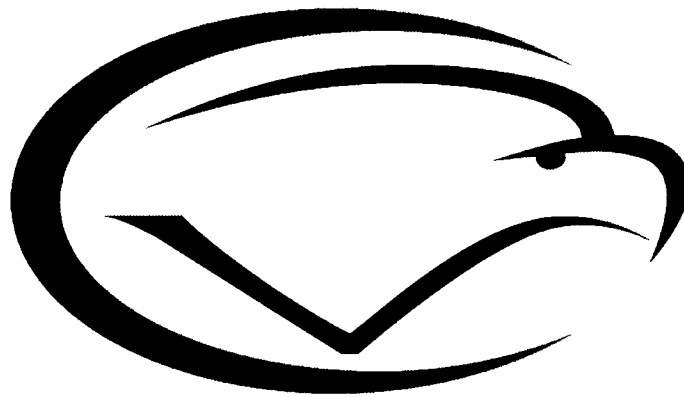


# Secondary Curriculum Maps



Cumberland Valley School District  
Soaring to Greatness, Committed to Excellence

MS Technology Courses

## Curriculum Map ~ Middle School Technology Education

<b>CV Priority Standard/PA Academic Standard</b>	
3.1.4. A. Know that natural and human-made objects are made up of parts.	
<b>Taught in Unit(s)</b>	
Introduction to Technology	
<b>Explanation/Example of the Standard</b>	
<p>Students will be able to:</p> <ul style="list-style-type: none"> <li>•Identify and describe what parts make up a system.</li> <li>•Identify system parts that are natural and human-made (e.g., ball point pen, simple electrical circuits).</li> <li>•Describe the purpose of analyzing systems.</li> <li>•Know that technologies include physical technology systems (e.g., construction, manufacturing, transportation)</li> </ul>	
<b>Big Idea(s)</b>	<b>Essential Question(s)</b>
A systems model involves a combination of elements or parts to complete a task. When the parts of a system work together, they accomplish a goal.	<p>What are the steps involved in a systems model?</p> <p>Why is it important to be understand the steps involved in a systems model?</p> <p>How can using a systems model approach help me to understand natural and human-made systems?</p>
<b>Assessments</b>	
See unit maps for specific unit common assessments.	
<b>Concepts (what students need to know)</b>	<b>Skills (what students must be able to do)</b>
Parts Systems technology	Identify Describe Know

## Curriculum Map ~ Middle School Technology Education

<b>CV Priority Standard/PA Academic Standard</b>	
3.1.7. B. Describe the use of models as an application of scientific or technological concepts.	
<b>Taught in Unit(s)</b>	
Introduction to modeling/Autodesk Inventor-7 <sup>th</sup> grade, Materials-7 <sup>th</sup> grade, Designing-8 <sup>th</sup> grade, Problem Solving-8 <sup>th</sup> grade, Autodesk Inventor – 8 <sup>th</sup> grade	
<b>Explanation/Example of the Standard</b>	
<ul style="list-style-type: none"> <li>•Identify and describe different types of models and their functions.</li> <li>•Apply models to predict specific results and observations.</li> <li>•Explain systems by outlining a system’s relevant parts and its purpose and/or designing a model that illustrates its function.</li> </ul>	
<b>Big Idea(s)</b>	<b>Essential Question(s)</b>
Models are essential to the understanding of larger ideas. Models allow us to break larger systems down into smaller easier to understand parts. Models allow us to test before we build.	How can I use models and modeling to express my ideas/solutions? How can we use models to enhance understanding? How can we use models to predict and analyze?
<b>Assessments</b>	
See unit maps for specific unit common assessments.	
<b>Concepts (what students need to know)</b>	<b>Skills (what students must be able to do)</b>
Models Modeling Systems Parts	Identify Apply Explain

## Curriculum Map ~ Middle School Technology Education

<b>CV Priority Standard/PA Academic Standard</b>	
3.7.4. A. Explore the use of basic tools, simple materials and techniques to safely solve problems.	
<b>Taught in Unit(s)</b>	
Introduction to materials and tools.	
<b>Explanation/Example of the Standard</b>	
<ul style="list-style-type: none"> <li>•Describe the scientific principles on which various tools are based.</li> <li>•Group tools and machines by their function.</li> <li>•Select and safely apply appropriate tools and materials to solve simple problems.</li> </ul>	
<b>Big Idea(s)</b>	<b>Essential Question(s)</b>
People need to be able to identify tools and their uses. People need to be able to safely and properly use tools. People need to know the differences between and proper uses for different materials.	Why is it important to know the proper and intended uses for a tool?  Why are some materials more appropriate for certain tasks than others?  Why is it important to know how to use tools safely?  How can tools help me to complete tasks?
<b>Assessments</b>	
See unit maps for specific unit common assessments.	
<b>Concepts (what students need to know)</b>	<b>Skills (what students must be able to do)</b>
Tools Machines materials	Describe Use Group Select Solve

## Curriculum Map ~ Middle School Technology Education

<b>CV Priority Standard/PA Academic Standard</b>	
3.7.4. D. Use basic computer software.	
<b>Taught in Unit(s)</b>	
Introduction to Technology Introduction to Materials and Tools	
<b>Explanation/Example of the Standard</b>	
<ul style="list-style-type: none"> <li>•Apply operating system skills to perform basic computer tasks.</li> <li>•Apply basic word processing skills.</li> <li>•Identify and use simple graphic and presentation graphic materials generated by the computer.</li> <li>•Apply specific instructional software.</li> </ul>	
<b>Big Idea(s)</b>	<b>Essential Question(s)</b>
It is important to be able to complete basic tasks related to a subject area on a computer.	How can using software help me to express my ideas and understanding related to technology?
Modeling programs are essential to understanding technology concepts.	How can I use a modeling program to express my ideas about technology?
<b>Assessments</b>	
See unit maps for specific unit common assessments.	
<b>Concepts (what students need to know)</b>	<b>Skills (what students must be able to do)</b>
Operating system skills Word processing skills Presentation materials Instructional software	Apply Identify

## Curriculum Map ~ Middle School Technology Education

<b>CV Priority Standard/PA Academic Standard</b>	
3.7.7. A. Describe the safe and appropriate use of tools, materials and techniques to answer questions and solve problems.	
<b>Taught in Unit(s)</b>	
Materials-7 <sup>th</sup> grade, Materials-8 <sup>th</sup> grade	
<b>Explanation/Example of the Standard</b>	
<ul style="list-style-type: none"> <li>•Identify uses of tools, machines, materials, information, people, money, energy and time that meet specific design criteria.</li> <li>•Describe safe procedures for using tools and materials.</li> <li>•Assess materials for appropriateness of use.</li> </ul>	
<b>Big Idea(s)</b>	<b>Essential Question(s)</b>
People need to be able to identify tools and their uses. People need to be able to safely and properly use tools. People need to know the differences between and proper uses for different materials.	Why is it important to know the proper and intended uses for a tool?  Why are some materials more appropriate for certain tasks than others?  Why is it important to know how to use tools safely?  How can tools help me to complete tasks?
<b>Assessments</b>	
See unit maps for specific unit common assessments.	
<b>Concepts (what students need to know)</b>	<b>Skills (what students must be able to do)</b>
Click here to enter text.	Click here to enter text.

## Curriculum Map ~ Middle School Technology Education

<b>CV Priority Standard/PA Academic Standard</b>	
3.7.7. C. Explain and demonstrate basic computer operations and concepts.	
<b>Taught in Unit(s)</b>	
Autodesk Inventor, 8 <sup>th</sup> grade	
<b>Explanation/Example of the Standard</b>	
<ul style="list-style-type: none"> <li>• Know specialized computer applications used in the community.</li> <li>• Describe the function of advanced input and output devices (e.g., scanners, video images, plotters, projectors, 3D printers) and demonstrate their use.</li> <li>• Demonstrate age appropriate keyboarding skills and techniques.</li> </ul>	
<b>Big Idea(s)</b>	<b>Essential Question(s)</b>
It is important to know and understand how to use the technology devices and software products used in the community and industry.  Technology is a tool.	How are technology devices used in the community and industry?  What technology devices are used in the community and industry?
<b>Assessments</b>	
See unit maps for specific unit common assessments.	
<b>Concepts (what students need to know)</b>	<b>Skills (what students must be able to do)</b>
Computer applications Input devices Output devices	Know Describe Demonstrate

## Curriculum Map ~ Middle School Technology Education

<b>CV Priority Standard/PA Academic Standard</b>	
3.7.7. D. Apply computer software to solve specific problems.	
<b>Taught in Unit(s)</b>	
Autodesk Inventor-7 <sup>th</sup> grade, Problem Solving-8 <sup>th</sup> grade	
<b>Explanation/Example of the Standard</b>	
<ul style="list-style-type: none"> <li>•Identify software designed to meet specific needs (e.g., Computer Aided Drafting, design software, tutorial, presentation software).</li> <li>•Identify and solve basic software problems relevant to specific software applications.</li> <li>•Identify basic multimedia applications.</li> <li>•Demonstrate a basic knowledge of desktop publishing applications.</li> <li>•Apply basic graphic manipulation techniques.</li> </ul>	
<b>Big Idea(s)</b>	<b>Essential Question(s)</b>
People need to be able to choose appropriate software based on a task and be able to utilize it. People should understand different modes of multimedia and publishing applications to express their ideas.	What technology resources can I use to express myself and why would some choices be better than others in certain situations?
<b>Assessments</b>	
See unit maps for specific unit common assessments.	
<b>Concepts (what students need to know)</b>	<b>Skills (what students must be able to do)</b>
Software Multimedia applications Desktop publishing Graphic manipulation techniques	Identify Demonstrate Apply