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| Design & Technology | **Pedagogical Knowledge****How do children learn in design and technology?** Children learn best when challenged in a series of well-designed tasks linked to meaningful contexts.Children learn best when given the opportunity to talk and discuss how to design, plan, shape and handle materials, evaluate their work and that of others.Whilst most work in D.T is practical, there is an abstract element to the subject, in that children speculate about ways they might develop artefacts and systems.Children should have hands-on experience of designing and making and visualising possibilities and reflecting with others.Much of the teachers is to frame meaningful contexts and challenges that require learners to think, do and engage with the manmade world.Teacher instruction, modelling and explanation all have a place, but particular use should be made of artefacts, visual resources and materials.Task design process is important. Children need to be clear about the task’s objectives.**Design process steps in D.T**1. Identify a need
2. Design
3. Plan
4. Make
5. Evaluate
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| Y1&2Cycle B | **Autumn****Movers & Shakers** | **Spring****Coastline** | **Summer****Magnificent Monarchs** |
| Unit | Remarkable Recipes | Beach Hut | Cut, Stitch and Join | Push and Pull |
| Local Heritage | Hartburn Co-op |  |  |  |
| Y1 | Create a design to meet simple design criteria.Describe why a product is important.Select healthy ingredients for a fruit or vegetable salad. | Select and use a range of materials, beginning to explain their choices. | Create a design to meet simple design criteria.Select and use a range of materials, beginning to explain their choices. | Name and explore a range of everyday products and describe how they are used.Select and use a range of materials, beginning to explain their choices. |
| Y1Cumulative skill | Talk about their own and each other's work, identifying strengths or weaknesses and offering support. |
| Y2 | Generate and communicate their ideas through a range of different methods.Explain why a designer or inventor is important.Describe the types of food needed for a healthy and varied diet and apply the principles to make a simple, healthy meal. | Choose appropriate components and materials and suggest ways of manipulating them to achieve the desired effect. | Generate and communicate their ideas through a range of different methods.Choose appropriate components and materials and suggest ways of manipulating them to achieve the desired effect. | Explain how an everyday product could be improved.Choose appropriate components and materials and suggest ways of manipulating them to achieve the desired effect. |
| Y2Cumulative skill | Explain how closely their finished products meet their design criteria and say what they could do better in the future. |
| Y3&4Cycle B | **Autumn****Invasion** | **Spring****Misty Mountain, Winding River** | **Summer****Ancient Civilisation** |
| Unit | Fresh Food, Good Food | Functional and Fancy Fabrics | Tomb Builders |
| Local Heritage |  |  |  |
| Y3 | Plan which materials will be needed for a task and explain why.Identify the main food groups (carbohydrates, protein, dairy, fruits and vegetables, fats and sugars).Use appliances safely with adult supervision. | Develop design criteria to inform a design.Use tools safely for cutting and joining materials and components. | Explore and use a range of mechanisms (levers, sliders, axles, wheels and cams) in models or products. |
| Y3Cumulative skill | Suggest improvements to their products and describe how to implement them, beginning to take the views of others into account. |
| Y4 | Choose from a range of materials, showing an understanding of their different characteristics.Design a healthy snack or packed lunch and explain why it is healthy.Work safely with everyday chemical products under supervision, such as disinfectant hand wash and surface cleaning spray. | Use annotated sketches and exploded diagrams to test and communicate their ideas.Select, name and use tools with adult supervision. | Explore and use a range of mechanisms (levers, axles, cams, gears and pulleys) in models or products. |
| Y4Cumulative skill | Identify what has worked well and what aspects of their products could be improved, acting on their own suggestions and those of others when making improvements. |
| Y5&6Cycle B | **Autumn****Maafa** | **Spring****Frozen Kingdoms** | **Summer****Britain at War** |
| Unit | Food for Life | Engineer | Make Do and Mend |
| Local Heritage |  |  |  |
| Y5 | Evaluate meals and consider if they contribute towards a balanced diet.Use an increasing range of preparation and cooking techniques to cook a sweet or savoury dish. | Use pattern pieces and computer-aided design packages to design a product.Select and combine materials with precision. | Combine stitches and fabrics with imagination to create a mixed media collage.Use applique to add decoration to a product or artwork. |
| Y5Cumulative skill | Test and evaluate products against a detailed design specification and make adaptations as they develop the product. |
| Y6 | Plan a healthy daily diet, justifying why each meal contributes towards a balanced diet.Follow a recipe that requires a variety of techniques and source the necessary ingredients independently. | Develop design criteria for a functional and appealing product that is fit for purpose, communicating ideas clearly in a range of ways.Choose the best materials for a task, showing an understanding of their working characteristics. | Pin and tack fabrics in preparation for sewing and more complex pattern work.Use different methods of fastening for function and decoration, including press studs, Velcro and buttons. |
| Y6Cumulative skill | Demonstrate modifications made to a product as a result of ongoing evaluation by themselves and to others. |