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**Knowledge Rich Curriculum Plan**

Year 7 Sweet Dispenser



| **Lesson/Learning Sequence** | **Intended Knowledge:**  *Students will know that… Students will know how to…* | **Tiered Vocabulary** | **Prior Knowledge:**  *In order to know this students, need to already know that…* | **Assessment** |
| --- | --- | --- | --- | --- |
| **Understanding Motion** | * *There are different types of motion to consider when design a product: Oscillating, rotary, linear and reciprocating* * *Motion can cause an ‘effect’ on the output of a product* * *Motion ca be used to create a mechanism (*a system of parts working together in a product) *on a product* * *Identify the different types of motion in existing products* | Mechanism: a system of parts working together in a product  Oscillating: Move or swing back and forth  Reciprocating: moving backwards and forwards in a straight line  Linear: Moving one direction in a straight line  Rotary: Moving in a continuous circle | Know that moving parts on a product normally perform a function  Know that motion means for something or someone to move | Recall/activate starter  Application plenary |
| **Practical 1: Cutting the Dispenser mechanism parts** | * Measure and mark out a cutting list using the appropriate tools (steel rule, try square and pencil) * Cut out the dispenser parts using traditional woodwork tools (tenon saw, bench hook) * Sand and file the edges of the material to ‘ease’ (soften) newly cut material | Accurate: free from error especially as the result of care | The basic safety and marking processes for a woodwork activity | Recall/activate starter  Cold call questioning |
| **Practical 2: Drilling holes with Pillar Drill** | * The correct use of a Pillar Drill * How to use a Pillar Drill safety * How to correctly wear and use Goggles | Pillar Drill: free standing machine tools used by engineers that use high powered motors to rotate drill bits at varying speed.  PPE: Personal protective equipment | Basic knowledge of health and safety  Basics of the use and importance of PPE | Recall/activate starter  SSS assessment |
| **Environmental issues** | * How environmental impacts affect designers * How designers combat the environmental impact when designing products * Understand the 6 Rs of sustainability and how they would be used * The 6 Rs of sustainability are: Reduce, Reuse, Rethink, Refuse, Recycle, Repair | Environment: the surroundings or conditions in which a person, animal, or plant lives or operates.  Reduce: use less  Reuse: use again  Rethink: change the idea  Refuse: say no to materials  Recycle: recreate to something else  Repair: fix something that is broken | Basic knowledge of environmental issues  Basics of how environmental issues affect us | Recall/activate starter  Cold call questioning |
| **Practical 3: Attachment** | * Know how adhesives are used in Design and Technology * Understand different types of adhesives in Design and Technology | Accuracy: free from error especially as the result of care  Adhesive: able to stick fast to a surface or object; sticky.  PVA | Understanding of the term glue and how it is used | Recall/activate starter  Application plenary |
| **Practical 4: Sanding** | * Know how to use the disk sander safety * Know what a quality finish looks like on a product * Know the term “finish” applies to the end of a product |  | Understand how a product should look once “finished” | Recall/activate starter  Cold call questioning |
| **Design Development: Final Idea** | * To decide the best aspects of their initial ideas to produce a final solution * Know how aesthetics can impact on the final sale point/target market of a design * How to annotate an idea to help communicate developments to a client (clear/detailed instruction or information about materials, dimensions, important parts) |  | Know what is meant by the term aesthetic  Have used annotation on diagrams in other subject areas | Recall/activate starter  Application plenary |
| **Practical 5: Moveable motion** | * Students will mark out the length of timber for the middle section * Students will know how to mark out correctly for the pillar drill * Students will assemble the final section of their sweet dispenser | Accuracy: free from error especially as the result of care | Know how to use the Pillar Drill successfully | Recall/activate starter  Cold call questioning |
| **Practical 6: Glass Jar design** | * How to apply their hand drawn design to their glass jar * How to use paint pens to design and develop their ideas |  | Have a basic understanding of colour  Have a basic understanding of designing | Recall/activate starter  Cold call questioning |
| **Assessment** | * Students will complete an assessment based on the highlighted intended knowledge within the map | N/A | All highlighted knowledge from the above map. | Final formative assessment |