

What does a vehicle need to move?

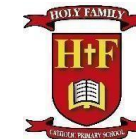
Year R / 1		Term	Autumn 2	Subject	Design Technology
National Curriculum Coverage	<ul style="list-style-type: none">Design purposeful, functional, appealing products for themselves and other users based on design criteriaGenerate, develop, model and communicate their ideas through talking, drawing, templates, mock- ups and, where appropriate, information and communication technologySelect from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishingSelect from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristicsExplore and evaluate a range of existing productsEvaluate their ideas and products against design criteriaExplore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.				
Early Learning Goals	Use a range of small tools, including scissors, paintbrushes and cutlery. Offer explanations for why things might happen Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. Share their creations, explaining the process they have used. Be confident to try new activities and show independence, resilience and perseverance in the face of challenge.				
Key Skills				Key Knowledge	
EYFS Making verbal plans and material choices. Improving fine motor/scissor skills with a variety of materials Joining materials in a variety of ways (temporary and permanent) Making simple suggestions to fix their car. Giving a verbal evaluation of their own and others’ car with adult support Year 1 Designing a vehicle that includes wheels, axles and axle holders, which will allow the wheels to move. Creating clearly labelled drawings that illustrate movement. Adapting mechanisms. Testing mechanisms, identifying what stops wheels from turning, knowing that a wheel needs an axle in order to move.				What shapes do wheels need to be? What needs to be attached to wheels to ensure they move? What real life items have wheels?	
Current Year			Future learning		
<ul style="list-style-type: none">Explain that wheels move because they are attached to an axle.Recognise that wheels and axles are used in everyday life, not just in cars.			Year 1/2 <ul style="list-style-type: none">Identify the correct terms for levers, linkages and pivots.Analyse popular toys with the correct terminology.		



- Identify and explain vehicle design flaws using the correct vocabulary.
- Design a vehicle that includes functioning wheels, axles and axle holders.
- Make a moving vehicle with working wheels and axles.
- Explain what must be changed if there are any operational issues.

- Create functional linkages that produce the desired input and output motions.
- Design monsters suitable for children, which satisfy most of the design criteria.
- Evaluate their two designs against the design criteria, using this information and the feedback of their peers to choose their best design.
- Select and assemble materials to create their planned monster features.
- Assemble the monster to their linkages without affecting their functionality.

Vocabulary: Axle, Chassis, Dowel, Equipment, Wheel



How do we make soup? Food

Year Year R/1		Term Spring 2	Subject Design Technology
National Curriculum Coverage	Select from and use a range of tools and equipment to perform practical tasks [for example, 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 Explore and evaluate a range of existing products Use basic principles of a healthy and varied diet to prepare dishes Understand where food comes from		
Early Learning Goals	Participate in small group, class and one-to-one discussions, offering their own ideas, using recently introduced vocabulary. Know and talk about the different factors that support their overall health and wellbeing: healthy eating. Manage their own basic hygiene and personal needs, including...understanding the importance of healthy food choices. Explore the natural world around them. Use a range of small tools, such as cutlery. Creating with materials: Safely use and explore a variety of tools.		
Key Skills		Key Knowledge	
EYFS Chopping ingredients with adult support Tasting the soup and give opinions Describe some of the following when tasting: look, feel, smell, taste. Discuss with the peers what they like and dislike about their soup. Year 1 Explore fruits and vegetables and the differences between them. To explore a pumpkin and describe it using the five senses. To design a fruit and vegetable soup recipe. To practise cutting with a knife. To learn how to use a knife safely. Develop small motor skills so that they can use a range of tools competently, safely and confidently. To observe and help (where appropriate) with the use of tools to prepare ingredients. To design food packaging. To describe the finished product and evaluate the process.		What is the difference between fruit and vegetables? How can I stay safe when using a knife? What is a diet?	
Current Year		Future learning	
		1/2	



- Become familiar with a range of fruit and vegetables whilst thinking about taste and texture.
- Evaluate a pumpkin's exterior and interior.
- Designing a recipe for soup using their knowledge from previous lessons on the different fruits and vegetables.
- Safely use kitchen equipment correctly. For example, using a knife.
- Make, test and reflect on their soup against a teacher design.
- Evaluate existing soup packaging design and create own.

4 /5

- Designing dippers and dip based on a food combination which works well together.
 - Slicing food safely using the bridge or claw grip.
 - Constructing a wrap that meets a design brief
 - Describing the taste, texture and smell of fruit and vegetables.
-
- Adapting a traditional recipe, understanding that the nutritional value of a recipe alters if you remove, substitute or add additional ingredients.
 - Writing an amended method for a recipe to incorporate the relevant changes to ingredients.
 - Designing appealing packaging to reflect a recipe.
 - Cutting and preparing recipes safely.
 - Using equipment safely, including knives, hot pans and hobs.
 - Knowing how to avoid cross-contamination.
 - Following a step-by-step method carefully to make a recipe.
 - Identifying the nutritional differences between different products and recipes
 - Identifying and describing healthy benefits of food groups.

Vocabulary: Smell, Feel, Taste, Look, Texture, Chop, Cut, Safety



What materials could you use to make a boat that floats? – Structures

Year R /1	Term Summer 2	Subject Design Technology
National Curriculum Coverage:	design purposeful, functional, appealing products for themselves and other users select from and use a range of tools and equipment to perform practical tasks build structures, exploring how they can be made stronger, stiffer and more stable	
Early Learning Goals:	Offer explanations for why things might happen. Explore the natural world around them, making observations Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. Share their creations, explaining the process they have used.	

Key Skills	Key Knowledge
EYFS Making verbal plans and material choices Improving fine motor skills/scissor skills in a variety of ways Joining materials together Talking about their junk model Give verbal evaluations of their own and others' work. Make simple suggestions to fix their junk model. Year 1 To understand what waterproof means and to test whether materials are waterproof. To test and make predictions for which materials float or sink. learn about the different features and structures of boats and ships. To investigate how the shape and structure of boats affects the way they move. To design a boat. To create a boat based upon their own design.	What does waterproof mean? Can you name some materials that are waterproof? What does it mean to sink and float? Why did you choose those materials for your boat?
Current Year	Future learning
<ul style="list-style-type: none">Learn how to select appropriate materials for a purposeTest and investigate which materials will float or sink.Understand how different shapes affect the way an object will move.Sketch and design a boat for purpose.Testing their end product in water and reflecting on what could have been improved on the design.	3 / 4 <ul style="list-style-type: none">Designing a stable pavilion structure that is aesthetically pleasing and selecting materials to create a desired effect.Building frame structures designed to support weight.Creating a range of different shaped frame structures.Making a variety of free-standing frame structures of different shapes and sizes.Selecting appropriate materials to build a strong structure and for the cladding.



- Reinforcing corners to strengthen a structure.
- Creating a design in accordance with a plan.

Learning to create different textural effects with materials.

5 / 6

- Designing a playground featuring a variety of different structures, giving consideration to how the structures will be used.
- Considering effective and ineffective designs.
- Building a range of play apparatus structures drawing upon new and prior knowledge of structures.
- Measuring, marking and cutting wood to create a range of structures.
- Using a range of materials to reinforce and add decoration to structures.
- Improving a design plan based on peer evaluation.
- Testing and adapting a design to improve it as it is developed.
- Identifying what makes a successful structure

Vocabulary: Sink, Float, Design, Test, Reflect