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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 productOscillating: Move or swing back and forthReciprocating: moving backwards and forwards in a straight lineLinear: Moving one direction in a straight lineRotary: Moving in a continuous circle | Know that moving parts on a product normally perform a functionKnow that motion means for something or someone to move | Recall/activate starterApplication 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 starterCold 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 safetyBasics of the use and importance of PPE | Recall/activate starterSSS 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 lessReuse: use againRethink: change the ideaRefuse: say no to materialsRecycle: recreate to something elseRepair: fix something that is broken | Basic knowledge of environmental issuesBasics of how environmental issues affect us | Recall/activate starterCold 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 careAdhesive: able to stick fast to a surface or object; sticky.PVA | Understanding of the term glue and how it is used | Recall/activate starterApplication 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 starterCold 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 aestheticHave used annotation on diagrams in other subject areas | Recall/activate starterApplication 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 starterCold 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 colourHave a basic understanding of designing | Recall/activate starterCold 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 |