



*Creating Quality  
Projects  
Handbook*

**2012-2013**

# ***Components of a Quality Project***

A quality project...

- 1. Meets national, state, or local standards.** Identify Standards to be addressed in your project. Limit yourself to five standards. Too many standards and they become impossible to assess. The student work for the project should specifically assess whether the standards were met or not.
- 2. Engages students.** As you create projects, think about what you are asking your students to do and how you are asking your students to do and how you are asking them to do it. Vary your presentation style and vary the types of activities that students are participating in. Ask yourself, “Will students be engaged and motivated by this work?”
- 3. Focuses on key understandings.** Every project should be organized, big ideas that you expect every student to learn and understand by the end of the project.
- 4. Encourages higher-level thinking.** Higher-level thinking is defined as applying and synthesizing knowledge. A project encourages higher-level thinking by focusing on an essential question, issue, or problem that helps students explore a topic in depth. The project asks many open-ended questions that encourage students to use skills and knowledge in a new and original context. Students reflect on their learning and draw connections between their learning and draw connections between their learning and the real world. A quality project also promotes higher-level thinking by asking students to connect knowledge from one subject area to another, by asking students to interpret data and analyze information, and by asking students to pose and solve their own problems.
- 5. Supports literacy and basic skills.** Substantial writing, reading, and discussing need to be included in every project. In addition, connections to math and other subject areas should be made. In this way, projects are not an add-on to your curriculum; projects are your curriculum. They enable you to make connections between all subject areas in meaningful ways.

- 6. Has clear and quality assessment.** A quality project has clear expectations that are communicated to the students at the beginning of the project. Students understand the final assessment task they are working toward and understand the rubric or other scoring tool that will be used to evaluate them. Rubrics and scoring tools should emphasize the content of the final product and not just cosmetic appearances. Assessments evaluate student progress toward attainment of the standards.
- 7. Focuses on all students.** All students should be able to understand the subject matter in depth and acquire the skills set out in the project. Lessons and content are geared toward different instructional levels, and lesson format is varied so that different learning styles are addressed.
- 8. Uses technology sensibly.** Technology should be integrated when and where it is appropriate. When designing lessons, consider how technology could be used to enhance the learning process by providing access to information that is not easily accessed in a different way (i.e., the internet). Uses technology to engage students in exploring real-world issues and solving authentic problems using digital tools and resources.
- 9. Has a real-world application.** Students are more motivated and engaged when they are learning about topics and concepts that affect their lives in meaningful ways. Relate what you are studying to the world outside your classroom by connecting your curriculum to issues and problems that your students face in their everyday lives.

## ***Essential Question(s):***

An essential question is a question that drives and focuses student work. Essential questions are open-ended and cannot be answered in one sentence or in one day. They lead students to explore what is essential about a topic and in doing so students add to and build upon their previous knowledge. Driving questions have a real world application that are all students can understand, relate to and are motivated by.

### ***Sample Essential Questions***

#### ***Primary***

1. What makes a friend?
2. How does a garden grow?
3. What makes me special?
4. Am I healthy?
5. What makes a good write/reader?
6. Why can't I have a dinosaur as a pet?
7. What does it mean to be rich?
8. Who discovered America?
9. Must a story have a moral? A beginning, middle, and end?
10. What's the best way to solve a problem?
11. How do animals move around?
12. What is an insect?
13. Who is your hero?

#### ***Intermediate***

1. How are a culture's beliefs and values revealed?
2. What makes a good citizen?
3. How can we remember the children of the Holocaust?

4. How has technology changed the world?
5. What is the best route to take to visit a specific region of the United States?
6. I don't have a tropical rain forest in my backyard, so why should I care about rain forests?
7. Are jury trials fair?
8. How can we work together to create a successful business?
9. How does our school affect the environment?
10. What makes a good sneaker?
11. What does it mean to be rich?
12. Is our drinking water safe?
13. Which flashlight batteries are most cost-effective?
14. Who discovered America?
15. Are our school rules fair?
16. Who is your hero?

### ***Middle School***

1. Are we truly free in a democracy?
2. What rights to teenagers have?
3. Huck Finn- abolitionist or racist?
4. Should we allow cloning?
5. How does a great work of art change you?
6. How does our school affect the environment?
7. What makes a good sneaker?
8. What does it mean to be rich?
9. Are the new democracies truly democratic?

10. What impression did Impressionism leave?
11. Is our drinking water safe?
12. Which flashlight batteries are most cost-effective?
13. Who discovered America?
14. Are our laws fair?
15. Who are the “heroes” in the books we have read?

### ***High School***

1. What makes a Democrat a Democrat and a Republican a Republican?
2. Is gravity a fact or a theory?
3. Holden Caulfield-a phony or authentic?
4. How does a great work of art change you?
5. Does freedom of speech mean you can say anything you want?
6. How does our school affect the environment?
7. What does it mean to be rich?
8. Is there a relationship between crime and population density in the United States?
9. Are the new democracies truly democratic?
10. Is our drinking water safe?
11. What impression did Impressionism leave?
12. Was geometry discovered or invented?
13. “War is diplomacy by other means.” Is this true?
14. What is the relationship between “fiction” and truth”?

## ***Essential Question Starters***

If you get stuck trying to create an effective driving question, here are essential question starters to get you going. While many of these starters are open-ended, some can be answered with yes or no. In those cases, students need to provide written evidence to support their answers.

1. What makes a good \_\_\_\_?
2. What are the ingredients for a successful\_\_\_\_?
3. What is the best way to \_\_\_\_?
4. Is there a relationship between \_\_\_\_and \_\_\_\_?
5. What are the advantages and disadvantages of \_\_\_\_?
6. What will happen if \_\_\_\_?
7. How are \_\_\_\_and \_\_\_\_different?
8. How many different \_\_\_\_are there?
9. Did \_\_\_\_influence\_\_\_\_?
10. Is \_\_\_\_really important?
11. In what ways did \_\_\_\_influence\_\_\_\_?
12. What would \_\_\_\_ be without \_\_\_\_?

## ***The Final Product***

The final product is your “proof” that your students have learned what you intended. A product is more than an essay or a report. The product should show students mastering of the project topic, and it should reflect multiple levels of thinking and skills.

Another important aspect to consider when determining the final product is the impact the product will have beyond your classroom. Students often place higher standards on their work if the “real world” is going to see it. An excellent product has a genuine purpose and should reach out to an audience beyond the students who are working on it.

### ***Examples of good final products and ideas on how to make them even better:***

	<b>GOOD</b>	<b>BETTER</b>
All About Me	Stories and drawings about family and family history.	Student created multimedia presentations about themselves, their families, and histories that are shared with the community at a Parent’s Night and on the Internet.
Community Involvement	Sketchers and plans for the new playground.	Sketches and building plans for the new playground including a list of safe, recycled, and locally available materials and recommendations that address safety regulations.
Homeless People	A web site that provides information about the homeless problem in America and provides links to public resources.	A proposal to the town council about remedying the homeless situation in the community. Presentation of the proposal will include a video documentary where homeless people in the community homeless shelter employees and others in the community are interviewed about the homeless situation.
Genetic Engineering	A brochure about genetically altered produce to be distributed at a local supermarket.	Student-created materials for a two hour workshop that clearly explains the scientific flaws in Jurassic Park to elementary age children. Give workshop at an elementary school.

## **A word in assessments Evidence of Learning:**

How will you determine whether or not students are getting “it”? Think about why you are performing the assessment/checks of understanding and what you will do with the results. It is most helpful to give an assessment that will help you learn more about your student’s understanding as it relates to the Common Core Standards and target students who need more assistance or challenge. Think about the kinds of questions or tasks you’re asking and how they will help you to better help your students.

## **Describe evidence-examples:**

The following are some examples of types of assessments you may use to give evidence of student understanding and suggestions on how you might make them more useful:

<i><b>Good Evidence</b></i>	<i><b>Better Evidence</b></i>
A true/ false quiz may give a bit of information about what students know.	A few open ended questions will give you better insight into what your students are thinking
Asking students yes or no questions will give you a quick check.	Asking students a question without one correct answer will help you assess their learning more fully.
Asking students to assess themselves on a scale of 1 to 5 will give you some ideas.	Asking students to explain why they’ve given themselves the number between 1 and 5 will give you even more information.
Asking students to tell you what they felt that they have learned can be helpful.	Asking students what they still feel confused about can give you another piece of the puzzle.

# Performance Tasks

A performance task is an authentic task that assesses a student's understanding of the key understandings of the project, as well as the skills and knowledge learned throughout the project. The task asks students to address a realistic problem through a final performance or substantial product. In performance tasks, students face realistic constraints, have realistic options, have a real audience, and serve a real purpose.

In addition, a performance task is user-friendly, that means students can actually complete the task, it is appropriate for the age of the students, and it is engaging. Students can actually have fun completing a performance task:

Perhaps the greatest difference between a performance task and other forms of assessment is that students know how they will be assessed before they begin the project. Students are familiar with and understand the rubric that will be used, know the skills and understandings that will be assessed, and know what high-quality work looks like because they have been given models of what is expected.

## Sample Performance Tasks:

Review the following performance tasks before creating your own. Many of these tasks can be modified to fit different grade levels. First look through the tasks provided for your grade level. Consider which tasks could be modified to fit your students. Then, review performance tasks for the other grade levels.

### High School

#### Task 1

"You are a professor of literature at a local college. Your library has just burned down and you are in the process of rebuilding it. A decision has been made to place five pieces of literature from the late 20th century into the cornerstone of the new building. You have been chosen to select the five pieces of literature to be placed in the cornerstone. You have been given the directive to choose literature that best reflects American literature in the late 20th century. The Board of Directors wants you to write an essay identifying the five pieces of literature you would choose, why you would choose each of those pieces, and what each piece reflects about American literature in the late 20th century."

- Grant Wiggins (1998)

#### Task 2

How can you design a boat out of cement so that it would float? Use your knowledge of density, molecules, matter, and volume to solve this problem. It is possible. Explain why your boat would float. If you would like, make a drawing first and then explain your answer.

## **Middle School**

### **Task 1**

Your job is to create a museum box that will provide a student with an overview of Manifest Destiny. The box should include 10-12 items. Of these items you must include the following:

- a. A chronological outline of events that influenced America's belief in Manifest Destiny. These events should cover the period of time from 1830 to 1860.
- b. A pamphlet or brochure that identifies each item in the box and explains its connection with Manifest Destiny. The explanation for each item should be written in 100 words or less.
- c. An audiocassette recording that gives the listener an overview of Manifest Destiny and discusses each of the other items included in the box. With this "audio tour" the listener should be able to "walk through the museum" and discover what Manifest Destiny is all about. The listening time on the cassette should not be longer than 15 minutes; however, some pauses may be built into the audio presentation to allow the audience to stop and discuss an artifact or read a document.

Your group may select the other items to include in the box. Be careful to select items that tell the story of Manifest Destiny. You have one week to complete this task.

When your box is complete, the committee that selects materials for our school library will review it. The librarian will provide the committee with the review sheet that will explain what criteria have to be met for any book or item to be included in the library. You already have this sheet. Your box will be evaluated using the Museum Box rubric, which you already have. Create a museum that will be both educational and appealing to the students in this school.

### **Task 2**

An architect friend of yours will pay you to help him prepare a scale drawing of a new room he is designing for a client. In real life each of the walls is 24 feet long and 9 feet high. A fireplace, a window, and a door will go on one wall. The real-life sizes of these features are listed below. The architect tells you to draw the room to scale.

Fireplace	6 ft wide x 3 feet high
Door	3 feet wide x 6.5 feet high 4.5
Window	feet wide x 6 feet high

Create a scale drawing of the room, including a legend. In addition, write a letter to your friend explaining how you completed the project. Include in your letter a description of the process you undertook, any math you used to complete the project, and a description of how you figured out the scale.

### Task 3

The principal, Mrs. Buckner, has agreed to allow our class to build a storage area in the back of our classroom. Now, we need to design this area. The storage area will be in the back left corner of the room in a space which is 2 meters long and 1 meter wide. The storage area must not be higher than 2.5 meters.

There are several things that must be considered in designing this storage area. First, there are four boxes of portfolios that must be stored. The boxes are 34 centimeters by 68 centimeters and they are each 30 centimeters tall. There are also six boxes of various sizes (which you can measure) in the back of the room with materials that we use for the topics we study. All of our math books need to be stored in this area, and there should be room to keep some extra items, which we use every now and then. Keep in mind that none of the boxes can be stacked on top of each other. (The weight of each box would crush the box below.)

Our class is going to design and build this storage area as part of our study of geometric concepts such as space and dimensions.

**Group Work:** In a group with three other students, you are to decide what the best design for this storage area would be. It must meet all of the requirements mentioned above.

The group should create a drawing of the design that shows how the storage area will look when it is built. The group should then compile a list of reasons why this design will work.

**Individual Work:** As an individual, make a copy of the design your group created. Using this sketch, create a diagram showing where all of our materials and books should be placed in the storage area. In writing, explain why you would place each item in the particular spot you have designated. When developing your diagram, consider factors such as size of items, convenience, and safety. You will be allowed to share your organizational scheme with your group members to get ideas about how it might be improved, and you may make any final revisions you think are appropriate.

## **Elementary/ Primary**

### **Task 1**

There has been a lot of wasted food recently at lunchtime in your cafeteria and the cooks are getting fed up. Your job is to present recommendations to the cooks about what food to buy and prepare for the students so that there will be less wasted food each day. Gather data from your classmates and present this data in a clear manner that demonstrates what foods to buy and prepare.

### **Task 2**

You have been asked to make a spin wheel for your school carnival. You want to make the wheel so that the school wins 70 percent of the time and the carnival players win 30 percent of the time. Also, you want each carnival player to think that they have a good chance of winning the spin wheel game or they won't want to play. Using your knowledge of probability, fractions, and percentages, design a wheel to meet your needs and draw how it would look below. You may want to practice drawing the wheel and the back of this page. Explain your spin wheel and why you set it up the way you did.

### **Task 3**

Imagine that it is the year 2024. Earth is very overcrowded. There is a shortage of food and energy resources (such as oil). The United States wants to send astronauts to explore new areas of the universe in hope of finding new resources. Scientists think one of the distant planets may have valuable resources. They have evidence that some form of "beings" live there and have built homes, but they do not know what they are really like. The president asks you to advise her planning team because you are an expert on exploration. She realizes there are some similarities (things that are the same) between what the astronauts will try to do and what happened in the past when European explorers like Columbus explored the New World. Your knowledge of what happened in the past will be useful in planning what to do in the future. Write a report advising the president on what to do. Include in your report answers to the following questions:

1. What are some of the similarities between this situation and what you know" about what happened when European explorers like Columbus came to the New World? Describe at least two similarities, but write more if you can think of them. Use specific facts or events from history to support your ideas.
2. What are some of the differences between this situation and European exploration of the New World? Describe at least two differences, but write more if you can think of them. Use specific facts or events from history to support your ideas.

3. What are the main goals or positive things the explorers should be trying to accomplish on this mission? Describe at least two goals for Earth and two that could benefit the other planet, but write more if you can think of them.
4. What are the possible problems that the explorers should try to avoid or minimize? Describe at least two problems for Earth and two for the other planet. If you can, give specific facts from history that supports your ideas.
5. Are there other things to consider in making a good plan?
6. Keeping in mind what you know about Columbus and other explorers in history, what do you think the president and astronauts should plan to do to make this new exploration as successful as possible?

#### **Task 4**

Use the materials (pipe cleaners, construction paper, clay, toothpicks, tape, scissors, and glue) to make a model of either an insect or a spider. Draw a picture of your critter. Is your critter an insect or a spider? Give two reasons why you think so.

#### **Task 5**

Your class is going on a class picnic at the end of the year. There will be food and drinks there. What types of cups should you bring so that drinks stay cold the longest? You have paper, Styrofoam, or plastic. Using your knowledge of the scientific process, design an experiment that test which container will keep liquid the coldest for 15 minutes

1. Describe what happened to the temperature of the liquid in all three containers. Did the temperature change? Describe the change.
2. Which container will keep the liquid the coldest for 15 minutes? Why do you think so?
3. Which cup would you choose for our picnic? Why?

#### **Creating Performance Tasks**

1. What realistic problem or context will I frame the task around?
2. What will be the substantial components of the performance task considering the realistic problem I have chosen? For example, will it include making an oral presentation, writing a persuasive essay, creating a brochure, or creating an informational book on a specific topic?
3. How will I assess the students on this product? How will students assess themselves on this product?
4. What key understandings, standards, and skills will I be assessing through this performance task?
5. What other assessment tasks support this performance task?

## **Performance Task Products**

Consider these products for your performance tasks.

### **For Older Students**

- Write a proposal that suggests a solution to a difficult problem.
- Design or make a construction that demonstrates a law, principle, or idea.
- Invent a device to solve a problem or to improve a process or product.
- Write editorials, letters to the editor or essays about a controversy and submit them to a newspaper.
- Maintain a journal of reactions to literature or issues studied.
- Create an audio, visual, or multi-media production that conveys a particular situation or idea.
- Do an oral presentation of \_\_\_\_\_.
- Participate in a debate or mock trial.
- Write a case study or test case that illustrates a certain concept or reflects a certain time period.
- Write a collection of letters that reflect a certain topic, concept, or time period.

### **For Younger Students**

- Create a book around a particular topic or concept.
- Maintain a journal of reflections and drawings around a particular topic or concept.
- Design a model that demonstrates a particular idea or concept.
- Invent a device to solve a problem or to improve a process or product.
- Create a design to address a real-life problem.
- Participate in a structured discussion around a specific topic or concept.
- Create a class newspaper around a certain topic or concept.
- Create an original publication that includes writing, drawings, cartoons, and other visuals.
- Create an experiment that explores a specific topic or concept.

## Research Paper

A report of substantial and original research in history, geography, sociology, urban studies, or one of the other social sciences. Demonstrates an in-depth understanding of an important topic. Fully describes the problem or issue at hand, provides complete and accurate information, and draws relevant conclusions.

	<b>4 (EXEMPLARY)</b>	<b>3 (PROFICIENT)</b>	<b>2 (NOVICE)</b>	<b>1 (BEGINNER)</b>
<b>Content</b>	The report provides complete, accurate information, supported by extensive and relevant research.	<ul style="list-style-type: none"> <li>The report provides accurate information, supported by relevant research; however, it may be missing some important or relevant information.</li> </ul>	<ul style="list-style-type: none"> <li>The report provides basic information, some of which may be incorrect and/or irrelevant; report is supported by research, but some research may be inappropriate or irrelevant.</li> </ul>	<ul style="list-style-type: none"> <li>The report provides little information, and information is inaccurate and irrelevant. There is little or no relevant research to support work.</li> </ul>
<b>Thinking and Communication</b>	<ul style="list-style-type: none"> <li>The report demonstrates in-depth understanding of the topic, with complete analysis and reflection.</li> <li>Ideas are developed and expressed fully and clearly using many appropriate examples, reasons, details, or explanations.</li> <li>The report examines the issue from more than one perspective.</li> </ul>	<ul style="list-style-type: none"> <li>The report demonstrates a clear understanding of the topic, with some analysis and reflection.</li> <li>Ideas are developed and expressed clearly through adequate use of examples, reasons, details, or explanations.</li> <li>The report may examine the issue from more than one perspective.</li> </ul>	<ul style="list-style-type: none"> <li>The report demonstrates some understanding of the topic, but with limited analysis and reflection.</li> <li>Ideas need to be expressed more clearly and supported 'by examples, reasons, details, and explanations.</li> <li>The report examines the issue from a single perspective.</li> </ul>	<ul style="list-style-type: none"> <li>The report demonstrates little understanding of the topic.</li> <li>Ideas need to be expressed clearly and be supported by examples, reasons, details, and explanations.</li> <li>The report does not examine the issue from a specific perspective</li> </ul>
<b>Organization and Mechanics</b>	<p>Ideas are expressed in the author's own well-chosen words. Vocabulary demonstrates sophisticated understanding of the topic.</p> <ul style="list-style-type: none"> <li>Organizational devices such as paragraphs, sections, chapters, and transitions are used effectively.</li> <li>Report is free of grammar; punctuation, spelling, and capitalization errors.</li> </ul>	<ul style="list-style-type: none"> <li>Ideas are expressed in the author's own words, and words are well chosen.</li> <li>Organizational devices such as paragraphs, sections, chapters, and transitions may be used incorrectly, but overall meaning is not affected.</li> <li>Limited errors in grammar, punctuation, spelling, and/or capitalization do not detract from overall meaning.</li> </ul>	<ul style="list-style-type: none"> <li>Some ideas copied from another source.</li> <li>Organizational devices such as paragraphs, sections, chapters, and transitions are missing or are used incorrectly, detracting from overall meaning.</li> <li>Numerous errors in grammar, punctuation, spelling, and/or capitalization take away from the overall meaning.</li> </ul>	<ul style="list-style-type: none"> <li>Ideas are largely copied from another source.</li> <li>Organizational devices such as paragraphs, sections, chapters, and transitions are missing.</li> <li>Numerous errors in grammar, punctuation, spelling, and/or capitalization detract from the overall meaning.</li> </ul>
<b>Illustration</b>	<ul style="list-style-type: none"> <li>The report is well supported by carefully illustrated and meaningful tables, charts, diagrams, and pictures all properly labeled and captioned</li> </ul>	<p>The report is sufficiently supported by tables, charts, diagrams, and pictures. Minor errors in labels and captions do not detract from the overall impact of the visuals.</p>	<ul style="list-style-type: none"> <li>The report is supported by limited use of tables, charts, diagrams, and pictures. Labels and captions may be inappropriate or missing.</li> </ul>	<ul style="list-style-type: none"> <li>The report is not Supported by tables, charts, diagrams, or pictures, or chosen visuals are inappropriate or inaccurate.</li> </ul>
<b>Presentation</b>	<ul style="list-style-type: none"> <li>The overall appearance is neat and organized.</li> <li>A bibliography or reference section identifies a wide variety of primary and secondary sources.</li> </ul>	<ul style="list-style-type: none"> <li>The overall appearance is generally neat and organized, with few erasures or corrections.</li> <li>A bibliography or reference section identifies an adequate number of primary and secondary sources.</li> </ul>	<p>The overall appearance needs improvement. It may need to be neater or better organized.</p> <ul style="list-style-type: none"> <li>A bibliography or reference section identifies an inadequate number of primary and secondary sources.</li> </ul>	<ul style="list-style-type: none"> <li>The overall appearance detracts from the presentation of the report. The presentation may be disorganized and contains many erasures or corrections.</li> <li>A bibliography or reference section may be missing altogether.</li> </ul>