

East Penn School District  
Secondary Curriculum

A Planned Course Statement  
for  
**Grade 7 Technology Education**

Course # 7RT

Grade(s) 7

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

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## Description of Course

**Course Title:** 7<sup>th</sup> Grade Technology Education

**Description:** The 7<sup>th</sup> grade Technology Education program is divided into two separate sections. The first section of the course is designed to give students a broad overview of the various areas of Communication Technology. The second section of the course gives the students the experience of integrating biotechnology and physical technology.

### Goals:

- Students will learn the basic technology involved in the production of a digital video
- Learn the technical terms and processes used by professionals
- Develop interpersonal skills involved in working with a group to complete a project
- Identify the various types of print, and select the correct application specific method
- Apply knowledge of design principles to effectively communicate and idea.
- Apply CADD skills to solve a specific problem

### Requirements:

Students are required to complete a number of different activities encompassing the various areas of Communications. Homework, quizzes, and tests will also be included throughout the course.

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### 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
<b>I. Video Production Digital Photography</b>	1	Students will be able to: <ul style="list-style-type: none"> <li>Plan and create a multi-media production</li> <li>Capture and edit digital video and still images.</li> <li>Select the appropriate media necessary to communicate a specific message</li> <li>Integrate digital photography and video production into a single media presentation</li> </ul>	A, L	Communications Systems Model (Transmitting, Encoding, Media, Decoding, Receiving, Feedback)  Electronic (Audio/Visual) <ul style="list-style-type: none"> <li>Video</li> <li>Computer Graphics</li> <li>Digital Photography</li> <li>Animation</li> </ul> Ethics In Digital Imaging	Students will be evaluated through: <ul style="list-style-type: none"> <li>Teacher observation</li> <li>Self-evaluation</li> <li>Oral and Written Tests</li> <li>Student work and evaluation</li> <li>Performance test</li> </ul>	3.6.7.B 3.7.7.D
<b>II. Graphic Communications</b>	2	Students will be able to: <ul style="list-style-type: none"> <li>Identify the various methods of printing</li> <li>Apply a variety of design principles to printed materials</li> <li>Design a specific project and select the appropriate method of printing for their application</li> </ul>	L, U	Communications Systems Model (Transmitting, Encoding, Media, Decoding, Receiving, Feedback)  Graphic Communication <ul style="list-style-type: none"> <li>Advertising</li> <li>Design Principles</li> <li>Printing Substrates</li> <li>Desktop Publishing</li> </ul>	Students will be evaluated through: <ul style="list-style-type: none"> <li>Teacher observation</li> <li>Self-evaluation</li> <li>Oral and Written Tests</li> <li>Performance test</li> </ul>	3.7.10.D 3.7.10.C
<b>III. Computer-Aided Design</b>	3	Students will be able to: <ul style="list-style-type: none"> <li>Transfer previously learned technical drawing skills to CADD software.</li> <li>Apply CADD skills to develop a solution to a specific problem (e.g. bridge design)</li> </ul>	A, L, U	Technical sketching, CADD software. Problem specific design.  CADD Software <ul style="list-style-type: none"> <li>Tools</li> <li>Orthographic/Isometric</li> </ul>	Students will be evaluated through: <ul style="list-style-type: none"> <li>Teacher observation</li> <li>Teacher evaluation</li> <li>Self and peer evaluation</li> <li>Performance Test</li> </ul>	3.7.7.D
<b>IV. Biotechnology: Solar Energy</b>	4	Introduction to solar energy. Identify applications of solar energy.	A	Solar Energy <ul style="list-style-type: none"> <li>Photovoltaic</li> <li>Thermal energy</li> </ul>	Students will be evaluated through: <ul style="list-style-type: none"> <li>Teacher observation</li> <li>Teacher evaluation</li> </ul>	3.6.7.A 3.8.7.A
	5	Identify materials that can be used to produce solar energy.	L	Metals Ceramics	Students will be evaluated through: <ul style="list-style-type: none"> <li>Test / Quiz</li> </ul>	3.6.7.A

Unit	Num	Objective	Level	Content	Evaluation	Standard
V. Physical/Biotechnology	6	Apply knowledge of materials to design a solar oven.	U	Wood Metals Ceramics	• Teacher observation	3.6.7.C
	7	Design solar oven	R	Apply CADD skills to design a solar oven	• Teacher developed rubric.	3.6.7.C
VI. Tools and Safety	8	Students will learn how to safely utilize a variety of tools.	L	Measuring tools Basic Hand tools Machine tools	• Teacher observation	3.7.7.A
	9	Students will construct a solar oven	U	Students create a solar oven based on their design, and the materials that they have chosen for their project.	• Teacher observation	3.6.7.A
	10	Students will test their solar oven.	U	Students will test their design to see if they are successful.	• Teacher developed rubric	