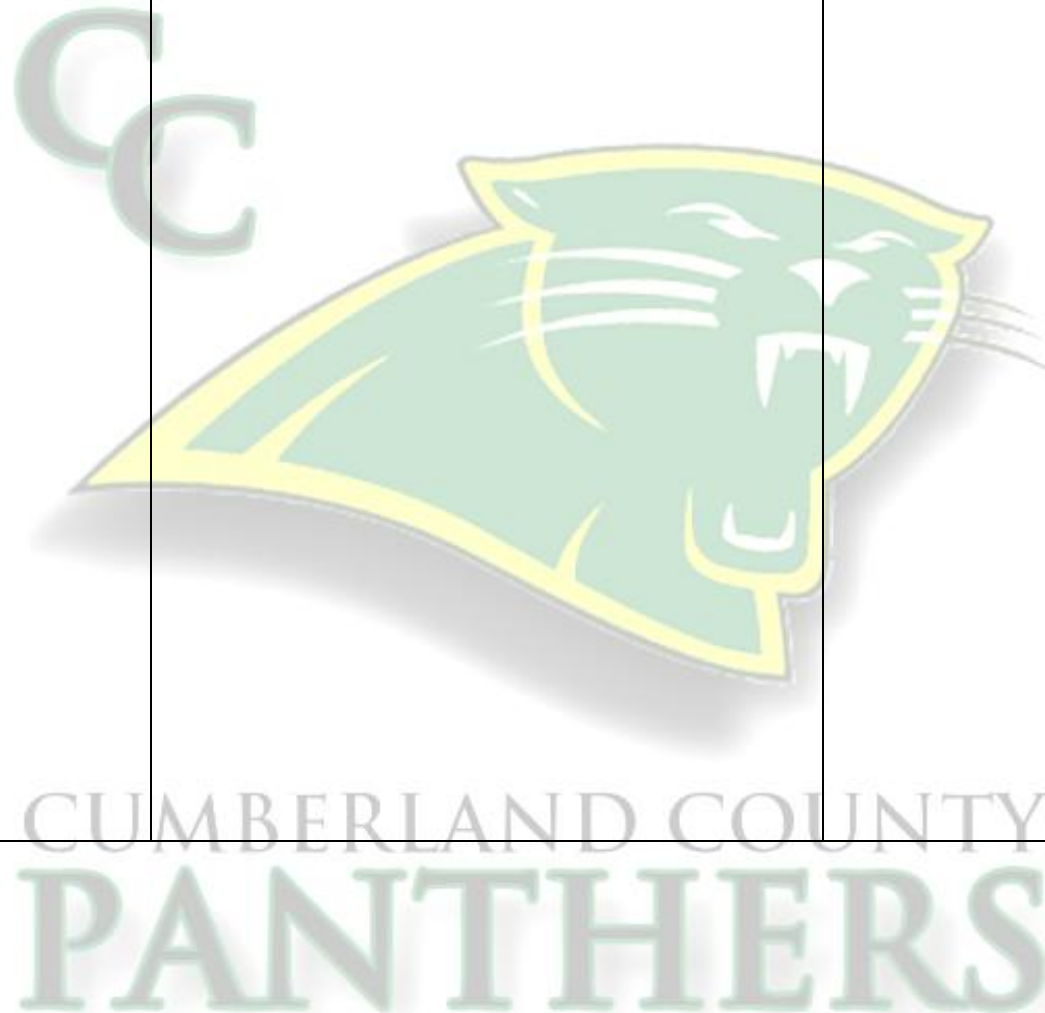


**CUMBERLAND COUNTY SCHOOL DISTRICT
BENCHMARK ASSESSMENT CURRICULUM PACING GUIDE**

School: CCHS	Subject: Technological Design	Grade: 9 -12
Benchmark Assessment 1		
Instructional Timeline: First 9 Weeks		
Topic(s): Technology, Technical systems, and Technical Problem Solving		
KOSSA Engineering & Design Standards	Learning Targets (I Can Statements)	Key Vocabulary
OA - Nature of technology OR – Transportation Technologies OO – Biotechnologies OQ – Communication Technologies OS – Manufacturing Technologies OT – Construction Technologies OC - Relationships among technologies and the connections between technology and other fields OG – Influence of Technology on History OD – Role of trouble shooting, research and development, invention, innovation, and experimenting in problem solving AC – Critical thinking and Problem Solving	I will be able to define technology I will be able to identify the 5 areas of technology I will be able to describe changes in technology throughout history I will be able to identify positive and negative effects of technology I will be able to use the technical problem solving process I will be able to explain how technology affects my daily routines I will be able to describe the purposes of communication I will be able to control tools and machines using communication	Technology Communication Technology Construction Technology Manufacturing Technology Transportation Technology Bio-related Technology Environment Brainstorming Implement Simulation System Input, Process, Output, Feedback Capital Energy Resource Technical Problem Solving Process

Invention
Innovation



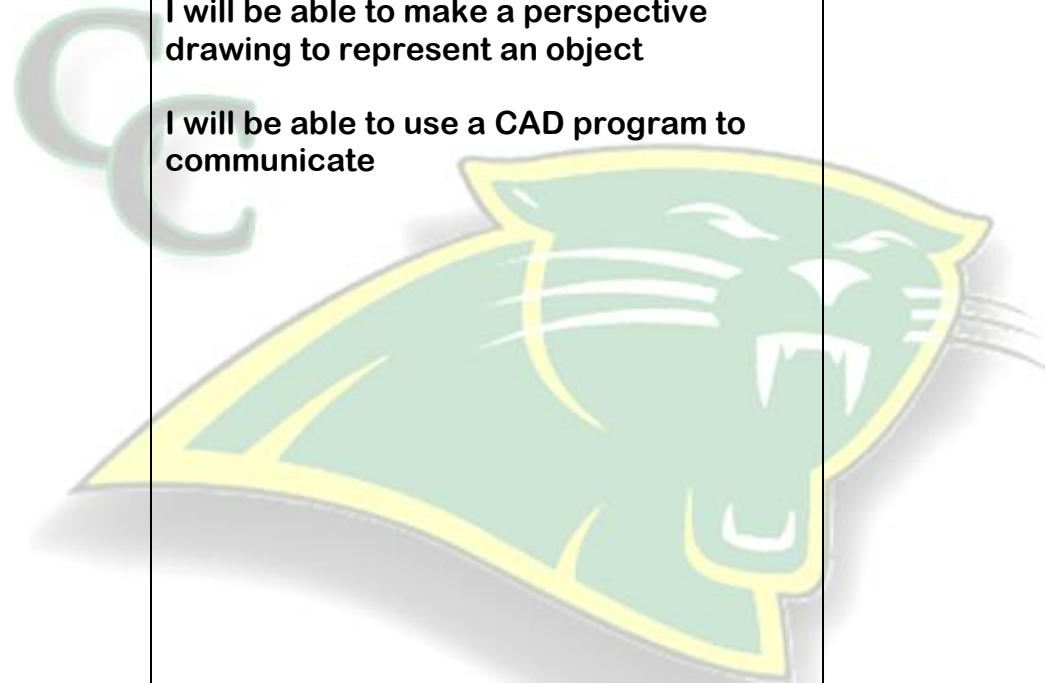
**CUMBERLAND COUNTY SCHOOL DISTRICT
BENCHMARK ASSESSMENT CURRICULUM PACING GUIDE**

School: CCHS	Subject: Technological Design	Grade: 9 -12
Benchmark Assessment 2		
Instructional Timeline: 2nd 9 Weeks		
Topic(s): The Design Process		
KOSSA Engineering & Design Standards	Learning Targets (I Can Statements)	Key Vocabulary
OH – Attributes of Design OQ 5 – Many ways of Communicating AD 1- Perform basic and higher level math operations AD 2 – Solve problems using measurement skills	I will be able to identify the steps in the design process I will be able to measure to 1/16" accuracy I will be able to use manual drafting equipment to communicate I will be able to identify the lines in the alphabet of lines I will be able to make an orthographic drawing to represent an object to 1/16" accuracy I will be able to identify 3 types of pictorial drawings I will be able to make an isometric drawing to represent an object to 1/16" accuracy	Drawing Board T-Square Architect’s Scale 30-60 and 45 degree Triangles Hidden line Visible line Dimension line Orthographic Drawing Pictorial Drawing Isometric Oblique Perspective CAD

I will be able to make an oblique drawing to represent an object to 1/16”

I will be able to make a perspective drawing to represent an object

I will be able to use a CAD program to communicate



CUMBERLAND COUNTY
PANTHERS

**CUMBERLAND COUNTY SCHOOL DISTRICT
BENCHMARK ASSESSMENT CURRICULUM PACING GUIDE**

School: CCHS	Subject: Technological Design	Grade: 9 -12
Benchmark Assessment 3		
Instructional Timeline: 3rd 9 Weeks		
Topic(s): Teamwork, Design, and Safety		
KOSSA Engineering & Design Standards	Learning Targets (I Can Statements)	Key Vocabulary
EF 1 – Recognize the characteristics of a team environment and conventional workplace	I will be able to identify and demonstrate the 4 teamwork skills necessary to be a successful team member	Encouragers
EF 2 – Contribute to the success of a team	I will be able to follow general safety procedures in a school shop	Leaders
EF 3 – Demonstrate effective team skills and evaluate their importance in the workplace	I will be able to operate a bandsaw and a drill press safely	Contributors
EN 1 – Assume responsibility for safety of self and others	I will be able to design a top that will spin for the longest time	Critical Thinking
EN 2 – Follow safety guidelines in the workplace	I will be able sketch top design ideas	Brainstorming
OK 1 - Apply the design process Identify a design problem	I will be able to make an orthographic drawing of my best top design	Work Ethic
OK 2 – Identify criteria and Constraints	I will be able to work with a team and select our best top design to produce	Conflict Resolution
	I will be able to test our design and gather information on other group designs	Balance
		Symetrical
		Center of Gravity

**CUMBERLAND COUNTY SCHOOL DISTRICT
BENCHMARK ASSESSMENT CURRICULUM PACING GUIDE**

School: CCHS	Subject: Technological Design	Grade: 9 -12
Benchmark Assessment 4		
Instructional Timeline: 4th Weeks		
Topic(s): Applying the Design Process		
KOSSA Engineering & Design Standards	Learning Targets (I Can Statements)	Key Vocabulary
OK 1 – Identify a Design Problem	I will be able to identify a beam, truss, and suspension bridge	Beam bridge
OK 2 – Identify criteria and Constraints	I will be able to use a computer simulation to design and test a bridge	Truss bridge
OK 3 – Refine the Design		Suspension bridge
OK 4 – Evaluate the Design	I will be able to make an orthographic drawing of my bridge design	Pier
OK 5 – Develop a Product or system using Quality Control	I will be able to work with a team and select our best bridge design to produce	Road bed
OK 6 - Reevaluate the final solution		Span
EF 1 – Recognize the characteristics of a team environment and conventional workplace	I will be able to work with a team to build our bridge from the selected drawing	Web based program
EF 2 – Contribute to the success of a team	I will be able to test our design and gather information on other group designs	Specifications
		Aerodynamics
EF 3 – Demonstrate effective team skills and evaluate their importance in the workplace	I will be able to use a computer simulation to design, evaluate, and modify a CO2 dragster	Drag
		Encouragers
	I will be able to draw a full scale CO2 dragster design and transfer that design	Leaders
		Contributors

<p>EN 1 – Assume responsibility for safety of self and others</p>	<p>to a wood body blank</p>	<p>Critical Thinking</p>
<p>EN 2 – Follow safety guidelines in the workplace</p>	<p>I will be able to use a band saw, scroll saw, drill press, and sander safely</p>	<p>Brainstorming</p>
	<p>I will be able to assemble wheels, axles, and screw eyelets to finish a CO2 dragster</p>	<p>Work Ethic</p> <p>Punctuality</p>
	<p>I will be able to test CO2 dragster designs by racing them down the hallway</p>	<p>Dependability</p>
		<p>Conflict Resolution</p>





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