Year 2 DT	Autumn Baby bear's Chair	Spring Wheels & Axels: Wacky Races	Summer Healthy Wraps
Values	Friendship and Love	Respect and responsibility	Perseverance and Hope
National Curriculum	Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home and school, gardens and playgrounds, the local community, industry and the wider environment]. When designing and making, pupils should be taught to: **Design** • design purposeful, functional, appealing products for themselves and other users based on design criteria • generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology **Make** • 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 **Evaluate** • explore and evaluate a range of existing products • evaluate their ideas and products against design criteria **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		
Overview	Considering what kind of chair Baby Bear would need for stability, pupils experiment with different structures, testing for stability. They then design and make a chair with appropriate materials and shapes to be the most stable.	Using their knowledge of structures, children build their frames and wheels before assembling their fairground rides, adapting their designs as necessary.	Building on their taste testing investigations, children design and make a wrap following a design criteria

Excellence and Enjoyment, Everyone and Everything. "God created you to be amazing" Ephesians 2:10

What we need to know **Red Hill Riches**	A chair is structured with a seat and secure legs Some 3D shapes have more stability Shapes can be fixed together using tabs Structures must be stable to withstand weight Structures should be tested to check stability	Wheels, axis and axel holders are located on a vehicle Axel holders are required for rotation A chassis requires axels and moving wheels A car should look aesthetically pleasing	The Eat Well Plate represents that we should eat carbohydrates, protein, dairy, fats, fruits & vegetables Fruit and vegetables should be cut safely Products should be designed around a design criteria Surveys can be used to support designs
Links to prior knowledge (footprints)	To understand that the shape of materials can be changed to improve the strength and stiffness of structures. To understand that cylinders are a strong type of structure. To begin to understand that different structures are used for different purposes. To know that a structure is something that has been made and put together.	To understand that the shape of materials can be changed to improve the strength and stiffness of structures. To understand that axles are used in structures and mechanisms to make parts turn in a circle. To know that a structure is something that has been made and put together.	To understand the difference between fruits and vegetables. To understand that some foods typically known as vegetables are actually fruits (e.g. cucumber). To know that a fruit has seeds and a vegetable does not. To know that fruits grow on trees or vines. To know that vegetables can grow either above or below ground.
Vocabulary	stability, stable, structure, chair, cylinder, cuboid, triangular prism, buckle, strengthen	axel, wheels, axel holder, rotate, chassis, aesthetic	balanced diet, balance, carbohydrate, dairy, fruit, ingredients, oils, sugar, protein, vegetable, design criteria
Excellence **Enjoyment** **Everyone** **Everything**	Excellence: Understanding the significance of a design brief and exploring how mechanisms work. Enjoyment: Each lesson will be engaging, creative and enjoyable. Everyone: Each lesson will be inclusive and accessible for all children, regardless of ability. Everything: Every piece of work will be celebrated, every lesson.	Excellence: Understanding the significance of a design brief and exploring what makes a successful and high quality structures. Enjoyment: Each lesson will be engaging, creative and enjoyable. Everyone: Each lesson will be inclusive and accessible for all children, regardless of ability. Everything: Every piece of work will be celebrated, every lesson.	Excellence: Tasting, describing and exploring healthy ingredients. Enjoyment: Each lesson will be engaging, creative and enjoyable. Everyone: Each lesson will be inclusive and accessible for all children, regardless of ability. Everything: Every piece of work will be celebrated, every lesson.

Disciplinary Knowledge	Exploring different shapes to identify the most stable Testing products to check for stability Designing against a design criteria Fixing structures together using joining techniques Evaluating products against a design criteria	Generating and communicating ideas using sketching and modelling. Learning about different types of structures, found in the natural world and in everyday objects. Making a structure according to design criteria. Creating joints and structures with axel holders to secure items Evaluating the effectiveness of their model	Designing a healthy wrap 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. Taste testing food combinations and final products. Describing the information that should be included on a label. Evaluating which grip was most effective.