

P R O J E C T D E S I G N : O V E R V I E W

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| Name of Project: What is your problem? Design it better. | | Duration: | |
| Subject/Course: Mechanical Design I and II | | Teacher(s): Evva Dossin | Grade Level: 9-12 |
| Other subject areas to be included, if any: | | | |
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| Key Knowledge and Understanding (CCSS or other standards) | | Select and use different forms of communications technology including word processing, spreadsheets, database, presentation software, email to communicate, and use of the internet to search for and display information.(IV.E) Demonstrate the ability to evaluate a design or product and improve the design using testing, modeling, and research. (XI.B.2) Develop and deliver formal and informal presentations using appropriate media to engage and inform audiences. (I.A.6) | |
| Success Skills (to be taught and assessed) | | Critical Thinking/Problem Solving | Self-Management |
| | | Collaboration | Other: |
| Project Summary (include student role, issue, problem or challenge, action taken, and purpose/beneficiary) | | Students will choose something from their everyday life that could be redesigned to make it perform/ function better. Students will then create a design solution for that problem. Design solution can be shown through a model, prototype, or information poster which will be briefly presented in-front of the class. | |
| Driving Question | | What can you change, design speaking, on an everyday item that would improve the performance of that product? | |
| Entry Event | | Show students “What Is Your Problem? Design It Better.” Presentation. Discuss with the students why the objects shown have design flaws, and ask them open ended questions how those items could be designed better. | |
| Products | | Individual: Students will create a model, prototype, or information poster. | Specific content and competencies to be assessed: |
| | | Team: | Specific content and competencies to be assessed: |

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| Making Products Public (include how the products will be made public and who students will engage with during/at end of project) | Present their projects to the class of peers and the teacher. |
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| Resources Needed | On-site people, facilities: Classroom Computers, Internet, PDF printer, multi-media program for poster. |
| | Equipment: Computers per individual student's needs. |
| | Materials: Computers per individual student's needs. Model building materials |
| | Community Resources: None |

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| Reflection Methods (how individual, team, and/or whole class will reflect during/at end of project) | Journal/Learning Log | Focus Group | |
| | Whole-Class Discussion | Fishbowl Discussion | |
| | Survey | Other: Record in on-line portfolio | |

Notes:

1 Day- Present topic/ begin working

2 Day-Worktime in Class

3 Day- Worktime in Class

4 Day- Present to Class

PROJECT DESIGN: STUDENT LEARNING GUIDE

Project:

Driving Question:

| Final Product(s) Presentations, Performances, Products and/or Services | Learning Outcomes/Targets knowledge, understanding & success skills needed by students to successfully complete products | Checkpoints/Formative Assessments to check for learning and ensure students are on track | Instructional Strategies for All Learners provided by teacher, other staff, experts; includes scaffolds, materials, lessons aligned to learning outcomes and formative assessments |
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| (individual and team) | | | |
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