|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **EYFS** | **Enquiry**  | **NC link**  | **Knowledge**  | **Skills**  | **Skills** | **Vocabulary** |
|  | * Select and use activities and resources, with help when needed.
* Use large-muscle movements to wave flags and streamers, paint and make marks.
* Choose the right resources to carry out their own plan.
* Use one-handed tools and equipment, for example, making snips in paper with scissors.
* Explore how things work.
* Make imaginative and complex ‘small worlds’ with blocks and construction kits.
* Explore different materials freely, in order to develop their ideas about how to use them and what to make.
* Develop their own ideas and then decide which materials to use to express them.
* Create closed shapes with continuous lines, and begin to use these shapes to represent objects.
* Develop their small motor skills so that they can use a range of tools competently, safely and confidently.
* Create collaboratively, sharing ideas, resources and skills.
* Use a range of small tools, including scissors, paintbrushes and cutlery.
* Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.
 | * Personal, social and emotional development
* Physical development
* Understanding the world
* Expressive arts and design
 | * Exploring using media and materials
* Constructing
* selecting tools
* moving and handling tools
* health And safety
* making observations
* playing and exploring
* using senses
 | * Choose the resources they need for their chosen activities
* Handle equipment and tools effectively
* Children know the importance for good health of a healthy diet
* They safely use and explore a variety of materials, tools and techniques, experimenting with
* Colour, design, texture, form and function.
* Children use what they have learnt about media and materials in original ways, thinking
* About uses and purposes.
* They represent their own ideas, thoughts and feelings through design and technology
 | * Show curiosity about objects, events and people
* Questions why things happen
* Engage in open-ended activity
* Thinking of ideas
* Find ways to solve problems / find new ways to do things / test their ideas
* Use senses to explore the world around them
* Create simple representations of events, people and objects
* Planning, making decisions about how to approach a task, solve a problem and reach a goal
* Checking how well their activities are going
* Changing strategy as needed

Reviewing how well the approach worked | * Scissors
* Sellotape
* Masking tape
* Glue
* Join
* Paper
* Wood
* Metal
* Plastic
* Card
* Names of basic colours
* Build
* Move
* Smooth
* Rough
* Sticking
* Cutting
* Planning
 |
| Autumn Term 1 |
|  | **YEAR 1** | **YEAR 2** | **YEAR 3** | **YEAR 4** | **YEAR 5** | **YEAR 6** |
| **Enquiry** | What else could the three little pigs have made their house from?***End Product****: Brick and Paper Mache House*

|  |
| --- |
| **Materials** |

 | Can we design our own bedroom name plate?***End Product:*** *Bedroom name plate***Mouldable Materials** | How can we design and make a jewellery container?***End Product:*** *Jewellery container***Mouldable Materials** | Can we all go fly a kite?***End Product:*** *Kite***Construction** | Why would birds hatch their eggs here?***End Product:*** *Bird box/house***Construction** | How can we keep a cat fit and healthy?***End Product****: Cat Gym/scratching post***Construction** |
| **NC link** | Literacy LinksOpportunities for children to link with traditional talesScience linksOpportunities for children to experiment different materialsArt LinkOpportunities for children to build on their drawing and painting skills | Literacy linkOpportunities for children to report orally or in writingMaths linkOpportunities for children to measure length | Literacy linkOpportunities for children to research from catalogues and websitesMaths Link | Literacy LinkOpportunities for children to research and present their findings. Art linkOpportunities for children to produce artwork based on kites including patterns for their own product.Maths LinkOpportunities for children to measure and use angles. | Literacy LinkOpportunities for children to research local birdsGeography LinkOpportunities for children to compare climates and physical features of habitatsMaths linkOpportunities for children to collect data and draw measurements and shapes accurately | Literacy linkOpportunities for children to research cats and their careMaths linkOpportunities for children to measure and calculate with money  |
| Knowledge | Knows a range of materials and components. | Knows and identifies a wide range of materials and components, including construction materials. | Knows and identifies a range of materials according to their functional properties and aesthetic qualities | Knows a wider range of materials according to their functional properties and aesthetic qualities | Knows and identifies a wide range of materials and components including textiles | Knows identifies and describes a wider range of materials according to their functional properties and aesthetic qualities |
| Skills | **Design*** Children can think of some ideas on their own
* Children can explain what they want to do
* Children can they use pictures and words to plan

**Make*** Children can select appropriate resources and tools to build their project
* Can they build a model/structure using different materials?
* Can they describe how something works?

**Evaluate*** Can they talk about their own work?
 | **Design*** Children can think of ideas and plan what to do next
* Children can choose the best tools and materials? Can they give a reason as to why they are the best?
* Children can describe their design by using pictures, diagrams, models, and words

**Make*** Children can join things (materials/components) together in different ways?
* Children can measure materials to use in a model or structure?
* Children can use joining, folding or rolling to make it stronger?

**Evaluate*** Children can talk about what went well with their work.
* Children can discuss if they did it again, what would they improve
 | **Design*** Children can show that their design meets a range of requirements
* Children can put together a step-by-step plan which shows the order, the equipment, and tools they need
* Children can describe their design using accurately labelled sketch and words?
* How realistic is their plan?

**Make*** Children can use tools and equipment accurately
* Children can select the most appropriate materials
* Children can use a range of techniques to shape and mould
* Children can use finishing techniques

**Evaluate*** What did they change which made their design even better?
 | **Design*** Children can come up with at least one idea about how to create their product?
* Children can take account of the ideas of others when designing?
* Can they produce a plan and explain it to others?

 **Make*** Children can tell is their finished product is going to be good quality
* Children can show a good level of expertise when using a range of tools and equipment
* Children are conscious of the need for their product to be liked by others

**Evaluate*** Children can suggest some improvements and say what was good or not so good about their original design?
* Children have thought about how they will check if the product will be successful
 | **Design*** Children can come up with a range of ideas after they have collected information
* Children can take a user’s view into account when designing
* Children can produce a detailed step-by-step plan

**Make*** Children can explain why their finished product is going to be of good quality
* Children can explain how their product will appeal to the audience
* Can they use a range of joining techniques?

**Evaluate*** Do they keep checking that their design is the best it can be?
* Children check whether anything can be improved
* Children can evaluate appearance and function against the original criteria
 | **Design*** Children can use a range of information to inform their design
* Children can use market research to informs plans
* Children can justify their plan to someone else
* Children consider culture and society in their design

**Make*** Children can use tools and materials precisely
* Children change the way they work if needed

**Evaluate*** Children consider the use of the product when selecting materials
* Does children’s product meet all the design criteria?
* Children can justify why they selected specific materials
* How well do they test their final product?
* Is it fit for purpose?
 |
| Vocabulary | Build, design, three little pigs, big bad wolf, sticks, bricks, straw, house, structure, strong, evaluate, materials  | Mould, manipulate, create, design, strong, tools, bedroom sign, fold, smooth,  | Design, materials, create, join, fix, strengthen, stable, shape, mould, hinges,  | Design, materials, create, join, strengthen, design, manipulate, kite, strong, resistant | Design, materials, resistant, product, joining, stability, finish, bird box, smooth,  | Design, materials, strength, stability, comfort, product, joining, market research,  |

Autumn Term 2

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **YEAR 1** | **YEAR 2** | **YEAR 3** | **YEAR 4** | **YEAR 5** | **YEAR 6** |
| **Enquiry** | Can we design a set of chairs for the three bears?***End Product****: Chair***Construction** | How can we put on a hand puppet show?***End Product****: hand puppet***Textiles** | How comfy is that cushion?***End Product:*** *Cushion***Textiles** | Will our pencil case for life last that long?***End Product:*** *Pencil case***Textiles** | What is the function of seasonal stocking?***End Product****: Seasonal stocking?* **Textiles** | Can we grow our own salad?***End Product****: Salad***Cooking** **and** **Nutrition** |
| **NC link** | Literacy LinkLinks with the story Goldilocks and the three bearsICT LinkOpportunities to use websites to researchMaths LinkOpportunities for children to measure parts of the chair and compare measurements | Art linkOpportunities for children to learn and practice drawing techniques during the design stageMaths LinkOpportunities for children to measure accuratelyLiteracy LinkOpportunities for children to retell stories and develop vocabulary | Literacy LinkOpportunities for children to explain, justify their own opinions and plan questions to interview other peopleArt LinkOpportunities for children to explore the impact of pattern, colour, and contrast Computing linkOpportunities for children to develop their use of CAD | Literacy LinkOpportunities for children to research and report their findingsChildren can discuss, question each other, and justify their choicesArt LinkOpportunities for children to develop their use of colour contrast and form including using relevant softwareComputing linkOpportunities for children to develop their use of CAD | Literacy linkOpportunities for children to research and report their findings in written or verbal formArt linkOpportunities for children to develop their use of colour contrast and formComputing linkOpportunities for children to develop their use of CAD | Geography linkChildren can use maps and find transport links ICT LinkChildren can research using gardening websitesLiteracy linkChildren can write about their experience  |
| Knowledge | Know a range of materials and components. | Know and identify a wide range of materials and components, including construction materials. | Knows and identifies a range of materials and components including textiles | Know and identify a range of materials and components including textiles | Know, identify and describe a wider range of materials and components including textiles | Understand and apply the principles of a healthy and varied diet. Prepare and cook a variety of savoury dishes using a range of cooking techniques.Understand seasonality and know where and how a variety of ingredients are grown. |
| Skills | **Design*** Children can think of some ideas of their own
* Children can explain what they want to do
* Children can use pictures and words to plan

**Make*** Children can explain what they are making
* Children can explain what tools they are using

**Evaluate*** Children can describe how something works
* Children can talk about their own and the work that other people have done
 | **Design*** Children can think of ideas and plan what to do next
* Children can choose the best tools and materials. Can they say why they are the best?
* Children can describe their design by using pictures, diagrams, models, and words.

**Make*** Children can join things (materials/components) together in different ways

**Evaluate*** Children can discuss what went well with their work
* Child can identify if they did it again what they would improve
 | **Design*** Children can show their design meets a range of requirements
* Children can put together a step-by-step plan which shows the order and also what equipment and tools they need
* Children can describe their design using an accurately labelled sketch and words

**Make*** Children can use equipment and tools accurately

**Evaluate**Children can change things which make their design even better | **Design*** Children can come up with at least one idea about how to create their product?
* Children can take account of the ideas of others when designing?
* Children can produce a plan and explain it to others

**Make*** Children can tell is their finished product is going to be good quality
* Children can show a good level of expertise when using a range of tools and equipment
* Children are conscious of the need for their product to be liked by others

**Evaluate*** Children can suggest some improvements and say what was good or not so good about their original design?
* Children have thought about how they will check if the product will be successful
 | **Design*** Children can come up with a range of ideas after they have collected information
* Children can take a user’s view into account when designing
* Children can produce a detailed step-by-step plan

**Make*** Children can explain why their finished product is going to be of good quality
* Children can explain how their product will appeal to the audience
* Can they use a range of joining techniques?

**Evaluate*** Do they keep checking that their design is the best it can be?
* Children can evaluate appearance and function against the original criteria
 | **Design*** Children can use a range of information to inform their design
* Children can use market research to informs plans
* Children can work within the constraints
* Children can follow and refine their plan if necessary

**Make*** Children can use tools and materials precisely
* Children change the way they work if needed

**Evaluate*** Children consider the use of the product when selecting materials
* Does children’s product meet all the design criteria?
* Children can justify why they selected specific materials
* How well do they test their final product?

Is it fit for purpose? |
| Vocabulary | Design, structure, stability, strength, create, chair, join, fix. | Design, materials, create, thread, needle, sow, stitch, join, purpose,  | Design, materials, create, thread, needle, sow, stitch, join, | Design, materials, strength, endurance, weight, join, fix, resistance | Design, materials, create, thread, needle, sow, stitch, join, purpose, finish, audience, product, refine | Design, healthy, varied, diet, ingredients, cooking, prepare, seasonality, in season, out of season, chop, cut, slice, dice, health and safety,  |

Spring Term 1

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **YEAR 1** | **YEAR 2** | **YEAR 3** | **YEAR 4** | **YEAR 5** | **YEAR 6** |
| **Enquiry** | What can our toys eat their dinner on?***End Product****: Plates***Mouldable Materials** | What makes car move?***End Product:*** *Vehicle***Mechanisms** | What would my dinner be back in time?***End Product:*** *Food related product***Cooking** **and** **Nutrition** | How can we catch a thief?***End Product:*** *Burglar Alarm***Mechanisms** | Who will win the year 5 bread bake off?***End Product:*** *Bread***Cooking** **and** **Nutrition** | Will our model theatre be ready for opening night?***End Product:*** *Theatre***Mechanism*s*** |
| **NC link** | Maths LinkOpportunities for children to compare sizes and use vocabulary of shapeArt LinkOpportunities for children to explore the effect of colours and fontsLiteracy LinkOpportunities to write invitations to the toys inviting them for dinner | Maths LinkOpportunities for children to measure, compare sizes and use vocabulary of shapeArt LinkOpportunities for children to decorate their model using collage techniques to represent scalesLiteracy linkOpportunities for children to talk and present their work to others | Literacy LinkOpportunities for children to research and report their findings.Geography LinkChildren can use maps to find locations and follow trade routesLiteracy linkChildren can use instructional writing for their recipes | Science linkOpportunities for children to apply scientific knowledge in a practical contextLiteracy linkOpportunities for children to research and report their findings in written or verbal formArt linkOpportunities for children to develop their use of colour contrast and form. | Geography LinkOpportunities to work with maps and knowledge of locationsScience linksOpportunities to talk about changes in states and gasesMaths LinkOpportunities for children to calculate the cost of ingredientsLiteracy LinkOpportunities for children to discuss, justify, interview, and write a report | Science Link: Opportunities for children to apply what they have learned about electricity and circuits during Key Stage 2.Literacy Link: Children can produce a step-by-step guide for a wider audienceComputing linkChildren can develop their use of CAM |
| Knowledge | Know a range of materials according to their characteristics | Know a wide range of materials and components, including construction materials. | Understand and apply the principles of a healthy and varied diet. Prepare and cook a variety of savoury dishes using a range of cooking techniques. Understand seasonality and know where and how a variety of ingredients are grown. | Know and identify a range of materials and components including textiles | Understand and apply the principles of a healthy and varied diet. Prepare and cook a variety of savoury dishes using a range of cooking techniques. Understand seasonality and know where and how a variety of ingredients are grown. | Know identify and describe a wider range of materials and components, including textiles. |
| Skills | **Design*** Children can think of some ideas of their own
* Children can explain what they want to do
* Children can use pictures and words to plan

**Make*** Children can explain what they are making
* Children can explain what tools they are using

**Evaluate*** Children can describe how something works
* Children can talk about their own and the work that other people have done
 | **Design*** Children can think of ideas and plan what to do next
* Children can choose the best tools and materials. Can they say why they are the best?
* Children can describe their design by using pictures, diagrams, models, and words.

**Make*** Children can join things (materials/components) together in different ways

**Evaluate*** Children can discuss what went well with their work
* Children can identify if they did it again what they would improve
 | **Design*** Children can show their design meets a range of requirements
* Children can put together a step-by-step plan which shows the order and also what equipment and tools they need
* Children can describe their design using an accurately labelled sketch and words

**Make*** Children can use equipment and tools accurately

**Evaluate*** Children can change things which make their design even better
 | **Design*** Children can come up with at least one idea about how to create their product?
* Children can take account of the ideas of others when designing?
* Children can produce a plan and explain it to others

**Make*** Children can tell is their finished product is going to be good quality
* Children can show a good level of expertise when using a range of tools and equipment
* Children are conscious of the need for their product to be liked by others

**Evaluate*** Children can suggest some improvements and say what was good or not so good about their original design?
* Children have thought about how they will check if the product will be successful
 | **Design*** Children can come up with a range of ideas after they have collected information
* Children can take a user’s view into account when designing
* Children can produce a detailed step-by-step plan

**Make*** Children can explain why their finished product is going to be of good quality
* Children can explain how their product will appeal to the audience
* Can they use a range of techniques?

**Evaluate*** Do they keep checking that their design is the best it can be?
* Children check whether anything can be improved
* Children can evaluate appearance and function against the criteria
 | **Design*** Children can use a range of information to inform their design
* Children can use market research to inform plans
* Children can work within constraints
* Children can follow and refine their plan if necessary
* Children can justify their plan to someone else
* Children can consider culture and society in their designs

**Make*** Children can they use tools and materials precisely?

• Children can change the way they are working if needed?**Evaluate*** Children can test and evaluate their final product?
* Would different resources have improved their product?
* Would they need more or different information to make it even better?
 |
| Vocabulary | Design, materials, create, mould, manipulate, shape, fix, join,  | Design, materials, create, fix, join, components, movable,  | Design, produce, ingredients, cook, cut, chop, healthy, lifestyle, diet  | Design, materials, create, current, circuit, buzzer, alarm, switch, electrical | Design, produce, ingredients, cook, cut, chop, healthy, lifestyle, diet, appeal, seasonality, yeast,  | Design, materials, create, fix, join, components, movable, structure, finish, create,  |

Spring Term 2

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **YEAR 1** | **YEAR 2** | **YEAR 3** | **YEAR 4** | **YEAR 5** | **YEAR 6** |
| **Enquiry** | Can we design a hat for the teddy to wear whatever the weather?***End Product:*** *Hat***Textiles** | What shall we have in our sandwiches today?***End Product:*** *Sandwiches***Cooking and Nutrition** | How can we help an egg survive a journey home from the shop?***End Product:*** *Egg box/carrier***Materials** | How will our tiles stay on the roof?***End Product:*** *Tiles***Mouldable Materials** | How will that boat fit under the bridge?***End Product:*** *Bridge***Mechanisms** | How can we shelter from the storm?***End Product:*** *Shelter***Materials** |
| **NC link** | Geography LinkOpportunities to explore different weather conditionsArt LinkOpportunities for children to build on and develop their drawing skillsLiteracy LinkOpportunities for children to write labels and develop vocabularyMaths LinkOpportunities for children to measure  | Literacy/Oracy LinkOpportunities for children to describe and contrast the look, flavour and texture of the different types of bread.Geography LinkOpportunities for the children to use maps to locate places and follow transport routesLiteracy LinkOpportunities for children to write recipes and reports | Science link:Opportunities for children to develop fair testingLiteracy LinkOpportunities for children to explain and justify their ideas and develop comparative vocabularyArt LinkOpportunities for children to research designs and explore with colours and font | History linkOpportunities for children to link learning to the RomansGeography LinkOpportunities for children about architecture, roof materialMaths LinkOpportunities for children to measure accurately and calculate the quantity of tiles for a given area | Geography LinkOpportunities for children to locate examples of bridges in this country and other countriesScience LinkOpportunities for children to discuss forces that are acting on parts of the bridge and the mechanism | Geography Link: Opportunities for the children to learn about natural disasters around the world, linked to location and climateMathematics Links: Opportunities for the children to calculate, including using money, measurements, and area. |
| **Knowledge** | Knows a range of materials including textiles according to their characteristics | Use basic principles of a healthy and varied diet to prepare dishes. Understand where food comes from. | Know a range of materials according to their functional properties and aesthetic qualities | Knows and identifies a range of materials according to their functional properties and aesthetic qualities | Knows and identifies a wider range of materials and components including textiles | Knows, identifies a wider range of materials and components, including construction materials and textiles, according to their functional properties and aesthetic qualities |
| **Skills** | **Design*** Children can think of some ideas of their own
* Children can explain what they want to do
* Children can use pictures and words to plan

**Make*** Children can explain what they are making
* Children can explain what tools they are using

**Evaluate*** Children can describe how something works
* Children can talk about their own and the work that other people have done
 | **Design*** Children can think of ideas and plan what to do next
* Children can choose the best tools and materials. Can they say why they are the best?
* Children can describe their design by using pictures, diagrams, models, and words.

**Make*** Children can describe the properties of the ingredients they are using
* Children are hygienic in the kitchen

**Evaluate*** Children can discuss what went well with their work
* Child can identify if they did it again what they would improve
 | **Design*** Children can show that their design meets a range of requirements
* Children can put together a step-by-step plan which shows the order, the equipment, and tools they need
* Children can describe their design using accurately labelled sketch and words?
* How realistic is their plan?

**Make*** Children can use tools and equipment accurately

**Evaluate*** Children made changes to make their design even better
 | **Design*** Children can come up with at least one idea about how to create their product?
* Children can take account of the ideas of others when designing?
* Children can produce a plan and explain it to others

**Make*** Children can tell is their finished product is going to be good quality
* Children can show a good level of expertise when using a range of tools and equipment
* Children are conscious of the need for their product to be liked by others

**Evaluate*** Children can suggest some improvements and say what was good or not so good about their original design?
* Children have thought about how they will check if the product will be successful
 | **Design*** Children can come up with a range of ideas after they have collected information
* Children can take a user’s view into account when designing
* Children can produce a detailed step-by-step plan

**Make*** Children can explain why their finished product is going to be of good quality
* Children can explain how their product will appeal to the audience
* Can they use a range of joining techniques?

**Evaluate*** Do they keep checking that their design is the best it can be?
* Children check whether anything can be improved
* Children can evaluate appearance and function against the original criteria
 | **Design**• Children can use a range of information to inform their design • Children can use market research to inform plans• Children can work within constraints• Children can follow and refine their plan if necessary • Children can justify their plan to someone else• Children can consider culture and society in their designs**Make*** Children can they use tools and materials precisely?

• Children can change the way they are working if needed?**Evaluate*** Children can test and evaluate their final product?
* Would different resources have improved their product?
* Would they need more or different information to make it even better?
 |
| **Vocabulary** | Design, materials, waterproof, weather, heat, join,  | Design, produce, ingredients, cook, cut, chop, healthy, lifestyle, diet | Design, materials, strength, endurance, weight, join, fix, resistance | Design, materials, create, mould, manipulate, shape, fix, join,  | Design, materials, create, fix, join, components, movable, structure,  | Design, materials, strength, endurance, weight, join, fix, resistance |

Summer Term 1

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **YEAR 1** | **YEAR 2** | **YEAR 3** | **YEAR 4** | **YEAR 5** | **YEAR 6** |
| **Enquiry** | What could be in our fruit salad?***End Product:*** *Fruit Salad***Cooking and Nutrition** | How will we make our bottles float?***End Product:*** *Boats***Materials** | How will we bridge that gap?***End Product:*** *Bridge***Construction** | How will we take our pizza home?***End Product:*** *Pizza Box***Materials** | What would that map look like in 3D?***End Product:*** *Map***Mouldable Materials** | Where can we grow our own strawberry plants?***End Product:*** *Plant pot***Mouldable Materials** |
| **NC link** | Geography LinkOpportunities for the children to find and name places on maps and compare geographical features including climate. Literacy LinkChildren can compare prices and calculate with money.Maths LinkChildren can compare prices and calculate with money. | Literacy Link: Opportunities for the children to research from books and online and write reports or feedback their findings orally. Art Link: Opportunities for the children to develop their drawing skills, including using relevant software to produce their designs.Science Link: Opportunities for the children to discuss properties of materials and testing | Geography Link: Opportunities for the children to research the location of famous bridges in this country and around the world and also learn about transport routes. History Links: The children can learn about bridge builders and engineers. Mathematics Link: Opportunities for the children to use units of measurement for length, weight, and time.  | Mathematics Link: Opportunities for the children to measure accurately and explore the properties of shapes and angles. Art Link: Opportunities for the children to research logos and graphic designLiteracy Link: Opportunities for the children to report verbally or in written form. | Geography or History Links: This whole Learning Challenge could link with the study of a specific location or an area of settlement from a historic period. Mathematical Link: Opportunities for pupils to measure and calculate relative differences in distance and the height of featuresComputing Link:Opportunities for pupils to use Google Earth to compare their model with the actual location. | Literacy Link;Opportunities for children to research and report their findingsScience Link:Opportunities for children to revisit conditions for plant growth and the life cycle of plants |
| **Knowledge** | Use the basic principles of a healthy and varied diet to prepare dishes. Understand where food comes from | Know a wide range of materials and components according to their characteristics. | Apply their understanding of how to strengthen, stiffen and reinforce more complex structures | Know and identify a wider range of materials according to their functional properties and aesthetic qualities | Know and identify a wider range of materials according to their functional properties and aesthetic qualities. | Know, identify and describe a range of materials according to their functional properties and aesthetic qualities |
| **Skills** | **Design*** Children can think of some ideas of their own
* Children can explain what they want to do
* Children can use pictures and words to plan

**Make*** Children can explain what they are making
* Children can explain what tools they are using

**Evaluate*** Children can talk about their own and the work that other people have done
 | **Design*** Children can think of ideas and plan what to do next
* Children can choose the best tools and materials. Can they say why they are the best?
* Children can describe their design by using pictures, diagrams, models, and words.

**Make** * Children can they join things (materials/ components) together in different ways?

**Evaluate*** Children can discuss what went well with their work
* Child can identify if they did it again what they would improve
 | **Design*** Children can show that their design meets a range of requirements
* Children can put together a step-by-step plan which shows the order and also what equipment and tools they need
* Children can describe their design using an accurately labelled sketch and words?
* How realistic is their plan?

**Make*** Children can use equipment and tools accurately?

**Evaluate*** Children are able to change their design to make it better
 | **Design*** Children can come up with at least one idea about how to create their product
* Children take account of the ideas of others when designing
* Children can produce a plan and explain it to others?
* Children can suggest some improvements and say what was good and not so good about their original design?

**Make*** Children can tell if their finished product is going to be good quality?
* Are children conscious of the need to produce something that will be liked by others?
* Children can show a good level of expertise when using a range of tools and equipment?

**Evaluate*** Have they thought of how they will check if their design is successful?
* Can they evaluate their product, thinking of both appearance and the way it works?
 | **Design*** Children can come up with a range of ideas after they have collected information
* Children can take a user’s view into account when designing
* Children can produce a detailed step-by-step plan

**Make*** Children can explain why their finished product is going to be of good quality
* Children can explain how their product will appeal to the audience
* Can they use a range of joining techniques?

**Evaluate*** Do they keep checking that their design is the best it can be?
* Children check whether anything can be improved
* Children can evaluate appearance and function against the original criteria
 | **Design*** Children can use a range of information to inform their design
* Children can use market research to informs plans
* Children can work within the constraints
* Children can follow and refine their plan if necessary

**Make*** Children can use tools and materials precisely
* Children change the way they work if needed

**Evaluate*** Children consider the use of the product when selecting materials
* Does children’s product meet all the design criteria?
* Children can justify why they selected specific materials
* How well do they test their final product?
* Is it fit for purpose?
 |
| **Vocabulary** | Design, produce, ingredients, cook, cut, chop, healthy, lifestyle, diet,  | Design, materials, float, sink, waterproof, buoyancy, join, fix, create. | Design, materials, create, fix, join, components, movable, structure, | Design, materials, create, fix, join, components, movable, structure, resistant | Design, materials, structure, finish, product, joining, fixing, creating,  | Design, materials, mould, shape, create, style, transporting, seedlings, plants, finish, purpose |

Summer term 2

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|  | **YEAR 1** | **YEAR 2** | **YEAR 3** | **YEAR 4** | **YEAR 5** | **YEAR 6** |
| **Enquiry** | Can we make a picture move?***End Product: Moving Picture*****Mechanisms** | Will you shake, pluck or hit your musical instrument?***End Product: Musical Instrument*****Construction** | How interactive can we make our book?***End Product: Book*****Mechanisms** | What is your favourite kind of pizza?***End Product: Pizza*****Cooking and Nutrition** | How far will our model plane fly?***End Product: Plane*****Materials** | Can we design and make a soft toy for a younger relative?***End Product: Soft toy*****Textiles** |
| **NC link** | Mathematics Link: Opportunities for the children to measure and draw accurately.Art Link: Opportunities for the children to draw and use other relevant art techniques and skills, including using relevant software to produce their designs.Literacy Link: Opportunities for the children to develop their oracy skills and vocabulary. | Music Links: Opportunities for the children to link this Learning Challenge with any instrumental and compositional work.Oracy Link: Opportunities for the children to develop their descriptive vocabulary and compare features of instruments.Art Link: Opportunities for the children to develop their drawing skills, including using relevant software to produce their designs.Mathematics Link: Opportunities for the children to measure dimensions of their designs and product. | Literacy Link The children can write their own stories for younger children that can then be made into their interactive books.Science Link Opportunities for the children to use circuits and batteries. | Literacy Links: Opportunities for the children to research and report their findings.Math Links:Opportunities to measure and weigh ingredients to make the pizza | History Link:Opportunities for the children to learn about the history of flight and significant individuals during this Learning Challenge.Literacy Link: Opportunities for the children to research and record their findings.Mathematics Link: Opportunities for the children to measure accurately and use the language of shape and angles. | Literacy Links: Opportunities for the children to research and report their findingsLiteracy Link: Opportunities for the children to write reports.Mathematics Links:The children can measure accurately, calculate the cost of fabric and work to scale.Computing linkOpportunities for children to develop their use of CAD |
| **Knowledge** | Know a wide range of materials and components according to their characteristics. | Know and identify wide range of materials and components, including construction materials and textiles, according to their characteristics  | Know and identify a wider range of materials and components. | Understand and apply the principles of a healthy and varied diet. Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques. Understand seasonality, and know where and how a variety | Know and identify a wider range of materials and components, including construction materials according to their functional properties | Know, identify and select from and use a wider range of materials and components, including textiles |
| **Skills** | **Design*** Children can think of some ideas of their own
* Children can explain what they want to do
* Children can use pictures and words to plan

**Make*** Children can explain what they are making
* Children can explain which tools they are using

**Evaluate*** Children can describe how something works
* Children can talk about their own work and things that other people have done
 | **Design*** Children can think of ideas and plan what to do next
* Children can choose the best tools and materials Can they give a reason why these are best?
* Children can describe their design by using pictures, diagrams, models and words

**Make*** Children can join things (materials/ components) together in different ways?

**Evaluate*** What went well with their work?
* If they did it again, what would they want to improve?
 | **Design*** Children can show that their design meets a range of requirements
* Children can put together a step-by-step plan which shows the order and also what equipment and tools they need
* Children can describe their design using an accurately labelled sketch and words
* How realistic is their plan?

**Make*** Children can use equipment and tools accurately

**Evaluate*** What did they change which made their design even better?
 | **Design*** Children take account of the ideas of others when designing
* Children can produce a plan and explain it to others
* Children can suggest some improvements and say what was good and not so good about their original design

**Make*** Children can tell if their finished product is going to be good quality
* Children are conscious of the need to produce something that will be liked by others?
* Children show a good level of expertise when using a range of tools and equipment?

**Evaluate*** Have they thought of how they will check if their design is successful?
 | **Design*** Children can come up with a range of ideas after they have collected information
* Do they take a user’s view into account when designing?
* Children can produce a detailed step-by-step plan

**Make*** Children can explain why their finished product is going to be of good quality
* Children can explain how their product will appeal to the audience
* Children can use a range of tools and equipment expertly

**Evaluate*** Do they keep checking that their design is the best it can be?
* Can they evaluate appearance and function against the original criteria?
 | **Design*** Children can use a range of information to inform their design
* Children can use market research to inform plans
* Children can follow and refine their plan if necessary
* Do they consider culture and society in their designs?

**Make*** Children can use tools and materials precisely
* Do they change the way they are working if needed?

**Evaluate*** How well do they test and evaluate their final product?
* What would improve it?
* Would they need more or different information to make it even better?
 |
| **Vocabulary** | Design, materials, flexible, stability, strength, joining, fixing, movement,  | Create, materials, design, instrument, pluck, strum, join, fix, musical,  | Create, design, fix, join, combine, structure, stable, flexible | Design create produce seasonality, ingredients, combine, mix, stir,  | Design, create, evaluate, model, join, fix, combine, material, aerodynamic, flight,  | Create, design, evaluate, texture, textile, joining, stitch, sowing, product, refine |