| Advanced Design Applications  Learning Cycle 1 Manufacturing Unit 4  **File 1.6 Consumers Smart Phone Accessory Design Brief Prototype Rubric** | | | |
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| **Category** | **Below Target** | **At Target** | **Above Target** |
| **Develop a Written Design Proposal** | Design proposal is inadequate and lacking pertinent information. | Design proposal contains a problem statement. It includes how the solution will be developed and/or how the solution will be evaluated and/or what tests will be conducted to determine success. Includes accurately drawn annotated sketches, notes, and technical drawings. Recorded in the Engineering Folio or EDJ. | Design proposal is written technically and precisely and contains a clear and accurate problem statement. How the solution will be developed as well as how the solution will be evaluated and what tests will be conducted to determine success are included. Includes detailed and accurately drawn annotated sketches, notes, and technical drawings. Recorded in the Engineering Folio or EDJ. |
| **Make Model/ Prototype** | Student builds a working model that *does not align/minimally aligns* with the criteria, constraints, and intent of the problem. The model cannot be tested OR does not work. | Student builds a working model that *adequately* aligns with the criteria, constraints, and intent of the problem. The working model can be tested using appropriate tools, materials, and resources. | Student builds a working model that *excellently* aligns with the criteria, constraints, and intent of the problem.  The working model can be tested using appropriate tools, materials, and resources. |
| **Test and Evaluate** | Student tests the working model’s effectiveness to solve the problem. *Minimal* records are collected or records are mostly inaccurate. Analysis of data is *not* present. | Student tests the working model’s effectiveness to solve the problem. *Adequate*, mostly accurate, records are collected and an analysis of data is present. | Student tests the working model’s effectiveness to solve the problem. Excellent, *accurate and detailed,* records are collected and a thorough analysis of data is present. |
| **Refine/ Improve** | Student does *not* redesign the working model to align with the criteria, constraints, or intent of the problem. | Student redesigns the working model into a more effective solution that aligns with the criteria, constraints, and intent of the problem. | Student clearly *uses data* to redesign the working model into a more effective solution that aligns with the criteria, constraints, and intent of the problem. |
| **Create/Make Product** | Student does not create or make a product that aligns with criteria, constraints, or intent of the problem. | Student makes a final product that aligns with most criteria, constraints, and the intent of the problem. | Student makes a final product that aligns with all criteria, constraints, and the intent of the problem. |
| **Communicate Results** | Student is inadequately prepared to explain the solution and/or results from testing are summarized or shared, but are incomplete or not clearly communicated. | Student is adequately prepared to explain the solution and results from testing are summarized and communicated clearly. | Student is thoroughly prepared to explain the solution. The explanation addresses all criteria, constraints, and solutions. Results from testing are summarized and communicated clearly and effectively. |