

<https://www.tinkercad.com/teach> (CAD programme)

**Year 6 – Textiles (Drawstring Bags)**

Phase	Content and Title (Trunk)	What the child will “leave” with (Leaves)	Vocabulary (Branches)
1	(R) To investigate and analyse items made using textiles: the materials used and how they are made.	<ul style="list-style-type: none"> <li>- Can identify the materials used in the manufacture of some items made using textiles</li> <li>- Can identify ways in which materials are joined in some items made using textiles</li> <li>- Can explain the main stages in the production of cotton cloth</li> </ul>	<ul style="list-style-type: none"> <li>- <b>Functional</b></li> <li>- <b>Distinguish</b></li> <li>- <b>Decorative</b></li> <li>- <b>Properties</b></li> <li>- <b>Sewing Pattern</b></li> <li>- <b>Seam</b></li> <li>- <b>Hem</b></li> <li>- <b>Fasteners</b></li> <li>- <b>Cloth</b></li> <li>- <b>Reinforce</b></li> <li>- <b>Design Criteria</b></li> </ul>
2	To explore some ways in which textiles are joined and decorated.	<ul style="list-style-type: none"> <li>- Can identify different sewing stitches on items made using textiles</li> <li>- Can distinguish between functional and decorative sewing stitches on items made using textiles</li> <li>- Can identify potential uses for different sewing stitches</li> </ul>	
3	To design an item made using textiles, and draw pattern pieces.	<ul style="list-style-type: none"> <li>- Can explain that design criteria are used by fashion designers to develop designs</li> <li>- Can design an item made using textiles according to design criteria</li> <li>- Can draw pattern pieces, adding details such as seam allowances</li> </ul>	
4	(M) To use pattern pieces to measure, mark and cut fabric; to sew design elements according to a design.	<ul style="list-style-type: none"> <li>- Can use pattern pieces to mark fabric for cutting and sewing</li> <li>- Can cut fabric according to a pattern</li> <li>- Can add design details to a product according to their own design</li> </ul>	
5	(M) To join fabric pieces by hand sewing.	<ul style="list-style-type: none"> <li>- Can thread a needle by themselves</li> <li>- Can join fabric pieces using a simple hand-sewing stitch</li> <li>- Can tie threads to ensure seams do not unravel</li> </ul>	
6	(E) To be able to evaluate a finished product.	<ul style="list-style-type: none"> <li>- Can evaluate their own finished products</li> <li>- Can suggest ways in which they could improve their work</li> <li>- Can evaluate the work of others</li> </ul>	

Year 6 – Food and Nutrition (Soups, Breads and Dips)

Phase	Content and Title (Trunk)	What the child will “leave” with (Leaves)	Vocabulary (Branches)
1	Food and its origins	<ul style="list-style-type: none"> <li>- Can articulate that seasons will affect the food that is available in specific relation to the UK.</li> <li>- Can explain how food is processed (curing, drying, pickling, bottling)</li> </ul>	-
2	Nutrition of Food	<ul style="list-style-type: none"> <li>- Can plan a healthy, balanced and varied diet meal plan for a week.</li> <li>- Children will incorporate the 5 main food groups and will ensure there is a balance between them.</li> <li>- Can explain why a variety of 5 fruit/veg portions are needed a day and can explain the different nutritional benefits a person might gain.</li> </ul>	
3	Food Planning	<ul style="list-style-type: none"> <li>- Can create a set of recipes for a 3 course meal.</li> <li>- Can explain why ingredients have been chosen and how they contribute to a healthy diet.</li> <li>- Can explain how a recipe might be scaled up or down by adjusting the quantity of ingredients. They will need to have accurately calculated the ratios of ingredients. (Cross Curricular – Maths Skills)</li> </ul>	
4	Preparation and Making	<ul style="list-style-type: none"> <li>- Children will use the recipe planned in the previous phase to prepare and make a starter dish hygienically and safely.</li> <li>- Can independently select the utensils that are needed for the dish.</li> <li>- Can explain how changes to the recipe might affect the appearance/taste (chunky vs blended soup or adding cream to affect the taste/texture).</li> <li>- Can independently and with precision become increasingly skilled at peeling, chopping, slicing, grating, mixing, kneading and baking.</li> </ul> <p>Cross Curricular link with Science - Yeast</p>	