***Q.U.E.S.T.***

***Research Project***

***Instructional Design***

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***Rationale***

Education must continue consistently throughout our lives. In order for students to continue to learn and explore, they must be given the tools necessary to succeed in society. Students need to learn how to ask question, and more importantly, find answers that will positively impact their lives, society, and the world. Students need to learn to ask questions and compile evidence, research, and investigation to education themselves as part of the Ohio Content Standards (2001) and more importantly, as a necessary skill in life. The Q.U.E.S.T. research project incorporates problem-based learning as well as service learning, both of which are key instructional models for contextual teaching (Chiarelott, 2006)]

By incorporating components of the problem-based model, students are taught the skills necessary to create self-directed learners (Chiarelott, 2006). Students focus a topic of discussion through careful assessment of their interests and skill sets. Students will choose the career they would like to investigate. They complete a research paper befitting a high school senior incorporating all writing application benchmarks in the Ohio Content Standards, 2001. Students not only learn to investigate, but they will also learn to determine validity of information. With all the information available via the worldwide web, it is important to know the credibility and accuracy of information (Gunning, 2007). Students will engage in the writing process from prewriting to publication showcasing the culmination of their research. Through this process, students learn thinking and research skills that will move beyond the English classroom and into the real world.

Using this investigative knowledge, students engage in another contextual learning experience, service learning. “Service learning must linked with course content and have an academic and community service orientation” (Chiarelott, 2007). Because students learn best when they can identify with and are interested in the topic (Greenburg, 2000), they will engage in service learning by interning with a company within their chosen career pathway. Students enter their internship with background knowledge through their research and investigative efforts. Students will gain first hand knowledge of the career by assuming the responsibilities for a period of time adding experiential knowledge to their already created background knowledge.

To bring all these efforts together, students engage in a reflection and self-evaluation of their efforts and experience. Students must reflect on the experience in order to improve performance and overall interest. Self reflection is a crucial part of any service learning process. Students must learn to reflect on their actions, achievements, and performance in order to have a truly meaningful experience (Kottalili, 2009). The greatest knowledge will come from the personal interaction within the service learning component. Through this process, students reflect on what they learned from the experience and how this experience adds richness to their investigative knowledge (Greenburg, 2000). Personal meaning is generated throughout the entire unit allowing students to control the meaningfulness of the investigation. Students learn to direct their own learning that will carry through to adulthood (Chiarelott, 2007).

***Unit Intended Learner Outcomes***

***Brainstorming***

* Students will compose open-ended questions for research, assigned or personal interest, and modify questions as necessary during inquiry and investigation to narrow the focus or extend the investigation. *Analysis*
* Students will reflect on the knowledge and skills needed to fulfill specific career tasks determining what career best fits their abilities. *Evaluation*
* Students will engage in professional interactions with potential employers to gain first hand knowledge of a career pathway. *Application*
* Students will analyze and compile information from several sources on a single issue clarifying ideas and connecting them to their interests. *Analysis*
* Students will generate writing ideas through discussions with others and from printed material, and keep a list of writing ideas. *Knowledge*
* Students will determine the usefulness of and apply appropriate pre-writing tasks (e.g., background reading, interviews or surveys). *Knowledge*
* Students will apply active listening strategies (e.g., monitoring message for clarity, selecting and organizing essential information, noting cues such as changes in pace). *Application*
* Students will demonstrate positive work behaviors and personal qualities needed to work in the education and training profession. *Application*
* Students will select and use effective speaking strategies for a variety of audiences, situations and purposes*. Application*
* Students will develop a controlling idea that conveys a perspective on the subject creating a clear, concise thesis statement that focuses the topic of the research paper. *Synthesis*
* Students will create an organizing structure appropriate to purpose, audience and context. *Application*

***Preassessment: Work Interest Inventory***

Courtesy of myfuture.com

This preassessment will be completed on the Internet where students will receive instant results explaining their career area of interest. To make a good decision about a future career, it helps to know what type of work you enjoy doing. Should I go to college or look for a job? If I try to find a job, what kind of job should it be? How do I find what jobs are best for me?  
  
Directions:  
Just check the box next to any of the activities that you like to do. Your answers are analyzed and fit into two of the 6 work groups (Realistic, Investigative, Artistic, Social, Enterprising or Conventional).

|  |  |
| --- | --- |
| **Activity** | **Like?** |
| **1. Take a course in car engine repair.** |  |
| **2. Counsel other people your age.** |  |
| **3. Study Earth sciences.** |  |
| **4. Construct wooden furniture.** |  |
| **5. Work with scientists to design a new jet engine.** |  |
| **6. Design an office filing system.** |  |
| **7. Manage a sales force.** |  |
| **8. Sing in a musical variety show.** |  |
| **9. Paint a mural.** |  |
| **10. Describe how sunlight is used for energy.** |  |
| **11. Participate in community activities.** |  |
| **12. Conduct research studies.** |  |
| **13. Lead a seminar on taking business risks.** |  |
| **14. Track a company's sales and finances.** |  |
| **15. Direct theatrical productions.** |  |
| **16. Work with abused children.** |  |
| **17. Use weights and measures.** |  |
| **18. Do automotive body work.** |  |
| **19. Write scientific reports.** |  |
| **20. Improve the accounting system of a small business.** |  |
| **21. Find people to invest in your business.** |  |
| **22. Write songs.** |  |
| **23. Take a course in marriage counseling.** |  |
| **24. Build a house.** |  |
| **25. Read to blind people.** |  |
| **26. Enter data into a computer.** |  |
| **27. Think of ideas for starting your own business.** |  |
| **28. Learn how to arrange the subjects for a photograph.** |  |
| **29. Invent scientific products.** |  |
| **30. Participate in a Big Brother/Big Sister program.** |  |
| **31. Compute wages for payroll records.** |  |
| **32. Take a short-story-writing class.** |  |
| **33. Repair a wooden fence.** |  |
| **34. Help your business grow.** |  |
| **35. Learn how to use a word processor.** |  |
| **36. Play a musical instrument.** |  |
| **37. Learn about childcare.** |  |
| **38. Use a prism to study light.** |  |
| **39. Assemble a new bicycle.** |  |
| **40. Change the structure of a corporation.** |  |
| **41. Tax accounting.** |  |
| **42. Design greeting cards.** |  |
| **43. Teach adults how to read.** |  |
| **44. Explain how satellites work.** |  |
| **45. Replace a broken light switch.** |  |
| **46. Learn how to develop real estate.** |  |
| **47. Identify different types of science lab equipment.** |  |
| **48. Restore an old car.** |  |
| **49. Design a set for a play.** |  |
| **50. Provide counseling to people with drug or alcohol problems.** |  |
| **51. Write a business proposal.** |  |
| **52. Fill out order forms for a company.** |  |
| **53. Be a file clerk.** |  |
| **54. Teach learning-disabled students how to read.** |  |
| **55. Cut wood with a handsaw.** |  |
| **56. Write a script for a play.** |  |
| **57. Lead a project team or committee.** |  |
| **58. Conduct an audit.** |  |
| **59. Manage a new area of a large corporation.** |  |
| **60. Build a radio.** |  |

***Subunit One: Brainstorming a Question***

***Lesson One: Determining Career Interests*** *90 minute period*

1. **Learner Outcomes*:***

* Students will determine the usefulness of and apply appropriate pre-writing tasks (e.g., background reading, interviews or surveys). *Knowledge*
* Students will analyze and compile information from several sources on a single issue clarifying ideas and connecting them to their interests. *Analysis*
* Students will generate writing ideas through discussions with others and from printed material, and keep a list of writing ideas. *Knowledge*

1. **Materials:**

* Computer
* Internet (website: myfuture.com)
* Q.U.E.S.T. Packet

1. **Procedure:**
2. **Before the lesson:** Previously, a class period was devoted to explaining the ins and outs to Q.U.E.S.T. Students have had the opportunity to ask questions and have set deadlines. Review the first step to the project: Question and Brainstorming. Inform students of the agenda of the day. *10 minutes*
3. **Engagement:** Write on the chalkboard the question: What do you want to be when you grow up? Divide the chalkboard into two categories:

As a child, An attainable career My ideal career

I wanted to be a… would be… would be…

Questions for Discussion:

* Why do you think we have different answers in each category?
* What do you think accounts for the change in answer between us as children and us now?
* Why do we have an attainable career and an ideal career?
* Why can’t the ideal career be the attainable career?

The goal of Q.U.E.S.T. is to become informed and educated when it comes to making the biggest decision of your life, what will you do after graduation? This project will hopefully show students that their ideal career can be attainable (within reason) if they are willing to work for it and put forth the effort necessary to be successful. *30 minutes*

1. **Activity:** Students will logon to the computers. Students will go to [www.myfuture.com](http://www.myfuture.com) Click on the work interest quiz on the right hand side of the page. Students will click the box next to each activity that interests them. There are sixty questions. *10 minutes*

Upon completion of the assessment, students will be given a list of several jobs in five different categories. There is a listing of civilian jobs and military positions to accommodate all student interest levels. Students should research the various careers and familiarize themselves with the unknown. They may find a career listed that they have never heard of. They should explore all options. *20 minutes*

**Key Question for Reflection:** Students will narrow their career selections to five specific careers. They must briefly reflect on these selections. On page 10 of the Q.U.E.S.T. packet, students should write down the five career topics and 1-3 sentences explaining why they are interested in this career and/or why they would be successful in this field. *10 minutes*

1. **Closure:** End class with a discussion about the careers they are interested in. Have students to go to the board and circle the careers that they are interested in exploring. Ask various students why they are choosing specific careers. What would make them successful in that career? If careers are added to the board, ask students to why they added that career. *10 minutes*
2. **Assessment:** Assess student understanding based on student rationales for each career selection. Students should show a competency of what the career entails and a reason showcasing why that career is a fit for them.

***Subunit One: Brainstorming a Question***

***Lesson Two: Focusing the topic*** *Time needed*: *180 minutes (90 minute periods)*

1. **Learner Outcomes**

* Students will compose open-ended questions for research, assigned or personal interest, and modify questions as necessary during inquiry and investigation to narrow the focus or extend the investigation. *Analysis*
* Students will determine the usefulness of and apply appropriate pre-writing tasks (e.g., background reading, interviews or surveys). *Knowledge*
* Students will demonstrate positive work behaviors and personal qualities needed to work in the education and training profession. *Application*

1. **Materials:**

* Q.U.E.S.T. Packets
* KWL Charts
* Pen/Pencil
* 2 KWL Chart Overheads
* Overhead Markers

1. **Procedure:**
   1. **Before the Lesson:** Review the concept of the KWL chart. Review with students each section of the KWL. Discuss what goes in each section of the KWL chart.Discuss some way that student could locate the information we want to learn. This is the How. Make a list on the chalkboard of HOW you can obtain information. Examples should include:Internet, books, periodicals, magazines, journals, newspapers, surveys, interviews, etc. *15 minutes*
   2. **Engagement:** Now that students have completed a KWL chart and know the basic elements of it, they will create KWL charts for each of the five career options they are considering for their research project. Place a blank KWL chart on the board. Use the topic, Teacher. Ask students everything they know about the teaching profession. Place that into the K column. In the W column on the overhead, ask students what they want to know about the teaching profession. Place those questions into the W column. Questions must be specific to the career. General questions will be answered through research. *15 minutes*
   3. **Activity:** Students will now complete the K column for each of their five career fields Students must place at least 10 pieces of information they know about the topic in this column. Information need not to be in complete sentences. *30 minutes*

Students will now come up with at least 10 questions they would like to answer about the career. These questions need to be in question format. These questions will be used at the career expo. Students will ask these questions to the career representatives. Allot more time for this process because they need to come up with their own specific questions relevant to the individual careers. This will go into the next class period. *45*-*60 minutes*

Discuss professionalism and the interview process. Students need to look professional at the career expo. Therefore, they are asked to dress business casual. This is comparable to their school dress code. Refer to page 17 in the Q.U.E.S.T. packet. Review these points with students. *10 minutes*

Invite a student to come up to the front. The teacher acts as the potential employer and allow student to practice their approach and technique. Point out the good and the bad. Reiterate the importance of first impression. *5 minutes*

Divide the class into partners. Students will practice approaching and interviewing each other following the guidelines on page 17. One student will pretend to be the interviewer, while the other is acting as him or herself. Then they should reverse roles. This needs to be taken seriously. *15 minutes*

* 1. **Closure:** Each student will come to the front of the room, one by one and practice the approach. Introductions should not be more than one minute. Once students have successfully introduced themselves, shook hands, and explained why they were there, they need to thank the teacher for their time and then they are able to line up at the door. This activity will act as the exit slip. *15-20 minutes*

***Subunit One: Brainstorming a Question***

***Lesson Three: Exploring and Narrowing the Topics*** *3 hours: Special Assembly Schedule*

1. **Learner Outcomes**

* Students will demonstrate positive work behaviors and personal qualities needed to work in the education and training profession. *Application*
* Students will select and use effective speaking strategies for a variety of audiences, situations and purposes*. Application*
* Students will apply active listening strategies (e.g., monitoring message for clarity, selecting and organizing essential information, noting cues such as changes in pace). *Application*
* Students will engage in professional interactions with potential employers to gain first hand knowledge of a career pathway. *Application*

1. **Materials:**

* Clipboard
* Q.U.E.S.T. packet
* KWL charts with 10 questions in each W column
* Pen or Pencil
* Index cards

1. **Procedure**
   1. **Before the Lesson:** Review with the students the expectations of this afternoon. Students are expected to act like potential employees. Refer to page 17 in the Q.U.E.S.T. packet. Explain to students that they will receive only 15-20 minutes with an employer so they need to rehearse what they want to say prior to introducing themselves. *10 minutes*
   2. **Engagement:** Review with students the approach when meeting a potential employer. Ask the students to partner with someone new (not the partner from last class period). Students should introduce themselves like we rehearsed yesterday. *10 minutes.*

Students will spend a few minutes reading over their interview questions. *10 minutes.*

* 1. **Activity:** Students will attend the career expo in the gymnasium where there will be several representatives from each career field.Not every career will be represented. Those students who are unable to interview someone from their given career will be given time to research the answers to their questions.

Each student will have approximately 15 minutes with an employer. Students will ask each employer the questions they created last class period. Students should keep track of the answers in the L column of their KWL charts showing what they learned about this career. *15-25 minutes per employer.*

The career expo will last for three hours so there will be plenty of time for students to speak to those on their list and potentially other they may be interested in. *2 hours*

* 1. **Closure:** Students will narrow down their topics and choose a topic for discussion before the conclusion of the career expo. Students will write their name and career choice on an index card. Index cards should be turned into the teacher. *5 minutes*
  2. **Assessment:** Students will reflect on the chosen career completing the initial reflection on page 18. *20 minutes*

***Subunit Two: Understanding the Focus of Research***

***Lesson Four: Choosing and focusing a topic***

1. **Learner Outcomes**

* Students will compose open-ended questions for research, assigned or personal interest, and modify questions as necessary during inquiry and investigation to narrow the focus or extend the investigation. *Analysis*
* Students will develop a controlling idea that conveys a perspective on the subject creating a clear, concise thesis statement that focuses the topic of the research paper. *Synthesis*

1. **Materials:**

* Q.U.E.S.T. packet
* Pen or Pencil

1. **Procedure**
   1. **Before the Lesson:** Students will review the concept of a thesis statement. They will refer to pg. 19 in their Q.U.E.S.T. packet. We will discuss how the thesis statement in the main focus of the entire body of research. Students will reflect on why they have chosen this topic and what they find the most interesting about it. They should refer to their initial topic reflection on pg. 18 to start brainstorming and understanding their research focus. Students will complete the question on pg. 19 to help further focus their ideas. They should create two ***different*** thesis statements. *15 minutes*
   2. **Engagement:** Modeling the Think-Pair-Share strategy, students have already completed the thinking stage at the beginning of the lesson, creating their thesis statements. With a partner, students should review the thesis statements they have written. Explain to that classmate what is good about their thesis statement and be honest if it is not up to par. They should be able to determine what the focus of their partner’s paper will be based solely on that one sentence. If your partner cannot, they need to try again. After working with your partner, think about which thesis statement best summarizes the intention of your research. Place a check next to the designated thesis statement. *10 minutes*
   3. **Activity:** Students will create a concept map based on their research topic. Students need to determine what each paragraph will be about. Their concept maps should contain at least 14 items stemming from the topic’s focus. See pg. 20 in your Q.U.E.S.T. packet. Utilizing the Share phase, students will enter into small groups based on career pathways: all business majors, humanities, social services, military, etc should join together if possible. If this is not feasible, create small groups of no more than 3-4. *5 minutes*

Students will create a list of topics to discuss in their research paper. They should utilize their groups to help create topics for the career focus. Students must list fourteen. *30 minutes*

Once they have fourteen topics of discussion, they need to log into a computer and begin creating their concept map on Microsoft Word. See pg. 21 in the Q.U.E.S.T. packet for concept mapping instructions. *20 minutes*

* 1. **Closure:** Students must print their concept map for viewing. They need to turn these in as their exit pass before leaving the classroom. *5 minutes*

1. **Assessment:** Concept maps will be viewed for completion only. Teacher will look for fourteen logical subtopics for research and one main focus in the center. Topics must be relevant. One point will be given for each topic and subtopic totaling 15 points.

***Post Assessment***

This assessment for this unit is both formative and summative. Students engage in both objective and subjective summative assessments, whereas the teacher will evaluate students objectively. The summative assessments are a series of rubrics for the main components of the project-based assignment. The summative assessment is the journal and reflection components of the service-learning assignment.

Students receive copies of the assessment rubrics. These assessments are included in the student packet for specific purposes: 1. To show students what I am looking for in terms of completion and requirements. 2. As a tool for students to evaluate their work. Students will evaluate their paper, PowerPoint, and presentation using the same rubric used by the teacher. (All rubrics are courtesy of rubistar, based on the 6+1 writing model.) Students need to think about their own product as if they were the teacher. Students are given this information prior to the start of Q.U.E.S.T. therefore they can refer to the rubrics throughout the whole research and design process. The goal for this component is for students to learn to self-critique and evaluate. Throughout the writing process, they were also individually evaluating and revising.

Students also engage in a self-evaluation via a 2-3 page reflective essay stating what they accomplished and what they learned while engaged in their service-learning internship. There is no rubric to accompany this piece. However, the teacher will look for thoughtfulness in the reflection. The goal is to assess student involvement and experience. The students need to show an appreciation and understanding of the experience on a personal level showcasing how this experience impacted their perception of the career.

The teacher will assess student understanding through the evaluation of their research paper, reflection, and presentation using the previously created rubric. Attention will be paid to the organization and content of the research. Students should have a clear focus with the research to fully explain their thesis statement. The main goal of this assessment is to determine the student’s expertise on the career and the richness of their experiences. By using the rubric, the teacher is able to see that students have grasped the skill of Q.U.E.S.T. Students now know how to pose a Question, Understand the process of research and focus, Explore a variety of source both print, electronic, and real world experience to gain information on the topic, seek out Service-learning as a means of knowledge, and incorporate Technology into all aspects of research. Students will translate these skills across content areas and throughout life.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **CATEGORY** |  |  |  |  |
| **Introduction** | The introduction is inviting, states the main topic and previews the structure of the paper. **10 points** | The introduction clearly states the main topic and previews the structure of the paper, but is not particularly inviting to the reader.  **7 points** | The introduction states the main topic, but does not adequately preview the structure of the paper nor is it particularly inviting to the reader. **5 points** | There is no clear introduction of the main topic or structure of the paper. **3 points** |
| **Focus on Topic** | There is one clear, well-focused topic. Main idea stands out and is supported by detailed information. **20 points** | Main idea is clear but the supporting information is general.  **15 points** | Main idea is somewhat clear but there is a need for more supporting information. **10 points** | The main idea is not clear. There is a seemingly random collection of information. **5 points** |
| **Support for Topic** | Relevant, telling, quality details give the reader important information that goes beyond the obvious or predictable. **40 points** | Supporting details and information are relevant, but one key issue or portion of the storyline is unsupported. **30 points** | Supporting details and information are relevant, but several key issues or portions of the storyline are unsupported. **20 points** | Supporting details and information are typically unclear or not related to the topic. **10 points** |
| **Sources** | All sources used for quotes and facts are credible and cited correctly. **10 points** | All sources used for quotes and facts are credible and most are cited correctly. **7points** | Most sources used for quotes and facts are credible and cited correctly. **5 points** | Many sources used for quotes and facts are less than credible (suspect) and/or are not cited correctly. **3 points** |
| **Grammar & Spelling** | Writer makes no errors in grammar or spelling that distract the reader from the content. **10 points** | Writer makes 1-2 errors in grammar or spelling that distract the reader from the content. **7 points** | Writer makes 3-4 errors in grammar or spelling that distract the reader from the content. **5 points** | Writer makes more than 4 errors in grammar or spelling that distract the reader from the content. **3 points** |
| **Conclusion** | The conclusion is strong and leaves the reader with a feeling that they understand what the writer is "getting at." **10 points** | The conclusion is recognizable and ties up almost all the loose ends. **7 points** | The conclusion is recognizable, but does not tie up several loose ends. **5 points** | There is no clear conclusion, the paper just ends. **3 points** |

**Student Name: Topic:**

**Final Paper Rubric**

**PowerPoint Rubric**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| CATEGORY | **10** | **7** | **5** | **3** |
| **Background** | Background does not detract from text or other graphics. Choice of background is consistent from card to card and is appropriate for the topic. | Background does not detract from text or other graphics. Choice of background is consistent from card to card. | Background does not detract from text or other graphics. | Background makes it difficult to see text or competes with other graphics on the page. |
| **Spelling and Grammar** | Presentation has no misspellings or grammatical errors. | Presentation has 1-2 misspellings, but no grammatical errors. | Presentation has 1-2 grammatical errors but no misspellings. | Presentation has more than 2 grammatical and/or spelling errors. |
| **Content - Accuracy** | All content throughout the presentation is accurate. There are no factual errors. | Most of the content is accurate but there is one piece of information that might be inaccurate. | The content is generally accurate, but one piece of information is clearly flawed or inaccurate. | Content is typically confusing or contains more than one factual error. |
| **Sequencing of Information** | Information is organized in a clear, logical way. It is easy to anticipate the type of material that might be on the next card. | Most information is organized in a clear, logical way. One card or item of information seems out of place. | Some information is logically sequenced. An occassional card or item of information seems out of place. | There is no clear plan for the organization of information. |
| **Use of Graphics** | All graphics are attractive (size and colors) and support the theme/content of the presentation. | A few graphics are not attractive but all support the theme/content of the presentation. | All graphics are attractive but a few do not seem to support the theme/content of the presentation. | Several graphics are unattractive AND detract from the content of the presentation |

**Presentation Rubric**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| CATEGORY | **8** | **6** | **4** | **2** |
| **Preparedness** | Student is completely prepared and has obviously rehearsed. | Student seems pretty prepared but might have needed a couple more rehearsals. | The student is somewhat prepared, but it is clear that rehearsal was lacking. | Student does not seem at all prepared to present. |
| **Time-Limit** | Presentation is 5-7 minutes long. | Presentation is 4 minutes long. | Presentation is 3 minutes long. | Presentation is less than 3 minutes OR more than 6 minutes. |
| **Stays on Topic** | Stays on topic all (100%) of the time. | Stays on topic most (99-90%) of the time. | Stays on topic some (89%-75%) of the time. | It was hard to tell what the topic was. |
| **Speaks Clearly** | Speaks clearly and distinctly all (100-95%) the time, and mispronounces no words. | Speaks clearly and distinctly all (100-95%) the time, but mispronounces one word. | Speaks clearly and distinctly most ( 94-85%) of the time. Mispronounces no more than one word. | Often mumbles or can not be understood OR mispronounces more than one word. |
| **Posture and Eye Contact** | Stands up straight, looks relaxed and confident. Establishes eye contact with everyone in the room during the presentation. | Stands up straight and establishes eye contact with everyone in the room during the presentation. | Sometimes stands up straight and establishes eye contact. | Slouches and/or does not look at people during the presentation. |