JC Schools 8th Grade
Gateway to Technology Yearly Standards

Units	Priority Standards	Supporting Standards
Unit 1 Design and Modeling 1.4	**DM1.4 T1** Use the techniques, skills, and modern engineering tools necessary to accurately sketch **DM1.4 T2** Create sketches that communicate effectively	**DM1.4-U1** Create rapid, accurate sketches to communicate ideas. **DM1.4-U2** Create orthographic drawings of an object to provide information that a perspective drawing may not be able to show. **DM1.4-U3** Apply dimensions to drawings to communicate size and location information.
Unit 2 Design and Modeling 1.5	**DM1.5 T2** Use the techniques (sketching), skills (measuring and dimensioning), and modern engineering tools (CAD) necessary to solve an engineering problem	**DM1.5-U1** Create representations of an object, using geometric shapes. **DM1.5-U2** Develop and annotate working drawing using computer-aided design (CAD) modeling systems. **DM1.5-U3** Communicate ideas and solutions to technological problems using three-dimensional computer modeling showing descriptive geometry, geometric relationships, and dimensions. **DM1.5-U4** Discover how individual objects are assembled together, while their degrees of freedom are systematically removed. **DM1.5-U5** Apply a design process to create solutions to existing problems. **DM1.5-U7** Create a prototype of their design to observe their product as a three-dimensional object.

| **Unit 3**

Design and Modeling 1.2 | **DM1.2 T1**
Apply the engineering design process to design a system, component, or process to meet desired needs within realistic constraints | **DM1.2-U1**
Explore different design processes to develop solutions to problems.

DM1.2-U2
Apply the design brief as a tool for defining the problem; it is an agreement between the engineer and client.

DM1.2-U3
Practice how engineers use design briefs to explain the problem, identify solution expectations, and establish project constraints.

DM1.2-U4
Explore brainstorming techniques in design teams to generate large numbers of ideas in a short amount of time, striving for quantity, not quality. |