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| DT ESSENTIAL SKILLS REC to Y6STRAND: MAKING, USING AND UNDERSTANDING  |
|  | EYFS Skills | Key Stage 1 Skills | Lower Key Stage 2 Skills | Upper Key Stage 2 Skills |
|  | End of RECExpectations | End of Year 1Expectations | End of Year 2 Expectations | End of Year 3 Expectations | End of Year 4 Expectations | End of Year 5 Expectations | End of Year 6 Expectations |
| ASPECT | Average age 5 years 6 months | Average age 6yrs 6months | Average age 7years 6 months | Average age8years 6 months | Average age 9 years 6 months | Average age 10 years 6 months | Average age 11 years 6 months |
| Tools |  | Select and explain why they have chosen a particular tool for a task. | Use tools safety for cutting and joining materials and components. | Select the appropriate tools and explain choices. | Analyse the potential of a range of tools and use them with accuracy. | Name and select appropriate tools for a task and use them with precision. | Use more complex tools with increasing accuracy. |
| Materials |  | Select and explain their choice of materials, sometimes with help. | Choose appropriate materials and suggest ways of manipulating them to achieve a desired effect. | Plan which materials will be needed for a task and explain why. | Choose from a range of materials. Showing an understanding of their different characteristics. | Select and combine materials with precision. | Choose the best materials for a task. Showing an understanding of their working characteristics. |
| Health and safety |  | Explain how to keep safe during a practical task. | Work safely and hygienically in construction and cooking activities. | Follow health and safety rules for cooking and baking activities.  | Follow health and safety rules when working with materials and substances. | Select and name appropriate tools for specific jobs and demonstrate how to use them safely. | Demonstrate how their products take into account the safety of the user. |
| Repair and maintenance |  | Explain how they would fix simple products. | Cut, measure, form and shape materials to fix or repair something, explaining objectives. | Try an alternative way of fixing something, if their first attempt isn’t successful. | Describe how a product could be made better, stronger or more sustainable. | Recycle, repair and mend old clothes/tools and explain why this is a good idea. | Paint, glue, nail and send to rejuvenate a damaged, faulty or old object. |
| Textiles  |  | Cut out shapes from a range of fabrics and papers. | Join fabrics using running stitch, glue, staples, over sewing and tape. | Create a simple pattern for a design. Cut slots in card and create nets. | Use a simple pattern to create a life-sized item of clothing. | Create a 3-D product using a range of materials and sewing techniques. | Combine fabrics to create more useful properties and make a product of high quality, checking for snags and glitches. |
| Card making |  | Fold, tear, roll and cut paper and card. | Create simple hinges and pop-ups using card | Measure and mark wood/dowel. | List more complex pup-ups | Combine materials with temporary or fixed joints. | Combine materials with moving joints. |
| Cutting  |  | Cut accurately and safely with scissors. | Cut wood/dowel using a bench hook and hacksaw. | Join fabrics using a running stitch. | Cut internal shapes. | Cut safely and accurately to a marked line. | Use a craft knife, cutting mat and safety ruler with one to one supervision if needed. |
| Joining  |  | Join appropriately, using glue or tape. | Attach features to a vehicle (e.g. an axle and wheels or a sail and rudder). Join appropriately, with glue and /or tape, for different materials and situations. | Create a shell or frame structure using diagonal struts to strengthen. | Use a glue gun with close supervision (one to one). | Use a glue gun with close supervision. | Join materials, using the most appropriate method for the material or purpose. |
| Structures  |  | Build simple structures. | Improve structures by making them stronger, stiffer and more stable. | Create a shell or frame structure using diagonal struts to strengthen. | Prototype and build frame and shell structures, showing awareness of how to strengthen, stiffen and reinforce. | Build a framework using a range of materials (e.g. wood, card and corrugated plastic) to support mechanisms. | Select the most appropriate materials and frameworks for different structures, explaining what makes them strong. |
| Mechanisms  |  | Use wheels, axles, levers and sliders. | Create and use wheels and axles, levers and sliders. | Create and use simple gears, pulleys, cams, levers and linkages. | Use pulleys, levers and linkages in their products. | Use cams or gears in their products. | Select the most appropriate mechanical system for a particular purpose. |
| Electricity  |  | Identify and talk about products that use electricity to make them work. | Create working circuits to light a bulb or work a buzzer. | Build models, incorporating circuits, with buzzers and bulbs. | Build models incorporating motors. | Build models, incorporating switches to turn on and off. | Design products incorporating the most appropriate electrical systems. |
| ICT |  | Input random control instructions to simple devices for an unplanned outcome(e.g. making Roamer move). | Input a sequence of instructions to a device for a planned outcome. | Evaluate their own programme, refine and improve it. | Create a solution to a problem using a control output device that has a sequence of events that activate it. | Monitor and control more than one output, in response to charges. | Develop, try out a reefing sequences of instructions to effectively monitor, measure and control events. |
| Preparing and cooking food |  | Measure and weigh food items using non-standard measure (e.g. spoons and cups). | Cut, peel, grate and chop a range of ingredients to make dishes fro other countries. | Combine a variety of ingredients using a range of cooking techniques. | Measure and weigh ingredients appropriately to prepare and cook a range of savour dishes. | Combine food ingredients appropriately (e.g. kneading, rubbing in and mixing). | Use appropriate tools and equipment, weighing and measuring with scales. |
| Nutrition |  | Identify the main food groups, including fruit and vegetables. | Recognise the need for a variety of foods in a diet. | Describe what a balanced diet is. | Make healthy eating choices and explain why. | Evaluate meals and consider if they contribute towards a balanced diet. | Plan how they can have a healthy/affordable diet. |
| Origins of food |  | Identify the source for common foods. | Explain where the food they eat comes from (e.g. by referring to countries, counties, animals and plants). | Identify food which comes from the UK and other countries in the world. | Explain some of the processes that foods go through to preserve/make them more appealing. | Explain what times of year particular foods are in season. | Explain how ingredients were grown, reared, caught and processed. |