

East Penn School District
Secondary Curriculum

A Planned Course Statement
For
Grade 8 Technology Education

Course # 8RT

Grade(s) 8

Department: Technology Education

Length of Period (mins.) 40

Total Clock Hours: 30

Periods per Cycle: 6

Length of Course (yrs.) 0.25

Type of Offering: required elective

Credit: _____

Adopted: 4/23/07

Developed by:

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Description of Course

Course Title: 8th Grade Technology Education: Physical Technology

Description: During this course, students will complete activities across the areas of Information Technology, Power Technology, and Biotechnology. Students will expand on skills developed in the program from 6th and 7th grade.

Students will be able to:

- Develop and improve upon the skills of problem solving and critical thinking
- Demonstrate the safe use of basic hand and machine tools.
- Develop a solution to a problem through the application of various systems.
- Identify the application of various production materials

Requirements:

Students are required to complete a number of different writing activities describing their in-class project's steps, materials, requirements and goals ("the problem statement"). Test and/or quizzes and in-class lab work is included throughout the course.

Key to Levels of Achievement (Listed with each learning objective)

Awareness (A):	Students are introduced to concepts, forms, and patterns.
Learning (L):	Students are involved in a sequence of steps and practice activities, which involved further development and allow evaluation of process.
Understanding (U):	Students demonstrate ability to apply acquired concepts and skills to individual assignments and projects on an independent level.
Reinforcement (R):	Students maintain and broaden understanding of concepts and skills to accomplish tasks at a greater level of sophistication.

Unit	Num	Objective	Level	Content	Evaluation	Standard
I. Introduction to Physical Technology	1	Show integration between information technology, physical technology, and biotechnology.	A	<ul style="list-style-type: none"> Overview of 6th and 7th grade program. 	<ul style="list-style-type: none"> Teacher evaluation of group participation 	3.6.7.A 3.6.7.C
II. Engineering and Design Process	2	Students will be able to explain and model the design process.	L	<ul style="list-style-type: none"> Identify the needs that a specific design satisfies Basic explanation of the design process Show examples of the design process and how it was applied to specific products Design a specific solution to a given problem. 	<ul style="list-style-type: none"> Teacher evaluation of group participation Teacher developed concepts quiz 	3.6.7.B
III. CADD	3	Review computer aided design software	R	<ul style="list-style-type: none"> Measurement Computer aided design 	<ul style="list-style-type: none"> Teacher Observation Solutions to be tested 	3.6.7.C
	4	Students will design an appropriate solution to a specific problem.	U	<ul style="list-style-type: none"> Problem Solving Methods 		
IV. Materials	5	Students will be able to identify the properties that distinguish various types of metallic and non-metallic materials	L	Non-Metallic <ul style="list-style-type: none"> Wood Ceramics Plastics Metals Composites	<ul style="list-style-type: none"> Teacher developed concepts quiz 	3.6.7.C
V. Tool Safety	6	Students will learn to safely utilize a variety of machine and hand tools.	L	<ul style="list-style-type: none"> Basic hand tools Machine tools 	<ul style="list-style-type: none"> Teacher observation Student Performance 	3.7.7.A
VI. Project Design	7	Students work in groups to design project	L	<ul style="list-style-type: none"> Perform steps necessary to design project 	<ul style="list-style-type: none"> Teacher evaluation of group participation 	3.6.7.C 3.7.7.A
	8	Project construction	U	<ul style="list-style-type: none"> Students select materials Students use appropriate tools to construct project. 	<ul style="list-style-type: none"> Teacher evaluation of group participation Performance quiz Evaluation of material choices 	