

Integrated Project-based Learning: Combining PTE Standards and Academic Standards

Use this template for planning and sharing ideas for projects. This template is based on the 6 A's:

Authenticity Academic Rigor* Applied Learning* Active Exploration* Adult Connections* Assessment*

Project	
Title of Project	Natural Disasters
Project Developed by	Tim Campbell, Randy Daniel, Shirley Hubbard, Susan Bedke, Becca Tateoka, Art Silva
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School	BHS, DJHS, CRTC
Pathway / Small Learning Community/Academy	Construction, Automotive, Allied Health, Math, English, Social Studies
Course Title(s)	Residential Construction I, Automotive Technology, Health Professions, Algebra Pre & 1, English 12, US History I
Time Frame	3 – 36 hours

Authenticity	
<i>Briefly describe your project. Include the key question and provide an overview of what students do and learn. Tell why the question is meaningful to the students and where one might see a similar question tackled by an adult in the workplace.</i>	
Key Question	How do natural disasters impact my field of study?
Overview	This thematic unit will allow both technical and academic instructors to address the standards and topics required for their individual courses. Ideally, the <i>same</i> natural disaster would be studied from multiple angles in the various classes. For example, the 2011 Tsunami/Earthquake in Japan and the subsequent disasters open up a wide variety of health issues, construction advances, historic and economic impacts, research projects, or plot the seismic activity and determine the slope of that line. The plan is out there; individual teachers adapt the plan for grade level appropriateness and standards.

Vocabulary/Key Terms

List vocabulary words and key terms essential to student understanding.

Paraphrase	Foundation	Exoduster	Coordinate Plane	Health
Source	Footing	Share-cropping	Cartesian Plane	Safety
Citation	Concrete	Drought	Plot	Evacuation
Argument	Reinforcing	Erosion	Intercepts	Disaster plan
Validity	Flexibility	Dustbowl	X Y Axis	First aid (kit)
Thesis				Hazard
Carbon Dioxide				
Dry chemical				
Junction boxes				
Breaker switches				

Active Exploration * Applied Learning * Adult Connections

What classroom-based, community-based, and career-based activities does the project involve? Include a description of the active exploration, applied learning, and adult connections in the project (as needed).

Active Exploration How does the project engage students in real investigations using a variety of methods, media and sources? What field-based work will students perform? How does student learning and service support active career exploration? Students will examine real models of homes. Math will explain scaled units in architecture. They will have lessons on home construction and the building codes for bids. How knowledge is used in industry?

Applied Learning How do students apply what they have learned and researched to a complex problem (e.g. designing a product, improving a system, creating an exhibit, organizing an event)? Lecture on industry usage of this concept i.e. model designs. Application with their own proportions also will be explored along with industry standards.

Adult Connections Who from the community, workplace, postsecondary and/or industry partnership works with students on the project? Lecture from local industry and community in home design.

Classroom Activities	Community Activities	Career Activities
1. Intro by teacher	1. Formal presentation in front of community members	1. Real-world experience in subject area
2. Background information of selected type	2. Guest speakers	2. Contact and networking with potential future employers
3. Student research, multi-media	3. Participation in community disaster practice	3. Preparation for additional training (post-secondary)
4. Hands-on experimentation and/or practice	4. Media stories about projects	
5. Assessment of skills or presentation of knowledge		

Academic/PTE Rigor

Standards Use the space below to list the state content standards and PTE industry standards addressed by the project. (A list of the content standards is available at <http://www.sde.idaho.gov/ContentStandards/default.asp>. This page, which includes selected high school level standards, is designed to let you easily create a list of standards you are addressing. You may then copy and paste the list into this template.)

Unit Two Safety Skills

02.03 Task: Apply fire safety rules and procedures

02.04 Task: Apply electrical safety rules and procedures

Site Preparation, Concrete Forms, and Forming (Module 7)

07.02 Basic knowledge of concrete footings and foundations

07.05 Explain the use of reinforcing in footings and foundations

Orientation to Health Professions for Secondary Schools (HP 130) and Fundamentals for Health Professions Standards State of Idaho

3.0 Communications in Health Care

5.0 Leadership and Followership

7.0 Medical Terminology

8.0 Infection Control

12.0 Legal and Ethical Responsibilities

Common Core State Standards For English Language Arts & Literacy in Social Studies, Science, and Technical Subjects (for BOTH English 12 and US History I)

RI 5, 6, 7, 10 Grades 9-10, 11-12

W 2, 4, 5, 6, 7, 8, 9 Grades 9-10, 11-12

SL 2, 3, 4, 5, 6 Grades 11-12

L 1, 2, 3, 4 Grades 9-10, 11-12

Concepts and Language of Algebra and Functions

AL.3.1.1 Represent linear patterns and functional relationships in a table and as a graph

A1. 5.2.1 Make predictions and draw conclusions based on measures of central tendency

A1.5.2.2 Make predictions using linear relations, scatter plots, trend lines, charts, tables and line of best fit

School to Career Competencies Please check (x) the competencies addressed by the project

Communicate and understand ideas and information

Collect, analyze and organize information

Identify and solve problems

Use technology

Initiate and complete entire activities

Act professionally

Interact with others

Understand all aspects of an industry

Take responsibility for career and life choices

Student Goal(s) Once the project begins, ask students to generate one or two personal goals.

- Become more aware of the possible natural disasters that could have an impact in our region.
- What type preparation each of us can make to lessen the devastating effect disaster can cause.
- Understand minimum building codes vs. new standards of construction that minimize potential damage and cost as a result of natural disasters.
- Effect of damage to personal automobiles expense of repairs.
- Students will understand the need to have trained medical personnel at every level.

Assessment

How do you and the students know the project is a success? What are your criteria for measuring students' achievement of the disciplinary knowledge and applied learning goals of the project? What evidence do they use to demonstrate their progress? What deliverables do they need to complete prior to the final exhibition? How will students self-assess?

Academic/PTE Rigor

Each student will complete the assessments in each of the classes participating in the thematic unit. This will include a variety of methods from formative and summative assessments measuring both content and method of expression. The culmination may be the senior presentation project required for graduation. Daily journals in English and/or social studies will allow self reflection, and technical teachers may require additional logs and journals as well.

Recommended Resources / Sample Products

Software or Materials Needed

(Examples)

Word 2007; Internet browser; informational research texts and/or class textbooks; 11x17 grid-lined map

Teacher-Developed Materials

(Examples of materials that can be shared with other classes. Please attach samples.)

Various handouts for background (foundational) learning

Student-Developed Materials

(Examples of products that can be shared with other classes. Please attach samples.)

Note cards; formal essays; first aid kits; disaster plans; emergency supply checklist

Websites Used

(Examples)

EarthquakeCountry.info;

**LessonPlanet.com;
ReadyClassroom.DiscoveryEducation.com
(handouts from website);**

CassiaCounty.org/disaster-services;

Earthquake.usgs.gov

Final Words

(In a sentence or two, highlight your project's overall value.)

Connects both academic and technical training to real world events AND potential careers

Teacher Tips/Extensions

(Use the first person to share a useful idea that helps with implementation and ensures success. Make it chatty, informal.)

Use email to coordinate the project with other teachers in the group. Communication between the teachers is going to be key to making the cross-curricular piece work.

Extensions

(List any ideas for students who may want to go deeper into the learning standards.)

- **Research effect a disaster has upon the regions economics.**
- **Research the availability of disaster funds and agencies that for disaster relief, ie FEMA, Red Cross,**
- **Volunteer organizations**

Timeline

What sequence of teaching and learning experiences will equip students to develop and demonstrate the PTE standards and the Academic standards?

Timeline

- Intro
- Handouts; guided practice
- Independent practice
- Formal and informal assessment
- Research project: monitoring selected geography sites, finding valid sources to support (prove) a thesis, etc.
- Construct project/paper for presentation/publication
- Final assessment

(Adapted from the Boston Public Schools Signature Projects.)