

Hopton C of E Primary Academy

DT Subject Overviews

EYFS/KS1

Title	<u>Cooking and Nutrition</u> Smoothies
Overview of Unit	Children explore where food comes from and learn to identify fruits and vegetables. They design and make a healthy smoothie based on suitable flavour combinations, using basic food preparation skills such as chopping and juicing safely. Children evaluate different ingredients through tasting, smelling, and observing, before creating their own smoothie. They also design simple packaging for their smoothie, considering what information should be included. The unit develops understanding of healthy eating, basic food preparation skills, and the ability to evaluate products against a design idea.
Key Vocabulary	blend, blender, chopping board, compare, cut, design, evaluate, flavour, fork, fruit, healthy, ingredients, juice, juicer, leaf, plant, recipe, root, seed, select, smoothie, stem, table knife, taste, tree, vegetable, vine
Key Learning Objectives	- I am learning to identify fruits and vegetables. - I am learning to identify where fruits and vegetables grow. - I am learning to practice food preparation skills. - I am learning to select ingredients for a recipe. - I am learning to apply food preparation skills to a recipe. - I am learning to evaluate the design brief.
Key knowledge	1. Fruits and vegetables grow in different places such as trees, plants, vines, and underground. 2. A smoothie is made by blending fruits, vegetables, and liquids together. 3. Different fruits and vegetables have different tastes, textures, and smells. 4. Food preparation tools must be used safely and carefully. 5. Healthy foods help our bodies grow and stay strong. 6. Packaging should include useful information about a product.
Skills to be coveredEYFS	Nursery ● Explore and talk about different fruits and vegetables through play and sensory experiences ● Begin to notice that fruits and vegetables grow on plants, trees, or in the ground ● Use simple tools with support to explore food preparation (e.g. stirring, pressing, squeezing) ● Explore ingredients through tasting, smelling, and handling ● Talk about foods they like and dislike using simple language ● Engage in role play linked to cooking and making food



	Reception ● Begin to recognise and name common fruits and vegetables ● Talk about where fruits and vegetables grow (e.g. tree, plant, ground, vine) ● Use simple tools to prepare food with support (e.g. cutting soft fruit, juicing, mixing) ● Begin to make simple choices when selecting ingredients for a smoothie or recipe ● Talk about what they are making and what they notice about taste, smell, and texture ● Begin to say what they like and suggest simple changes to their food or recipe
Skills to be Covered KS1	Design: ● Design a healthy smoothie based on a food combination which work well together ● Designing smoothie carton packaging by hand. ● Identifying if a food is a fruit. ● Learning where and how fruits and vegetables grow. Make: ● Chopping fruit and vegetables safely to make a smoothie. ● Juicing fruits to make a smoothie. ● Describing appearance, smell and taste. ● Tasting and evaluating different foods. ● Suggesting information to be included on packaging. Evaluation: ● Identifying what I liked in my smoothie and what I may change next time. ● Identify what process I may need further practice with.
End of assessment quiz	<i>Each quiz should also revisit two questions from previous units</i> 1. What tool is used to blend a smoothie? 2. Name one place where fruit or vegetables can grow. 3. Why do we wash food before preparing it? 4. What does a chopping board help us do safely? 5. Why is tasting ingredients important before making a smoothie? 6. What information could go on smoothie packaging?

Title	<u>Textiles: Puppets</u> We will be using materials and sewing skills to make our own puppets.
Overview of Unit	Children explore how to design and make a hand puppet using fabric and joining techniques. They begin by designing a puppet using a simple template linked to a familiar character or story. Children develop practical skills in cutting fabric, joining



	materials, and decorating their puppet using a range of methods such as glue, staples, or stitching. They are introduced to basic sewing skills, including running stitch, and learn how to follow a sequence of steps to complete a product. Children evaluate their final puppet against their design, reflecting on what they like and what could be improved.
Key Vocabulary	decorate, design, fabric, hand puppet, safety pin, stencil, template, glue, staple, pin, textile, technique, cut, join, assemble, material, pattern, feature
Key Learning Objectives	- I am learning to joining fabrics together using different methods. - I am learning to use a template to create my design. - I am learning to join two fabrics together accurately. - I am learning to embellish my design using joining methods.
Key knowledge	1. Fabric is a material that can be cut, joined, and decorated. 2. A template helps us create shapes accurately. 3. Running stitch is a simple sewing technique used to join fabric. 4. Different joining methods include glue, staples, pins, and stitching. 5. Puppets can be designed for a purpose or character. 6. Evaluating helps us improve our products.
Skills to be coveredEYFS	Nursery • Explore a wide range of materials such as fabric, paper, and recycled resources through sensory play • Enjoy cutting, tearing, sticking, and joining materials with support • Develop fine motor skills through threading, squeezing, and manipulating materials • Explore simple joining using glue, tape, and pressing techniques • Talk about what they are doing using simple language • Engage in role play using puppets and storytelling • Explore making simple models and creations through play Reception • Use scissors with increasing control to cut materials • Explore joining techniques such as glue, tape, and simple fastening methods • Begin to explore simple threading or stitching with support • Use simple drawings or templates to help plan ideas • Talk about their puppet and describe what they have made • Begin to sequence simple steps when making • Begin to reflect on their work by saying what they like and what could be improved • Explore combining materials for a specific purpose (making a puppet)
Skills to be Covered KS1	Design: • Using a template to create a design for a puppet



	Make: • Cut fabric neatly with scissors • Use joining methods to decorate a Puppet • Sequence steps for constructions • Sew using running stitch Evaluation: • Reflect on a finished product, explaining likes and dislikes
End of assessment quiz	<i>Each quiz should also revisit two questions from previous units</i> 1. What is a template used for? 2. Name one way fabrics can be joined together. 3. What is running stitch? 4. Why do we decorate puppets? 5. Which tool helps us cut fabric? 6. What could you improve if you made your puppet again?

Title	<u>Mechanisms: wheels and axles</u> We will be designing and making our own vehicles.
Overview of Unit	Children explore how wheels, axles, and axle holders work together to create movement. They investigate different ways of fixing wheels and test how design choices affect how well a product moves. Children design and make a simple moving vehicle, developing skills in cutting, assembling, and joining materials accurately. They compare different designs, test their own models, and evaluate how well their product works for a user. The unit builds understanding of mechanisms, movement, and how products are designed and improved.
Key Vocabulary	axle, axle holder, better, careful, choose, compare, design, dislike, like, mechanism, movement, product, straight line, tool, turn, user, wheel, worse
Key Learning Objectives	- I am learning to develop cutting skills by shaping wheels. - I am learning to refine cutting skills by shaping around wheels. - I am learning to evaluate by comparing and discussing wheel designs. - I am learning to create a design by drawing plans for a pull along toy. - I am learning to apply finishing techniques by decorating pull along toy.
Key knowledge	1. Wheels and axles work together to help objects move. 2. An axle goes through the centre of a wheel. 3. Vehicles are designed for a user and a purpose. 4. Cutting and joining materials carefully helps products work better. 5. Different wheel designs can affect movement. 6. Evaluation helps designers improve products.
Skills to be coveredEYFS	Nursery



	● Explore different objects that move (push, pull, roll) through play ● Investigate wheels and moving toys in the environment ● Use construction materials to build simple models with support ● Develop fine motor skills through pushing, pulling, joining and manipulating objects ● Talk about movement using simple language (e.g. fast, slow, roll, push, pull) ● Explore vehicles and moving objects through stories and role play Reception ● Explore how objects move and begin to describe how wheels help movement ● Build simple models using construction kits and loose parts ● Begin to test and change models to make them move better ● Talk about how and why things move differently (e.g. smooth, bumpy, fast, slow) ● Begin to use simple plans or ideas to design a moving model ● Begin to understand that wheels and axles help objects move in a controlled way ● Talk about what they have made and suggest simple improvements
Skills to be Covered KS1	Design ● Thinking about what others might want from a design. ● Beginning to recognise how products and designs in the world around us solve certain needs. ● Considering who they are designing for – by identifying the user. ● Stating what they intend to make and why – by identifying the purpose. ● Talking about ideas with purpose and user in mind. ● Talking about existing products when generating ideas. ● Using basic drawing skills to communicate ideas. Make ● Planning more than one step ahead. ● Choosing between a small number of materials, ingredients or components. ● Explaining their choices based on personal experiences. ● Requesting equipment appropriate to the purpose (e.g. scissors for cutting and glue for joining). ● Explaining in simple terms why certain tools must be handled carefully. ● Following and recalling simple safety instructions. ● Finding the middle of an object. ● Refining their grip to cut competently and confidently. ● Cutting straight lines and evenly spaced lines. ● Beginning to cut large shapes and thicker materials like card. ● Puncturing holes. ● Recognising the edges of paper and card need to be stuck firmly using a glue stick. ● Using tools, like scissors, to create shapes. ● Beginning to use controlled painting or colouring techniques to finish a product.

	● Adding texture to create visual interest. Evaluate ● Discussing existing products, saying what they like about them. ● Comparing two products and discussing which is better for a specific purpose. ● Discussing how their products could be improved based on personal preferences. ● Comparing their finished products with their original designs. ● Saying what they like about their peers' designs and products. ● Accepting feedback and understanding it is meant to improve their work. Technical ● Recognising and exploring everyday objects that have mechanisms.
End of assessment quiz	<i>Each quiz should also revisit two questions from previous units</i> 1. What do wheels help a vehicle do? 2. What is an axle? 3. Why must scissors be used carefully? 4. What is a user? 5. Why do designers test products? 6. How could you improve a moving vehicle?

Title	<u>Mechanisms: Making a Moving Storybook</u> We will be creating a moving storybook.
Overview of Unit	Children explore how simple slider mechanisms work by designing and making a moving storybook page. They learn how to create movement using sliders, understanding how input creates output through simple mechanisms. Children develop their design ideas based on clear criteria, then assemble and test their pages to ensure the mechanism works effectively. They evaluate their finished product and suggest improvements, learning how products are designed, made, and improved for a purpose.
Key Vocabulary	adapt, assemble, design, design criteria, input, mechanism, model, sliders, test
Key Learning Objectives	- I am learning to explore making mechanisms. - I am learning to design a moving story book. - I am learning to construct a moving picture - I am learning to evaluate my finished product.
Key knowledge	1. Mechanisms help parts of a product move. 2. A slider is a mechanism that creates movement. 3. Input is the action that makes a mechanism move. 4. Storybooks can be designed for a specific audience. 5. Testing helps us check if a mechanism works properly. 6. Designers improve products by adapting and changing ideas.
Skills to be coveredEYFS	Nursery



	● Explore simple movement through play (e.g. pushing, pulling, sliding objects) ● Investigate how objects move in different ways using hands-on experiences ● Build simple models using construction materials and loose parts ● Develop fine motor skills through pushing, pulling, and sliding actions ● Talk about movement using simple vocabulary (e.g. push, pull, move, fast, slow) ● Engage in story-based play linked to books, characters, and movement ● Explore making simple structures through continuous provision Reception ● Explore how objects move and begin to describe simple mechanisms in play ● Use construction materials to build and test simple moving models ● Begin to create simple slider-like movements using everyday materials ● Talk about how things move in books, toys, and models ● Begin to use simple plans or ideas before making ● Begin to understand that movement can be controlled using simple mechanisms ● Talk about what they have made and how it moves ● Begin to suggest simple changes to improve their models
Skills to be Covered KS1	Design ● Thinking about what others might want from a design. ● Beginning to recognise how products and designs in the world around us solve certain needs. ● Considering who they are designing for – by identifying the user. ● Stating what they intend to make and why – by identifying the purpose. ● Talking about ideas with purpose and user in mind. ● Talking about existing products when generating ideas. ● Using basic drawing skills to communicate ideas. ● Explaining how to adapt mechanisms, using bridges or guides to control the movement. ● Designing a moving storybook for a given audience. Make ● Planning more than one step ahead. ● Choosing between a small number of materials, ingredients or components. ● Explaining their choices based on personal experiences. ● Requesting equipment appropriate to the purpose (e.g. scissors for cutting and glue for joining). ● Explaining in simple terms why certain tools must be handled carefully. ● Following and recalling simple safety instructions. ● Finding the middle of an object. ● Refining their grip to cut competently and confidently. ● Cutting straight lines and evenly spaced lines. ● Following a design to create moving models that use levers and sliders. ● Beginning to cut large shapes and thicker materials like card. ● Puncturing holes. ● Recognising the edges of paper and card need to be stuck firmly using a glue stick. ● Using tools, like scissors, to create shapes.

	- Beginning to use controlled painting or colouring techniques to finish a product. - Adding texture to create visual interest. Evaluate - Discussing existing products, saying what they like about them. - Comparing two products and discussing which is better for a specific purpose. - Discussing how their products could be improved based on personal preferences. - Comparing their finished products with their original designs. - Saying what they like about their peers' designs and products. - Accepting feedback and understanding it is meant to improve their work. - Testing a finished product, seeing whether it moves as planned and if not, explaining why and how it can be fixed. - Reviewing the success of a product by testing it with its intended audience. Technical - Recognising and exploring everyday objects that have mechanisms.
End of assessment quiz	<i>Each quiz should also revisit two questions from previous units</i> - What is a mechanism? - What does a slider do? - What is meant by input? - Why do we test moving storybooks? - Who might a moving storybook be designed for? - What could you change if your mechanism did not work?

Title	<u>Cooking and Nutrition: Balanced Diet</u> We will create a healthy, balanced meal.
Overview of Unit	Children learn about the five food groups and what makes a balanced diet. They explore different food combinations by tasting and evaluating ingredients before designing their own wrap ideas. Children develop practical food preparation skills such as chopping, grating, snipping, and spreading safely. They then make their own wrap, applying their design and food knowledge. Finally, children evaluate their finished product, reflecting on what they liked and what they could improve, as well as which skills they need more practice with.
Key Vocabulary	appearance, balanced, carbohydrates, chopping board, combination, cut, dairy, design, design brief, diet, evaluate, feel, fruit, grate, grater, ingredients, menu, oils, proteins, review, scissors, smell, snip, spread, spreads, table knife, taste, vegetables
Key knowledge	- A balanced diet includes foods from different food groups. - Fruit and vegetables are important parts of a healthy diet. - Different tools are used for different food preparation tasks. - Ingredients should be chosen carefully to make a balanced meal. - Food can be described by its taste, smell, texture, and appearance. - Evaluating food helps improve recipes.
Key Learning	- I am learning to recognise foods and their food groups - I am learning to identify the balance of food groups in each meal.



Objectives	- I am learning to identify an appropriate piece of equipment to prepare a given food. - I am learning to select balanced combinations of ingredients. - I am learning to design based on criteria. - I am learning to evaluate a dish based on design criteria.
Skills to be covered EYFS	Nursery ● Explore a wide range of foods through sensory play, tasting, and discussion ● Begin to notice different types of food (e.g. fruit, vegetables, meals) ● Talk about foods they like and dislike using simple language ● Engage in role play linked to cooking, shops, and food preparation ● Explore food through smell, touch, and taste experiences ● Begin to understand that food comes from different places ● Develop fine motor skills through mixing, spreading, and handling objects in play Reception ● Begin to recognise that different foods belong to different groups ● Talk about what makes some foods healthier than others ● Explore and describe food using senses (taste, smell, appearance, texture) ● Begin to make simple choices when selecting ingredients for a wrap ● Use simple food preparation skills with support (cutting, spreading, grating, snipping) ● Talk about what they are making and what they notice during preparation ● Begin to understand that a variety of foods are needed for a balanced diet ● Begin to evaluate food by saying what they like and what they would change.
Skills to be Covered KS1	Design ● Identifying the five food groups. ● Learning about a balanced diet. ● Tasting and evaluating different food combinations. ● Describing appearance, smell and taste. ● Designing three wrap ideas. Make ● Chopping foods safely to make a wrap. ● Grating foods to make a wrap. ● Snipping smaller foods instead of cutting. ● Spreading soft foods to make a wrap. Evaluate ● Identifying what I liked in my smoothie or wrap and what I may change next time. ● Identify what process I may need further practice with.
End of assessment quiz	<i>Each quiz should also revisit two questions from previous units</i> 1. What is a balanced diet? 2. Name one food group. 3. Which tool is used for grating food?



	4. Why do we wash our hands before preparing food? 5. Why is it important to choose healthy ingredients? 6. What could you improve about your wrap next time?
--	---

Title	<u>Structures: A Chair for a Bear</u> We will test the strength of materials and make a strong and stable chair.
Overview of Unit	Children explore how structures can be designed and built to be strong, stable, and fit for purpose. They investigate different types of chairs and evaluate what makes them effective. Using design criteria, children plan and create a chair for a small bear, selecting appropriate materials and construction techniques. They develop skills in cutting, joining, and assembling materials to create a freestanding structure. Children test the stability of their chair and evaluate its effectiveness, suggesting improvements based on their findings. The unit develops understanding of stability, structure, and purposeful design.
Key Vocabulary	design brief, design criteria, evaluate, flexible, improve, select, stiff, strong, thicker, thinner, weak
Key Learning Objectives	- I am learning to evaluate existing structures. - I am learning to explore how shape affects the strength of a tower. - I am learning to explore how thickness affects the strength of materials. - I am learning to make a strong and stable chair for a user. - I am learning to evaluate and improve a structure.
Key knowledge	1. Structures need to be strong and stable. 2. Different materials have different properties such as stiff, flexible, strong, or weak. 3. Folding paper or card can make structures stronger. 4. Shapes can affect the strength and stability of a structure. 5. Design criteria help designers make successful products. 6. Testing and evaluating help improve structures.
Skills to be covered EYFS	Nursery ● Explore a wide range of materials such as card, paper, and construction resources through play ● Begin to build simple structures using blocks, boxes, and loose parts ● Talk about what they are making using simple language (e.g. big, small, strong, weak) ● Investigate how things stand, balance, or fall over through play ● Explore joining and stacking materials using hands and simple tools with support ● Begin to notice that some structures are stronger than others through trial and error ● Develop fine motor skills through cutting, tearing, and manipulating materials ● Talk about what they like and dislike about their models and creations



	Reception ● Design and build simple structures using a range of materials (e.g. card, paper, construction kits) ● Begin to think about what they are making before they build it ● Explore how to make structures stronger and more stable through trial and testing ● Use tools with increasing control (e.g. scissors, tape, glue) to join materials ● Begin to select materials for a purpose (e.g. stronger, thinner, stiffer, flexible) ● Talk about their creations and explain what they have made ● Begin to test and improve their models to make them stronger or more stable ● Begin to compare simple structures and say which works better and why ● Develop early problem-solving skills through building and adapting models
Skills to be Covered KS1	Design ● Using a simple design brief that outlines the intended use, target user and key features of the product to create simple design criteria ● Creating ideas with design criteria in mind ● Referring to specific parts of existing products when generating ideas Make ● Choosing materials, ingredients or components from a wider range of options ● Explaining choices based on the properties of materials and components ● Looking for ways to make cutting easier (e.g. turning the material, not fully closing scissors) ● Choosing known geometric shapes when making ● Beginning to shape objects to improve how they work Evaluate ● Discussing a range of existing products and saying what they like and dislike about them ● Comparing products and explaining why some better meet design criteria than others ● Evaluating ideas and creations against simple design criteria Technical Knowledge ● Recognising that different structures are used for different purposes ● Exploring the features of structures ● Making stable structures from card ● Creating supporting structures to aid stability ● Using stable objects like cylinders to create structures ● Building a strong and stiff structure by folding paper ● Folding to strengthen or stiffen materials ● Comparing the stability of different shapes ● Identifying the weakest part of a structure
End of assessment quiz	<i>Each quiz should also revisit two questions from previous units</i> 1. What does stable mean? 2. Which material property means “does not bend easily”? 3. How can folding help a structure? 4. Why do designers test structures? 5. What is a design brief? 6. Which shape is often strong for structures?



