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| Design and Technology Knowledge Map |
| **KS1 Cycle A** |
| Autumn Term – A castle with a moving drawbridge |
| **Design: Developing, planning and communicating ideas**   * I can design a castle based on my work in history and English * I can say how my drawbridge will work. * I can use my knowledge from making other products to help me create my own ideas. * I can use simple design criteria to help develop my ideas as I am making my drawbridge. * I can develop my design ideas through discussion, observation, drawing and modelling. * I can model my ideas by exploring materials and components and by making templates and mock-ups.   **Make**   * I can use a range of tools safely and with some accuracy. (scissors/hole punch) * I can measure, mark out, cut and shape a range of materials * I can assemble, join and combine materials using glue and masking tape   **Evaluate**   * I can talk about my design ideas and what I am making with other children and adults * I can evaluate my product against my design criteria. * I can see suggest how my castle and drawbridge could be improved   **Technical Knowledge**   * I can explore the use of levers, sliders and winding mechanisms to lift the drawbridge * I know how freestanding structures can be made stronger, stiffer and more stable |
| **Vocabulary:** product, model, design, measure, tools, materials, assemble, evaluate, strengths, improve |
| Spring Term – Boats |
| **Design: Developing planning and communicating ideas**   * I can design a boat based on the story ‘Lost and Found’ * I can use design criteria to develop my ideas * I can describe what my boat is used for * I can model ideas by exploring different materials and components and by making templates and mock-ups * I can develop my design ideas through discussion, observation, drawing and modelling   **Make**   * I know how to use a range of tools safely and with some accuracy (scissors/hole punch) * I can measure, mark out, cut and shape a range of materials * I can assemble, join and combine materials in order to make my boat * I can choose finishing techniques based on my own ideas   **Evaluate**   * I can evaluate my boat against my design criteria * I can make changes to my product to improve it * I can talk about my evaluation with other children and adults   **Technical Knowledge**   * I can explore the use of mechanisms to power my boat such as winding mechanisms or wind power |
| **Vocabulary:** boat, mast, sail, engine, wind power, winding mechanism, float, load, design, measure, tools, materials, assemble, evaluate, strengths, improve |
| Summer Term – Fruit salad |
| **Cooking and Nutrition**   * I know that I should eat at least 5 portions of fruit and vegetables every day. * I can cut, peel and chop fruit safely * I can prepare simple dishes safely and hygienically without using a heat source.   **Design**   * I can design a fruit salad for a target group * I can say how my fruit salad will be suitable for the target group * I can generate ideas based on my own experience * I can use my knowledge of existing products to help come up with ideas * I can develop and communicate my ideas through talking and drawing   **Make**   * I can use tools and equipment safely to prepare fruit * I can follow procedures for safety   **Evaluate**   * I can talk about my design ideas and what I am making * I can make simple judgements about my fruit salad against design criteria * I can suggest how my fruit salad could be improved |
| **Vocabulary:** fruit, vegetables, portions, cut, peel, chop, knife, peeler, chopping board, hygiene |
| **Cycle B** |
| Autumn Term – Cooking: Apple related |
| **Cooking and Nutrition**   * I know that all food comes from plants or animals * I know that food has to be farmed, grown elsewhere (e.g. at home) or caught * I can name and sort food into the groups on the Eatwell plate * I know that everyone should eat at least 5 portions of fruit or vegetables every day * I can prepare simple dishes safely and hygienically, without using a heat source * I can cut, peel, chop and grate foods   **Design**   * I can generate ideas based on my own experiences * I can develop and communicate my ideas by talking and drawing   **Make**   * I can use equipment safely * I can follow procedures for safety   **Evaluate**   * I can suggest how my product could be improved. |
| **Vocabulary:** food, farming, food groups,Eatwell plate, portions, prepare, cut, peel, chop, grate, hygiene |
| Spring Term – Wheels and axles: Making a vehicle |
| **Design: Developing, planning and communicating ideas**   * I can design a fire engine inspired by our work in history and by visitors from the fire service * I can describe how my fire engine will move * I can use knowledge of toy cars to help generate my ideas * I can explore wheels and axles using construction kits and different components * I can explore different ways to attach my axle and wheels to my vehicle * I can develop and communicate my ideas through talking and drawing   **Make**   * I can plan using a sequence of pictures in order to show what I will do * I can use a range of tools safely to cut different materials and with some accuracy * I can follow procedures for safety (e.g. use of saw to cut, glue gun) * I can measure, mark out, cut and shape materials and components * I can use finishing techniques to add detail to my fire engine, e.g. lights, hose   **Evaluate**   * I can talk about my ideas and suggest improvements as I work   **Technical Knowledge**   * I can explore wheels and axles to make my vehicle move |
| **Vocabulary:** vehicle, wheels, axle, chassis, fire-engine, lights, hose, features, dowel, hacksaw, cut, stick, glue gun |
| Summer Term – Hand puppets |
| **Design: Developing, planning and communicating ideas**   * I can base my puppet on imaginary and story based contexts * I can say who my target audience is and whether it is for myself or others * I can generate ideas drawing on my own experience * I can use existing puppets to help come up with ideas * I can develop and communicate my ideas though talking and drawing   **Make**   * I can use a range of tools safely to cut, shape and join fabrics and materials * I can measure, mark out, cut and shape materials * I can use finishing techniques to add detail to my puppet, e.g. eyes, hair   **Evaluate**   * I can suggest how my puppet can be improved   **Technical Knowledge**   * I can explore different ways of joining fabrics, e.g. use fabric glue, sewing |
| **Vocabulary:** puppet, hand, pop-up, string, fabric, glue, stitch, needle, thread, sew |