Grades 11-12 Advanced Drafting and Design-Inventor, Quarter 1, Revised 2013

**Big Ideas/Key Concepts: Safety in Shop and Computer Labs**
Students will pass with 100% accuracy a written and performance safety examination covering tools, equipment, standards, rules, and regulations specific to the course of study. Students will also recognize the importance of a “greener” environment.

<table>
<thead>
<tr>
<th>Standards</th>
<th>Student Friendly “I Can” Statements</th>
<th>Resources</th>
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| Standard 1.0  
Students will take personal responsibility for the safety of themselves, their coworkers, and bystanders and perform safety examinations and maintain safety records. | I can demonstrate and comprehend the importance of a safe working environment by passing the safety test with 100%.  
I can select appropriate tools, technology, machinery, equipment, and materials for a given assignment.  
I can identify potential hazards related to the use of tools and equipment.  
I can follow the rules and regulations to comply with personal and lab safety standards.  
I can maintain a portfolio with proper organization and sections relating to safety in the shop and computer labs.  
I can understand the importance of conserving energy.  
I can practice the “Reduce, Reuse, Recycle” in and out of the classroom. | [www.OSHA.gov](http://www.OSHA.gov)  
General safety information from various textbooks  
Safety notes, power point, Prezi, Programs  
Rubric handout on requirements of a portfolio  
Textbook |
| Standard 1.3  
Maintain a portfolio with a copy of written safety examinations and equipment examinations for which the student has passed an operational checkout by the instructor. |  |
| Standard 3.8  
Research, recognize, and understand the interactions of the environment and green issues as they relate to the course work and to a global economy. |  |
## Big Ideas/Key Concepts: Student Organization
Students will demonstrate leadership, citizenship, and teamwork skills required for success in the classroom, school, community, and workplace.

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| Standard 2.0  
Students will demonstrate leadership, citizenship, and teamwork skills required for success in the school, community, and workplace. | I can participate in a student organization such as TSA or Skills/USA.  
I can be an active team member of ACE Mentoring.  
I can be an active and productive team member.  
I can apply problem-solving techniques to make decisions.  
I can be responsible for my actions. | www.Tsaweb.org  
www.Skillsusa.org  
www.Acementor.org |
| Standard 2.2  
Participate in an approved student organization related to the program of study. | | |

## Big Ideas/Key Concepts: Three-View Drawings
Students will create and print two- and three-dimensional scale drawings and orthographic projections using a CAD software.

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| Standard 4.1  
Students will create and print two-dimensional scale drawings. | I can complete the book tutorial  
I can complete the three handout tutorials | Inventor software  
Computer/printer  
I Tunes U videos- URL is found on SharePoint page of teachers participating. |
| Standard 4.2  
Student will create and print drawings of three-dimensional objects including parallel extrusion, perspective extrusion, and three-dimensional isometrics. | I can use the Inventor program and text book, draw the assignments and make drawings that contain three views, sections, reverse engineering, isometric representations. | Instructional Videos on the public drive  
Textbook-Drafting and Design Chapter 8, page |
Standard 4.3
Create and print engineering drawings of complex objects requiring multiple sectional views.

**Common Core standard: 1, 2, 3, 4, 5, 6, 7, 9**

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| Standard 2.0
Students will demonstrate leadership, citizenship, and teamwork skills required for success in the school, community, and workplace. | I can effectively present a self-evaluation of my progression in the engineering, architecture, and design fields. I can complete the assignments. I can organize and maintain a professional 9 week portfolio demonstrating my assignments. | 3-ring binder Sheet protector Computer Printer |
| Standard 3.2
Develop advanced study skills. | Common Core standard:10 | |

-241
Basic Technical Design drawing as assigned by teacher
Autodesk Inventor R4 Fundamentals

**Big Ideas/Key Concepts: Portfolio**
Students will develop advanced study skills that can assist to demonstrate personal and analytical competencies

**Standards**

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| Standard 2.0
Students will demonstrate leadership, citizenship, and teamwork skills required for success in the school, community, and workplace. | I can effectively present a self-evaluation of my progression in the engineering, architecture, and design fields. I can complete the assignments. I can organize and maintain a professional 9 week portfolio demonstrating my assignments. | 3-ring binder Sheet protector Computer Printer |
| Standard 3.2
Develop advanced study skills. | | |