Warren County School District

PLANNED INSTRUCTION

# COURSE DESCRIPTION

## Course Title:\_\_Creating Technology\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Course Number: \_\_\_\_\_\_\_\_\_\_**00740**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

Course Description and Prerequisites:

Creating Technology is an activity-based course in which students form an enterprise (company).

Students participate in the organization and management of the enterprise; select and engineer a product; raise money; hire employees; engineer a production line; produce, advertise, and sell the products; and finally distribute profits. Students play varying roles to solve real-world design, engineering, production, financial, and marketing problems.

Prerequisite: Applying Technology

No final exam required.

Suggested Grade Level: \_Grade 8\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Length of Course:** \_\_\_ One Semester \_\_\_\_\_Two Semesters \_\_\_X\_\_Other (Describe)\_\_9 weeks\_\_\_\_\_\_\_\_

## Units of Credit: \_\_\_\_\_None\_\_\_

PDE *Certification and Staffing Policies and Guidelines (CSPG)* Required Teacher Certification(s) Technology Education CSPG # 65

Certification verified by WCSD Human Resources Department:

 \_\_X\_\_ Yes \_\_\_\_No

Board Approved Textbooks, Software, Materials:

Title:

Publisher:

ISBN #:

Copyright Date:

Date of WCSD Board Approval:

BOARD APPROVAL:

 Date Written:\_10/6/2006\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Date Approved:\_\_\_\_12/4/06\_\_\_\_\_\_\_\_\_\_\_

 Implementation Year:\_\_\_\_2007-2008\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Suggested Supplemental Materials:

Exploring Technology; ITEA Resource Guide

Machinery Handbook (reference)

Architectural Graphic Standards (reference)

Course Standards

PA Academic Standards:

3.1.10 (A,C,D) Unifying Themes; 3.2.10 (D) Inquiry and Design; 3.6.10 (B,C) Technology Education; 3.7.10 (A,B,C,D) Technological Devices; 3.8.10 (A,B,C) Science, Technology and Human Endeavors

WCSD Academic Standards:)

None

Industry or Other Standards:

None

SPECIAL EDUCATION AND GIFTED REQUIREMENTS

The teacher shall make appropriate modifications to instruction and assessment based on a student’s Individual Education Plan (I.E.P.) or Gifted Individual Education Plan (G.I.E.P.).

SPECIFIC EDUCATIONAL OBJECTIVES/CORRESPONDING STANDARDS AND ELIGIBLE CONTENT WHERE APPLICABLE

3.1.10 Unifying Themes x – performance assessed during that semester

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Performance Indicator** | **1** | **2** | **Assessment**  |
| A.  | Discriminate among the concepts of systems, subsystems, feedback, and control in solving technological problems.  |  |  | Formative Assessments:* Objective quizzes
* Written assignments
* Use rubrics to assess process, not just product
* Peer evaluations by rubric

Summative Assessments:* Performance Assessments
* Written tests
 |
| C. |  Apply patterns as repeated processes or recurring elements in science and technology |  |  |
| D. | Apply scale as a way of relating concepts and ideas to one another by some measure. |  |  |

**3.2.10 Inquiry and Design**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Performance Indicator** | **1** | **2** | **Assessment**  |
| D.  | Identify and apply the technological design process to solve problems.  |  |  | Formative Assessments:* Objective quizzes
* Written assignments
* Use rubrics to assess process, not just product
* Peer evaluations by rubric

Summative Assessments:* Performance Assessments
* Written tests
 |

**3.6.10 Technology Education**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Performance Indicator** | **1** | **2** | **Assessment**  |
| B. | Apply knowledge of information technologies to encoding, transmitting, receiving, storing, retrieving, and decoding. |  |  | Formative Assessments:* Objective quizzes
* Written assignments
* Use rubrics to assess process, not just product
* Peer evaluations by rubric

Summative Assessments:* Performance Assessments
* Written tests
 |
| C. |  Apply physical technologies of structural design, analysis and engineering, personnel relations, financial affairs, structural, production, marketing, research, and design to real world problems.  |  |  |

**3.7.10 Technological Devices**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Performance Indicator** | **1** | **2** | **Assessment**  |
| A. | Identify and safely use a variety of tools, basic machines, materials and techniques to solve problems and answer questions.  |  |  | Formative Assessments:* Objective quizzes
* Written assignments
* Use rubrics to assess process, not just product
* Peer evaluations by rubric

Summative Assessments:* Performance Assessments
* Written tests
 |
| B. |  Apply appropriate instruments and apparatus to examine a variety of objects and processes. |  |  |
| C. | Apply basic computer operations and concepts. |  |  |
| D. | Utilize computer software to solve specific problems. |  |  |

**3.8.10 Science, Technology and Human Endeavors**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Performance Indicator** | **1** | **2** | **Assessment**  |
| A. | Analyze the relationship between societal demands and scientific and technological enterprises.  |  |  | Formative Assessments:* Objective quizzes
* Written assignments
* Use rubrics to assess process, not just product
* Peer evaluations by rubric

Summative Assessments:* Performance Assessments
* Written tests
 |
| B. |  Analyze how human ingenuity and technological resources satisfy specific human needs and improve the quality of life.  |  |  |
| C. | Evaluate possibilities consequences and impacts of scientific and technological solutions.  |  |  |

ASSESSMENTS

PSSA Assessment Anchors Addressed: The teacher must be knowledgeable of the PDE Assessment Anchors and/or Eligible Content and incorporate them into this planned instruction. Current assessment anchors can be found at pde@state.pa.us.

Formative Assessments: The teacher will develop and use standards-based assessments throughout the course.

Portfolio Assessment: \_\_\_\_ Yes \_\_X\_\_ No

District-wide Final Examination Required: \_\_X\_\_ Yes \_\_X\_\_ No

Course Challenge Assessment: None

# REQUIRED COURSE SEQUENCE AND TIMELINE

###  Content Sequence Dates

Creating Technology (Introduction) 2 Days

Enterprise Inputs (including safety) 10 Days

Organizing an Enterprise 2 Days

Financing an Enterprise 2 Days

Design Engineering 3 Days

Production Engineering 2 Days

Producing Products 16+ Days

Marketing Products 2 Days

Financial Process 2 Days

Enterprise Outputs and Impacts 2 Days

Future Developments 2 Days

**WRITING TEAM:** Arthur Anderson, Elizabeth Anderson, Patrick Cronmiller, David Krack, Andrew Perlstein, John Victor

# WCSD STUDENT DATA SYSTEM INFORMATION

 1. Is there a required final examination? \_\_X\_\_ Yes \_\_X\_\_ No

 2. Does this course issue a mark/grade for the report card? \_X\_ Yes\_\_\_\_ No

 3. Does this course issue a Pass/Fail mark? \_\_\_\_ Yes \_\_X\_ No

1. Is the course mark/grade part of the GPA calculation?

\_X\_\_ Yes \_\_ \_\_ No

 5. Is the course eligible for Honor Roll calculation? \_X\_ Yes \_\_\_\_ No

1. What is the academic weight of the course?

\_\_\_\_ No weight/Non credit \_\_X\_ Standard weight

 \_\_\_\_ Enhanced weight (Describe)\_\_\_\_\_\_\_\_\_\_\_\_\_