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| **TEXAS CTE LESSON PLAN**[www.txcte.org](http://www.txcte.org) |
| **Lesson Identification and TEKS Addressed** |
| **Career Cluster** | Business Management and Administration |
| **Course Name** | Business Management |
| **Lesson/Unit Title** | Project Management |
| **TEKS Student Expectations** | **130.139. (c) Knowledge and Skills**(9) The student demonstrates project-management skills to improve workflow and minimize costs. The student is expected to:1. initiate a project, which includes identifying resources needed for a project
2. develop a project plan
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| **Basic Direct Teach Lesson**(Includes Special Education Modifications/Accommodations and one English Language Proficiency Standards (ELPS) Strategy) |
| **Instructional Objectives** | Students will understand the necessity for effective project management.* Understand the phases of project management.
* Develop a project plan.
* Apply project‐management tools
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| **Rationale** | The main purposes of this lesson are to help students understand the following concepts:* The steps involved in managing a project
* The importance of evaluating a project to see if changes should be made
* The roles of a project manager
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| **Duration of Lesson** | 5-6 days |
| **Word Wall/Key Vocabulary***(ELPS c1a,c,f; c2b; c3a,b,d; c4c; c5b) PDAS II(5)* | * Project – A business activity that has a beginning and end date, is temporary, and has a specific goal in mind.
* Stakeholders – Anyone who will be affected by the completion of a project including the project team, customers, and community members.
* PERT diagram – Program Evaluation Review Technique; a diagram showing progression of tasks in a project.
* GANTT chart – A diagram developed by Henry Gantt, showing tasks in a project.
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| **Materials/Specialized Equipment Needed** | * Textbook
* Lesson Presentation
* Instructor Computer/Projection Unit
* Websites
	+ [http://www.vita.virginia.gov/oversight/projects/default.aspx?id=567](http://www.vita.virginia.gov/oversight/projects/default.aspx?id=567%20)
	+ [https://engineering.purdue.edu/EPICSHS/Teachers/Teaching](https://engineering.purdue.edu/EPICSHS/Teachers/Teaching%20) Students Project Management.pptx (no underscore between Teaching Students Project Management, only spaces)
	+ <http://www.umsl.edu/~sauterv/analysis/488_f02_papers/ProjMgmt.html>
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| **Anticipatory Set**(May include pre-assessment for prior knowledge) | * Ask students if they have worked on a project in class.
* Ask students if they have gone through steps to complete a project.
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| **Direct Instruction \*** | **Ask** students what is involved in preparing college applications, such as the Texas Common Application.  Have a student volunteer list all of the responses.  Ask students what would happen if they left off one of the tasks.**Ask** students what they would need to do to complete another application.  Is it as detailed as the first one? Explain that this is the difference between something that is and is not a project. The first time it is done, it is a project. A repeat of the same type of thing is not considered a project because the details have already been implemented. **Ask** students if they can think of any consequences that can result from leaving out a project detail when determining the scope of the project.Examples of Business Projects    Research projects     Strategic planning     Employee training     New employees     Creating employee manuals     Change in procedures     Event planning     Introduction of a new product Characteristics of a Project     Has a beginning and end date     Is temporary, not ongoing     Has a specific goal in mind   The Role of the Project Manager     Guides the development of the project plan     Monitors the progress of the project     Responsible for the communication plan and communicates with stakeholders     Responsible for the risk management plan Project Phase Flowchart     Initial     Planning     Execution     Closing**Ask** students to volunteer an example of a project that they were involved with or they that are familiar with at school.  Often school projects involve event planning. **Ask** if the event was merely thrown together or if there would seem to be a process. **Ask** for volunteers to answer what “phase one” activities might be for a fundraiser for storm victims in a nearby community (for example, raising a certain amount of money by the end of the event). Record the responses.Then have students volunteer phase two ideas. Be sure to have students record the information to post in the room somewhere. Have students do the same for phase three.  As tasks are listed on the board, usually students will discover a task that has been left out.  Explain that this is one reason projects are usually completed in teams.  A fresh set of eyes can often come up with details that may have been missed.Phase One – The Initial Phase     Define the project     Determine end results or the goals to be accomplished by the end of the project, also called the project scope     Should be specific     Should be measurable     Assemble a project team Phase Two – The Planning Phase    Obtaining resources as needed     Develop a budget     Establish a timeline or schedule with major interval dates to keep the project on schedule     Develop communication plan       Develop a risk management plan to cover any contingenciesPhase Three – The Execution Phase    Identify all tasks required to complete the project     Accomplishing the specific tasks of the project     Keeping in mind the interval dates for completion of major parts of the project     Making changes to the plan as needed     Task tracking methods     PERT – Program Evaluation Review Technique, a critical path diagram developed by the Navy in the 1950’s     GANTT – a type of task‐scheduling bar graph developed by Henry Gantt in 1910 Explain to the students how important it is to estimate the time it will take per task as this will be included in a GANTT chart or PERT diagram. On a projector or document camera, show students examples of finished product PERT diagrams and GANTT charts so they get an idea of the s of processAfter they have listed all the tasks involved, demonstrate how to create a PERT or GANTT chart.   You may also use an online video o show the students. Once the chart or diagram is completed, students can visually see the estimated completion time for each task.  If this project were actually being completed, changes may need to be made to adjust for any time delays.   Also, stress to students that either a PERT diagram or a GANTT chart should be done, but there is no need for both.PERT Diagram Example       The numbers indicate the order of the tasks to be completed  The arrows show the relationship between the tasks, and the task duration is below the arrows     GANTT Chart Example     List the tasks required to complete the project, their start dates, and how long it will take to complete the tasks     Look for online tutorials on how to prepare a GANTT chart in a spreadsheet software application When a project is completed, it is important for follow‐up discussions to take place to gauge the level of success.  Ask students how a cell phone company, for example, knows if its new model is successful.  Does the company send a follow‐up email with a survey?  Are there possibly internal memos or emails that circulate regarding their new product’s successes or failures?  Phase Four – The Closing Phase     Completion of the project     Evaluation of project successes and weaknesses     Questions to ask     On time?     On budget?     Results met?Evaluation methods     Discussion    Online survey     Paper survey     Phone calls     Data reflecting the level of customer or client satisfaction (if project is external)During the project, all parties involved will need to be informed as to the status of the project. In groups, have students discuss who needs information, how often they need it, and what kind of information is needed.Communication Plan     Who will receive project plan updates?     What information will they receive?     When will they receive updates?     Location of team members     If local, face‐to‐face, or digital     If distant, consider online application sharing and online scheduling to coordinate activities Communication Plan Specifics     Who (stakeholders)?     Project team members     Customers or clients     Community members     When (frequency)?     Weekly     Periodically as needed     How (medium)?     Meetings     Monthly newsletter     Website updateAs the project progresses, changes may need to be made.  As an example (you may search for others on the Internet), discuss the following situation with students.  If a new cell phone is coming out but there is a strike at one of their suppliers, or if parts are coming from a foreign country and they cannot leave the country for some reason, what is the company’s contingency plan?This also leads to the concept of risk.   Have students choose a recent product and ask them to share what risks could be associated with the project of developing that product.Status Report     Can be included as part of a communication plan     Verifying progress compared to schedule     On‐track in what areas     Behind in what areas     Ahead in what areas     Unexpected delays or other issues Project Risk     Identify potential risks     Develop a risk checklist    Estimate likelihood of risk (risk assessment)     Determine impact in each area, (for example, time, budget, end results)     Develop a risk management plan     Allow for delays when scheduling     Keep amounts on hand for unanticipated budget overage     Enforce conditions of contracts to lessen risk Projects can actually be planned manually, but the tools below can aid in the project plan.  Ask students if they would prefer to use digital tools or complete the project documents manually.Project Management Tools     Brainstorming tools     PERT chart tools     GANTT chart tools     Scheduling system     Computer |
| **Guided Practice \*** | Have the students decide on a project idea as a class. It could be one that may have been done already or that one or more of the students were involved with, which may help clarify the steps that were involved in the project.  Then place signs around the room with the names of the four phases of a project.  Have students, in pairs, write down the activities that were involved with each phase and place them under the appropriate phase.  When they are done, go through each phase and discuss what the students suggested, making adjustments as necessary. |
| **Independent Practice/Laboratory Experience/Differentiated Activities \*** | Have students conduct research on actual business projects to see how the phases apply to real‐world projects.  They may take notes on the activities that are performed during each phase as they may need to refer to them later on when they plan projects. |
| **Lesson Closure** | Review Ask students the following questions on exit tickets: Q1: What are three specific characteristics of a project? A1: A project has a beginning and end date, is temporary, and has a specific result or goal in mind. Q2: What are the four phases of a project? A2: The four phases are the initial, planning, execution, and closing phases. Q3: In which phase are the majority of the project tasks done? A3: The execution phase is when most of the tasks are done. Q4: What are two types of charts that track task progress?A4: Two types of charts are PERT and GANTT charts. Q5: What is the purpose of a communication plan? A5: Communication plans inform all parties involved about the status of a project. |
| **Summative / End of Lesson Assessment \***  | Informal Assessment Any and all of the following can be used as informal assessments. * Exit tickets with vocabulary
* Pair‐share activities
* Class discussion and participation

Formal Assessment The following can be considered a formal evaluation: * **Communication Plan Table Assignment #1** – Present students with a project scenario, such as the project examples at the beginning of the presentation (or any other project idea) and have students create a Communication Plan table for that project plan.  The table should have column headings stating Stakeholders, Types of Information, How Often, and Type of Communication.
* **Project Mind Map Assignment #3** – Individually, students will create a mind map for a project idea of their choice.  They may use software that creates mind maps, create one in a word processing document that uses shapes (such as in a flowchart), or create one manually.  In the center will be the project idea, and the project phases will stem from the center.  Be sure to include the tasks that will be involved.  PERT diagrams or GANTT charts do not need to be included in the mind map.  The mind map is to serve as a project guideline.
* **Planning a Field Trip Project Assignment #2** – Have students in groups plan a project such as a field trip or other school or community event.  They will create a presentation, whether using presentation software or an online presentation website, that includes slides with each phase of the project and appropriate graphics and graphs as necessary.
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| **References/Resources/****Teacher Preparation** | * <http://www.vita.virginia.gov/oversight/projects/default.aspx?id=567>
* [http://www.usability.gov/what‐and‐why/project‐management.html](http://www.usability.gov/what%E2%80%90and%E2%80%90why/project%E2%80%90management.html)
* <http://www2.cit.cornell.edu/computer/robohelp/cpmm/Project_Roles_and_Responsibilities.htm>
* [https://engineering.purdue.edu/EPICSHS/Teachers/Teaching Students Project Management.pptx](https://engineering.purdue.edu/EPICSHS/Teachers/Teaching%20Students%20Project%20Management.pptx) (no underscore between Teaching Students Project Management, only spaces)
* <http://www.umsl.edu/~sauterv/analysis/488_f02_papers/ProjMgmt.html>
* Business Principles and Management, South‐Western Publishing, 2001
* Business Management, South‐Western Publishing, 2013
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| **Additional Required Components** |
| **English Language Proficiency Standards (ELPS) Strategies** |  |
| **College and Career Readiness Connection[[1]](#footnote-1)** |  |
| **Recommended Strategies** |
| **Reading Strategies** |  |
| **Quotes** |  |
| **Multimedia/Visual Strategy****Presentation Slides + One Additional Technology Connection** |  |
| **Graphic Organizers/Handout** |  |
| **Writing Strategies****Journal Entries + 1 Additional Writing Strategy** |  |
| **Communication****90 Second Speech Topics** |  |
| **Other Essential Lesson Components** |
| **Enrichment Activity**(e.g., homework assignment) | Have students interview an employee or employer of a business and ask them about projects they have conducted.  Inquire about how the work was divided, how they scheduled the required tasks, and how they evaluated the project’s success when it was completed.  Report your findings to the class. |
| **Family/Community Connection** |  |
| **CTSO connection(s)** | FBLA, BPA |
| **Service Learning Projects** |  |
| **Lesson Notes** |  |

1. Visit the Texas College and Career Readiness Standards at <http://www.thecb.state.tx.us/collegereadiness/CRS.pdf>, Texas Higher Education Coordinating Board (THECB), 2009. [↑](#footnote-ref-1)