

**GRADE 7-INDUSTRIAL TECHNOLOGY**  
**PLANNED COURSE CURRICULUM GUIDE**

**I. COURSE DESCRIPTION AND INTENT:**

**II. INSTRUCTIONAL TIME:**

**Class Periods:**  
**Length of Class Periods (minutes):**  
**Length of Course:**  
**Unit of Credit:**  
**Course Weight:**

**A GREAT PLACE TO LEARN!**



***PINE GROVE AREA SCHOOL DISTRICT***  
**PINE GROVE, PENNSYLVANIA**

**PINE GROVE AREA SCHOOL DISTRICT**  
Pine Grove, Pennsylvania 17963

**PLANNED COURSE ADAPTATIONS/MODIFICATIONS**  
**Introduction**

The instructional adaptations that follow are provided as suggestions to be implemented with all students, particularly with those in need of special education services including the gifted. This listing is in no way intended to be exhaustive. Rather, it is reflective of some major considerations in the area of curriculum adaptations/modifications.

These instructional adaptations will work with any student, but are especially beneficial to those in need of learning support. Some may argue that these modifications are simply *good teaching*. Indeed, modifications of this type do represent good teaching. These principles of good teaching become instructional modifications whenever: (1) certain students in a particular class require such modifications *above and beyond* what is typically required by *most* students in that class and (2) without these modifications, these same students would not succeed.

## PREFACE

Users and information seekers should familiarize themselves with the purpose and terminology of this **Planned Course Curriculum Guide (PCCG)**. We suggest that you first read the following:

- **PCCG PURPOSE AND INTENT**
- **PCCG DEFINITIONS**

The PCCG specifies the unit lesson outcome, essential content, standards, activities, resources, and evaluation of student performance. This sector provides the means to initiate the learning activities to attain the program goal as identified in the course description and intent.

The standards and outcomes are minimal expectations; further embellishment of the course is discretionary with the instructor depending upon the capability of the students.

This PCCG is designed as an ACTIVE document capable of technological modification as required.

The instructional delivery of this curriculum is quality controlled through the lesson plan development of the teacher.

**Lawrence J. Mussoline, Jr., Ph.D.**  
**Superintendent of Schools**

# **PLANNED COURSE CURRICULUM GUIDE (PCCG) PURPOSE AND INTENT**

## **The Planned Course Curriculum Guide (PCCG) is a multi-purpose document:**

- All staff, particularly new teachers, can understand instructional expectations through the WRITTEN curriculum
- A continuing district-wide instructional process and scope and sequence of subject matter are enhanced. The WRITTEN curriculum is delivered through the TAUGHT curriculum (instructional content and learning activities) and is evaluated through the TESTED curriculum (expected levels of student achievement - learning outcomes)
- Priority student-centered outcomes are identified and attained through suggested learning activities and content designed to help insure a balanced and comprehensive basic curriculum
- Essential content and course standards provide an efficient basis for selecting appropriate instructional materials and resources
- Staff development areas for curriculum improvement are provided
- The PCCG conforms with current Pennsylvania Department of Education curriculum regulations and serves the dual feature of providing both an administrative document and an instructional guide
- Content and subject format remain flexible and adaptable to modification - an "active" document
- Special Pennsylvania Department of Education (PDE) legislation is identified
- Parents and students are provided with an overview of the instructional program and each course in particular

## PLANNED COURSE CURRICULUM GUIDE (PCCG) DEFINITIONS

- **Course Description and Intent**: a brief overview of the course and program goals
- **Instructional Time**: frequency of class meetings and time/appropriate credit at the secondary level
- **Special Notes**: emphatic features or highlights and identification of Department of Education mandates found in the course
- **Unit Lesson Outcome**: describes the knowledge, skills, attitudes, student performance behaviors and areas of study that have been identified as appropriate to help the student attain the rigorous standards of a quality education
- **Teaching-Learning Activities**: suggested activities designed to help all students achieve the learning outcomes and standards
- **Standards**: statements establishing the minimal knowledge, skills, performance behaviors, and essential learning (content) a student must attain. A standard defines what students should know and be able to do
- **Expected Levels of Achievement (Learning Outcomes)**: what students will be expected to do as a result of the application of teaching-learning activities and content
- **Evaluation Criteria (Actual Level of Attainment)**: student performance level achieved and measured through specified evaluation criteria

## LEARNING STANDARDS AND CONTENT ACTIVITIES

*Statement of student learning expectations achieved through suggested teaching-learning activities and selected content to help reach standards and graduation requirements.*

### Academic Content Standard # 3.1 A

<b>ESSENTIAL CONTENT PERFORMANCE STANDARD</b>	<b>CONTENT &amp; INSTRUCTIONAL ACTIVITIES/STRATEGIES WITH CORRECTIVES AND EXTENSIONS</b> <i>(individually created teaching activities may be used to achieve the standards; however, listed below are activities which may be helpful) ©</i>	<b>ACTUAL LEVEL OF ATTAINMENT (EVALUATION CRITERIA) ASSESSMENT</b>	<b>RESOURCES AND MATERIALS</b>
<b>STANDARD</b> A.1 Describe a system as a group of related parts that work together to achieve a desired result.  A.2 Explain the importance of order in a system	A.1 The students will describe an automobile braking system and how it works  A.2 The Students will understand the normal cycles of an internal combustion engine	<ul style="list-style-type: none"> <li>• Discussion</li> <li>• The completion of the auto exploration module</li> <li>• Observation</li> <li>• Workbook activities</li> <li>• tests</li> </ul>	<ul style="list-style-type: none"> <li>• computer</li> <li>• auto insight software</li> <li>• technology textbook</li> <li>• class notebook</li> <li>• auto exploration module guide</li> </ul>

## LEARNING STANDARDS AND CONTENT ACTIVITIES

*Statement of student learning expectations achieved through suggested teaching-learning activities and selected content to help reach standards and graduation requirements.*

### Academic Content Standard # 3.2 B

<b>ESSENTIAL CONTENT PERFORMANCE STANDARD</b>	<b>CONTENT &amp; INSTRUCTIONAL ACTIVITIES/STRATEGIES WITH CORRECTIVES AND EXTENSIONS</b> <i>(individually created teaching activities may be used to achieve the standards; however, listed below are activities which may be helpful) ©</i>	<b>ACTUAL LEVEL OF ATTAINMENT (EVALUATION CRITERIA) ASSESSMENT</b>	<b>RESOURCES AND MATERIALS</b>
<p><b>STANDARD</b></p> <p>B.1 Measure materials using a variety of scales</p> <p>B.2 Communicated, raise questions, formulate, hypothesis, test and experiments</p> <p>B.3 Design controlled experiments, recognize variables, manipulate variables</p> <p>B 4 Interpret data, formulate models, design models, and produce solutions.</p>	<p>B.1 The students will use measuring in:</p> <ul style="list-style-type: none"> <li>• drafting</li> <li>• the exploring mechanisms module</li> <li>• the computer aided design module</li> <li>• the space and rocketry module</li> <li>• the auto exploration module</li> </ul> <p>B.2 The students will construct various simple machine on the exploring mechanisms trainer</p> <p>B.3 The students will complete experiments with many variables in the exploring mechanisms module</p> <p>B.4 The students will build or work with models in the following modules:</p> <ul style="list-style-type: none"> <li>• exploring mechanisms</li> <li>• space and rocketry</li> <li>• auto exploration</li> <li>• drafting</li> </ul>	<ul style="list-style-type: none"> <li>• Demonstrations</li> <li>• Observations</li> <li>• Workbook activities</li> <li>• Tests</li> <li>• Models</li> <li>• Projects</li> </ul>	<ul style="list-style-type: none"> <li>• Technology textbook</li> <li>• Computers</li> <li>• Exploring mechanisms trainer</li> <li>• Calculator</li> <li>• Class notebook</li> <li>• Various computer software</li> <li>• Estes model rocket kit</li> </ul>

## LEARNING STANDARDS AND CONTENT ACTIVITIES

*Statement of student learning expectations achieved through suggested teaching-learning activities and selected content to help reach standards and graduation requirements.*

### Academic Content Standard # 3.2 C

<b>ESSENTIAL CONTENT PERFORMANCE STANDARD</b>	<b>CONTENT &amp; INSTRUCTIONAL ACTIVITIES/STRATEGIES WITH CORRECTIVES AND EXTENSIONS</b> <i>(individually created teaching activities may be used to achieve the standards; however, listed below are activities which may be helpful) ☺</i>	<b>ACTUAL LEVEL OF ATTAINMENT (EVALUATION CRITERIA) ASSESSMENT</b>	<b>RESOURCES AND MATERIALS</b>
<b>STANDARD</b> C.1 Generate questions about objects that can be answered through scientific investigations  C.2 Conduct a two part experiment  C.3 Communicate appropriate conclusions from the experiment	C.1 the students will generate questions about how simple machines make work easier  C.2 The students will construct various simple machines on the exploring mechanisms trainer  C.3 The students will experiment with those simple machines  C.4 The students will calculate the mechanical advantage of those simple machines	<ul style="list-style-type: none"> <li>• Demonstrations</li> <li>• Observations</li> <li>• Workbook activities</li> <li>• test</li> </ul>	<ul style="list-style-type: none"> <li>• technology textbook</li> <li>• exploring mechanisms trainer</li> <li>• computer</li> <li>• calculator</li> <li>• class notebook</li> </ul>

## LEARNING STANDARDS AND CONTENT ACTIVITIES

*Statement of student learning expectations achieved through suggested teaching-learning activities and selected content to help reach standards and graduation requirements.*

### Academic Content Standard # 3.6 C

<b>ESSENTIAL CONTENT PERFORMANCE STANDARD</b>	<b>CONTENT &amp; INSTRUCTIONAL ACTIVITIES/STRATEGIES WITH CORRECTIVES AND EXTENSIONS</b> <i>(individually created teaching activities may be used to achieve the standards; however, listed below are activities which may be helpful) ©</i>	<b>ACTUAL LEVEL OF ATTAINMENT (EVALUATION CRITERIA) ASSESSMENT</b>	<b>RESOURCES AND MATERIALS</b>
<b>STANDARD</b> C.1 Use knowledge of material effectiveness to solve specific construction problems  C.2 Differentiate among the different types of construction applications	C.1 The students will learn the advantages of different construction materials  C.2 The students will use different materials to complete various projects	<ul style="list-style-type: none"> <li>• demonstrations</li> <li>• class discussion</li> <li>• tests</li> <li>• worksheets</li> </ul>	<ul style="list-style-type: none"> <li>• wood</li> <li>• wood by products</li> <li>• metal</li> <li>• plastic</li> </ul>

## LEARNING STANDARDS AND CONTENT ACTIVITIES

*Statement of student learning expectations achieved through suggested teaching-learning activities and selected content to help reach standards and graduation requirements.*

### Academic Content Standard # 3.7 B

<b>ESSENTIAL CONTENT PERFORMANCE STANDARD</b>	<b>CONTENT &amp; INSTRUCTIONAL ACTIVITIES/STRATEGIES WITH CORRECTIVES AND EXTENSIONS</b> <i>(individually created teaching activities may be used to achieve the standards; however, listed below are activities which may be helpful) ©</i>	<b>ACTUAL LEVEL OF ATTAINMENT (EVALUATION CRITERIA) ASSESSMENT</b>	<b>RESOURCES AND MATERIALS</b>
<b>STANDARD</b> B.1 Select appropriate instruments to measure size, weight, and shape of objects  B.2 Apply Knowledge of different measurement systems to measure and record objects properties	B.1 The students will measure length, width, and weight of objects to complete The exploring mechanisms trainer using rulers and scaled  B.2 The students will measure to draw objects on the computer aided design module  B.2 The students will use scales to measure in drafting	<ul style="list-style-type: none"> <li>• demonstrations</li> <li>• class discussion</li> <li>• tests</li> <li>• drawings</li> <li>• experiments</li> <li>• observation</li> </ul>	<ul style="list-style-type: none"> <li>• computer and trainer</li> <li>• drafting tools</li> <li>• scales</li> <li>• video</li> </ul>