

Considering the Visual Ranking Tool for Your Unit

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MODULE 6

Considering the Visual Ranking Tool for Your Unit

Description: During this module, you explore additional uses of the *Visual Ranking Tool*, view project descriptions and create your own, set up a teacher workspace, and create a project online. You try out your ideas for targeting higher-order thinking skills through the use of the *Visual Ranking Tool* by creating a practice list to rank and obtaining feedback from others.

Activity 1: Clarifying Project Ideas for Using Visual Ranking

Step 1: Reviewing the Needs of Your Unit

Before determining a possible use for the *Visual Ranking Tool* in your unit, review your targeted higher-order thinking skills, standards, and learning objectives. Compare them with the thinking skills that would be supported by *Visual Ranking*.

1. Open your Unit Plan.
2. Review your "Habits of Learning Taxonomy."
3. Review the standards indicated in your Unit Plan and note those standards that could benefit from the use of the *Visual Ranking Tool*. If the standards are not already highlighted in a color specific for *Visual Ranking* (which may have been done in the activity on page 2.05), you may want to highlight them now or identify them beside the key words listed below and on the next page.

compare _____

contrast _____

differentiate _____

order _____

organize _____

perspective _____

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- placement _____
- point of view _____
- rank _____
- sort _____
- other: _____



Note: In your review of the standards, do not be limited by these key words. You may need to look for hidden opportunities for higher-order thinking, especially if your state's standards focus mainly on very specific knowledge-based tasks or understanding.

4. Review your learning objectives and identify which objectives could be supported by the use of *Visual Ranking*. You may want to highlight them in your Unit Plan or identify them below.

5. Consider how the learning objectives for the sample project descriptions on the following pages (and in Appendix D) would be supported through the use of *Visual Ranking*. Keep your standards and objectives in mind as you think about your own project.



Note: If you do not believe *Visual Ranking* will be a good fit for the unit being developed in this course, you will have the opportunity to try out an idea for a different unit.

Do not try to force the use of *Visual Ranking* when it is not a good use of time or academically warranted.

Step 2: Viewing Sample Project Descriptions and Prompts

When you create a *Visual Ranking* project online, you need to enter a Project Description and Project Prompt to guide your students' work. Use this time to help clarify your project ideas.

Project Description

The Project Description is a focused, short paragraph that describes the project to your students and explains how they will use the *Visual Ranking Tool* to help them answer the questions of the project. The Project Description should be able to convey in a few sentences why this is a project or problem that is worthy of study, as well as define what your students will be trying to solve, produce, respond to, test, recommend, or find out.

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Project Prompt

In addition to the Project Description, you will need to create a prompt. A good prompt is an essential component of incorporating the *Visual Ranking Tool* into a project so that students know how they should rank the list.

Hints for Creating Prompts

When developing a prompt, think about the following:

- A helpful prompt may include the criteria for sorting.
 - Example: "Put this list of inventions in order of their importance to modern life."
- It may be necessary to leave out the criteria if each team will be developing, or will receive from you, its own criteria. If the prompt does not include the criteria for sorting, the ordered lists will vary according to the criteria each team uses. This can create an opportunity to discuss how applying different criteria results in different rankings.
 - Example: "Put this list of inventions in order of their importance."
- A good prompt tells students that they are sorting all of the items and not just picking out the best.
 - Instead of "Who were the greatest presidents?" the prompt might state, "List these presidents in terms of their impact on civil rights, ranking the president with the greatest impact first."

After you develop a prompt, you should discuss with your students the meaning of the qualifiers in your prompt. For instance, specifically explore what "impact," "significant," and "best" mean.

Examples

Here are a few examples of Learning Objectives, Project Descriptions, and Prompts:

Note: For more examples, see ideas beginning on Appendix C.03.

- **Language Arts**
 - **Learning Objectives:**
 - Draw conclusions about how character interactions affect plot
 - Analyze literature to find evidence in support of a thesis
 - Formulate rational arguments and apply the art of persuasion and debate

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- **Project Description:** Two people madly in love with only a desire that love would conquer all—what could possibly go wrong? Neither Romeo, Juliet, nor their families could foresee the grave future ahead of them. By the end of the play, six people are dead and others injured. Is it fate, simply unlucky circumstances, or something else that causes these deaths? Use the *Visual Ranking Tool* to help clarify who are most to blame for Romeo and Juliet’s deaths. From those ideas, you will write an essay that discusses who and what contribute to the deaths of Romeo and Juliet.
- **Prompt:** Rank these characters in the order of their influence upon and responsibility for the deaths of Romeo and Juliet, according to each character’s actions or inaction.
- **Health**
 - **Learning Objectives:**
 - Weigh the positive and negative effects of vaccines
 - Make recommendations regarding the necessity of vaccinations
 - **Project Description:** Some parents are concerned that childhood vaccines could produce adverse effects and cause health problems for their children, such as autism, damage to the immune system, brain damage, and so on. You are part of a committee that will make recommendations regarding these immunization concerns. The audience for your report could be federal vaccine research policymakers, state and local vaccine program implementers, health care professionals, the public, or the media. Use the *Visual Ranking Tool* to rank the possible positive and negative effects of vaccines. Research and make recommendations based on the relationship between vaccines and any adverse effects.
 - **Prompt:** Rank the following effects of vaccines in order of their impact on your decision as to whether children should be vaccinated.
- **Math**
 - **Learning Objectives:**
 - Prioritize investment options based on financial goals
 - Project future economic trends based on current and past information
 - Weigh potential risks and benefits of different investment strategies
 - Make investment recommendations based on research and projections

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- **Project Description:** Most young people understandably want the best things in life—nice homes, new cars, expensive clothes, and vacations in fun places. Your job in an investment firm is to advise others on how to invest their money. A client has \$100 a month to invest in such things as savings, bonds, and the stock market. Research and rank the best options for investment, depending on the goals of your client.
- **Prompt:** Rank the following investment choices in the order of their potential risk, listing the highest risk first.
- **Second Prompt:** In your second ranking, rank those investment choices in order of their largest potential gain.
- **Science**
 - **Learning Objectives:**
 - Understand the components in an ecosystem
 - Identify and prioritize causes of wildfires
 - Determine the best course of action to deal with wildfires
 - Propose new policy to preserve and protect natural resources
 - **Project Description:** An average of 5 million acres burn every year in the United States due to wildfires, causing millions of dollars in damage. Many people believe all fire is bad for a forest, including prescribed or controlled burning. Some believe healthy forests need to be managed in order to control fire risk; others think that any natural fire should be allowed to run its course. What should we do about wildland fires? A new policy needs to be developed to determine the best course of action when dealing with fires and potential fires in forest areas. You have been assigned to a task force to research and recommend a policy. First, you will need to research what contributes the most to wildfires. Second, you will research and recommend a new policy on how we can preserve and protect our natural resources in such a way that the needs of all involved are met.
 - **Prompt:** Before policies can be made, we need to know the facts. What contributes the most to the outbreak of wildfires? Rank the items below from the greatest to least significance.

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- **Social Studies/History**
 - **Learning Objectives:**
 - Analyze cause-and-effect relationships as they relate to immigration
 - Project future immigration trends based on the past
 - Propose feasible solutions to address current immigration concerns
 - **Project Description:** Continued immigration constantly reshapes the demographics, economy, and society of the world. In the United States during the 1990s, an average of more than 1.3 million immigrants—legal and illegal—settled in the United States each year, and this trend continues. To begin to understand the issues of immigration, we need to know why people came to the United States in the past and why people still want to come live in the United States today. Additionally, what are the benefits and the problems of immigration—for both the immigrants and existing populations? Your job as the head of the Center for Immigration Studies is to address these concerns and prepare a report that will be passed on to a Senate Subcommittee that is investigating this issue.
 - **Prompt:** What are the greatest influences that contribute to immigration? What causes people to immigrate? Rank the list with the items having the greatest effect first, according to your assigned historical time period.

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Step 3: Sharing Your Ideas

If you started a wiki in Module 2, create another entry to share your ideas for a project that incorporates the use of the *Visual Ranking Tool* into your classroom. If you are not using a wiki, share in small groups.

For this activity, share with those participants who teach in a similar grade or subject area.

Share your ideas on these questions on your wiki page as you reflect on your plan for *Visual Ranking*:

- What idea do you have for using *Visual Ranking*?
- How will the use of *Visual Ranking* fit into your Unit Plan and help your students meet the learning objectives and target higher-order thinking skills? If you have already decided that *Visual Ranking* will not be a good fit for your unit, what ideas do you have for using *Visual Ranking* with your students in other units?
- What concerns do you have in using this tool or incorporating ranking?
- What feedback would you like from others?

In small groups, discuss each other's ideas. If using a wiki, share your wiki pages and provide feedback on their ideas. Specifically provide feedback on how to best use the tool to encourage higher-order thinking skills. Consider how they could bring in other points of view.



1. Open the wiki site URL for this course from your Favorites.

Note: The URL and login information may be written down on Overview page vi or in your login Information document.

2. Edit your page and create a new entry to summarize your ideas for using *Visual Ranking*. Besides reflecting on the questions above, include:

- An overview of how the *Visual Ranking Tool* would be integrated into your unit
- Concerns, questions, and desired feedback



Note: Depending on the wiki site chosen, you may be instructed to either edit the same wiki page or create a new sub-page.



3. Save your wiki page.
4. Share your wiki page in a small group and, if needed, note any feedback directly on your page. Provide feedback to your colleagues on their project ideas, concerns and questions they have, and any new ways to look at the project to better target higher-order thinking and different perspectives within the unit.

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Activity 2: Planning Your Project

Step 1: Creating Your Own Project Description and Prompt

In this activity, you create your own project description and prompt that will appear in your students' workspace. As you develop your project description, consider including the following elements. Even if you think you might want to use or modify an existing project from the Intel® Education Web site, think about how you might want to modify that project to include a stronger emphasis of these elements.

- Setup of an authentic problem, significant question, or real-life scenario
- Explanation as to why the project or problem is worthy of study
- Definition of what your students will try to solve, produce, respond to, test, recommend, or find out
- Description of what students will be required to decide, prioritize, negotiate, or seek consensus on
- Use of age-appropriate language that makes the topic engaging and interesting

Consider the following questions as you develop a Project Description:

- Does the project engage the students' interest? Will it motivate them to pursue and explore the concepts deeply?
- Is the project cast in a context familiar to the students? Is it based on a real-world situation, scenario, or controversy?
- Is the project staged well? Is the project developed so that student interest builds?
- Is the information provided adequate to solve the questions of the project? Is too much information provided? Too little?
- Does the complexity and length of the project warrant and support working collaboratively?
- Is the problem or scenario of the project open-ended, which will provide different entry points and paths for your students?
- Does the project challenge students to use higher-order thinking skills?



Modified from: "Guidelines for Reviewers,"
Problem-Based Learning Clearinghouse, University of Delaware
www.udel.edu/pblc/reviewers

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Draft Your Project Ideas

1. Open your Unit Plan.
2. Review your Curriculum-Framing Questions. Consider how your students' work with *Visual Ranking* could help to support your unit's questions.
3. Review your project priorities on pages 2.20–2.22. Consider how different perspectives or members outside of your classroom could be incorporated into your project ideas.
4. Preview the Project Reflection Checklist on page 6.19.
Note: You may also want to review the Project Rubric on page 2.18–2.19.
5. Use the following table to draft the **Project Description** and **Prompt** for your ranking or type them directly into your Unit Plan.
6. If you are planning to modify an existing project on the Intel Education Web site (which you can copy to your Teacher Workspace), review Steps 2 and 3, but then skip ahead to Activity 3 (Steps 1–3), starting on page 6.12, and make your edits to the project details online.




Note: If you do not think the use of the *Visual Ranking Tool* will be a good fit for your unit, save the Visual Ranking Project Idea document in the *Thinking Tools, Visual Ranking Tool* folder on the Curriculum Resource CD and try out a project idea for a different unit.

Do not try to force the use of *Visual Ranking* when it is not a good use of time or academically warranted.

Example	Project Description	Mother's Day is coming! Our class needs to earn money for an upcoming field trip. Put the two together and what do you get? An opportunity! You will be involved in researching, planning, marketing, and selling flowers for Mother's Day. You, as a member of the class, are now a business partner, and you have many important decisions to make so that your business is successful. Use the <i>Visual Ranking Tool</i> to begin research on your first decision: which flowers to sell. Let's grow a business!
	Prompt	Which flower(s) should we sell for Mother's Day based on price, profit, and availability?
Possible Ideas	Project Description	
	Prompt	

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Step 2: Planning Your Use of Visual Ranking

1. Open your Unit Plan.
2. In the *Visual Ranking* section of the Unit Plan, type the Project Title, Project Description, and Prompt.
-  3. Save your Unit Plan. Keep this document open for the next step.

Step 3: Creating a Practice List

Often you will want to brainstorm with your students to come up with a list to rank, like we did in Module 4, rather than simply providing them with a pre-created list. However, in order to try out your project ideas, brainstorm a list that you would expect your students might come up with—or a list that you will provide for them. Use the Intel® Education *Help Guide* if you need assistance in completing any technology skills identified in this step.

Tips for Creating Items to Rank

- The *Visual Ranking Tool* can accommodate a list with a maximum of 16 items. The number of characters per line is limited to 83 characters; however, if you have any list item over 37 characters, you are limited to 12 items in your list.
- Try not to have too few or too many items. With too few items to rank, teams may have difficulty seeing much of a variation when comparing lists. With too many items, teams may have difficulty ranking a large list and/or understanding the distinction between items. A good rule of thumb is to include 7–12 items.
- Short names for the items are easier to sort. The text boxes will resize to match the length of the longest item.
- Review the list to make sure that items are not too similar or overlapping (for example, in an activity that asks students to sort favorite pets, avoid including both “dogs” and “Collies”).
- Items appear in the order they are entered. Look through your list of items to see if the order conveys any unintentional bias. Entering a list alphabetically will prevent any bias from showing and will also make it clear when a list has not yet been sorted.

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Create Items to Sort

1. Use the space below to brainstorm items to sort, or go directly to direction 2 below to type your list in your Unit Plan.



2. In your Unit Plan, type the list of items for your practice ranking in the **Sorting List** section. Press the Enter key after each item to make it easier to paste into the *Visual Ranking* workspace.
3. If you wish, sort your list alphabetically. (See Word Processing Skill 7.19.)
4. Will your student teams have different criteria for sorting the items? Will they be sorting according to different perspectives? Will you be assigning a team ID to any outside guests so they can also rank the list? If so, begin thinking about the types of team ID names that would help students to identify the different perspectives when they compare their rankings. You may want to preview the directions for assigning specialized team ID names. (See Teaching Tools, Visual Ranking Tool Skill 1.11.)



5. Save your document, but keep it open for the next activity.

Refer to the following skills in the Help Guide for this section:

- Word Processing Skill 7.19: To sort or change the order of rows based on certain information
- Visual Ranking Tool Skill 1.11: Creating unique team names

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Your facilitator will briefly demonstrate Step 2 on page 6.10 (creating a new project) and Step 3 on page 6.14 (setting up teams with the project wizard). Note Step 4 on page 6.15 for creating specialized team names to call out different perspectives or ranking criteria. Be sure to write down your practice team login information on Overview page vii or type it in the electronic file.

Refer to the following skills in the Help Guide for this section:

- Visual Ranking Tool Skill 1.6: Creating a Visual Ranking project from an existing project
- Visual Ranking Tool Skill 1.7.6: Showing correlation when students compare lists
- Visual Ranking Tool Skill 1.8: Editing a project
- Visual Ranking Tool Skill 1.11: Creating unique team names

Do not try to force the use of *Visual Ranking* when it is not a good use of time or academically warranted.

Activity 3: Setting Up a Visual Ranking Project

During this activity, you create a new *Visual Ranking* project online, as well as learn how to manage the project and student teams. Use the *Help Guide* if you need assistance in completing any technology skills identified below.

Step 1: Creating a Visual Ranking Project from an Existing Project

If you saw a project online that you would like to use as a starting point, you can use the project wizard to copy the project's description, prompt, and sample sorting list to your Teacher Workspace. If you want to create a new project based on your own ideas, skip this step and go directly to Step 2 on page 6.13.



1. Open *Visual Ranking* from your Favorites.
(www.intel.com/education/visualranking)

2. Click **Project Examples**.

3. Open the appropriate project in either **Unit Plans** or **Project Ideas**.



4. Copy the project so you can set up this project in your workspace. (See Teaching Tools, Visual Ranking Tool Skill 1.6.)

5. Edit the description, prompt, or list to rank of the project in your Teacher Workspace. (See Teaching Tools, Visual Ranking Tool Skill 1.8.)

6. Decide whether you want the correlation to appear when students compare their list with other teams. (See Teaching Tools, Visual Ranking Tool Skill 1.7.6.)



7. Save your changes.

8. After editing the project information online, copy the details into your Unit Plan.



Note: If you do not think the use of the *Visual Ranking Tool* will be a good fit for your unit, open the Visual Ranking Project Idea document in the *Thinking Tools, Visual Ranking Tool* folder on the Curriculum Resource CD and try out a project idea for a different unit.



9. Save your Unit Plan (or the Visual Ranking Project Idea document).

10. Return to your Teacher Workspace and click **Done**.

11. Review Step 2 to familiarize yourself with creating a project from scratch, and then go to Step 3 to set up teams.

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Step 2: Creating a New Visual Ranking Project

Use the *Help Guide* for assistance in creating a new *Visual Ranking* project from scratch.



1. From within the Teacher Workspace, set up a new *Visual Ranking* project. (See Teaching Tools, Visual Ranking Tool Skill 1.7.)
2. Type the **Project Name**. This name could specifically reference the purpose or use of the *Visual Ranking Tool* in your overall unit. This title will appear in the *Student Workspace* and above your students' *Visual Ranking* lists. You can change the name of the project later if you wish. (See Teaching Tools, Visual Ranking Tool Skill 1.8.)
3. Under **Project Description**, type the project description that you created on page 6.08 (or copy and paste the description from your Unit Plan). This description will appear in the Student Workspace. (See Word Processing Skills 2.6 and 2.8.)
4. Type a statement or question for the project in the **Prompt for Students** box. This prompt will also be displayed on the top of the students' list to rank. (See page 6.09 or copy and paste the statement from your Unit Plan.)
5. Add your practice **List to Sort** from page 6.11 or copy and paste the list from your Unit Plan.



Note: Do not leave any blank rows when typing your list. If you plan on brainstorming the list with your students, you can edit your project later. Before creating a list with your students, you will need to delete this practice list and add at least two placeholder items. You will not be able to save the project without at least two items entered in the List to Sort section.

6. Determine whether you want the correlation to appear when students compare their list with other teams and make the appropriate selection. (See Teaching Tools, Visual Ranking Tool Skill 1.7.6.)

Note: The correlation that is displayed in *Visual Ranking*, called the Spearman Correlation coefficient, is a measure that is reserved for looking at data sets that are arranged in rank order. Any two sets of data (in this case, two ordered lists) can be compared to see to what extent they are related. The strength of this correlation varies from 0 (we can't tell at all that they are similar) to 1 (we are certain they are similar). The correlation also has a sign to indicate whether the item in list B will be in a similar position to the item in list A (a positive correlation) or in an opposite position (a negative correlation). For more information on the Spearman Correlation coefficient, see the *Visual Ranking Tool Resources* folder on the Curriculum Resource CD.

7. Submit the project.
8. The *Manage Project Teams* page will open.
9. Go to Step 3 for instructions on assigning teams.

Refer to the following skills in the Help Guide for this section:

- Visual Ranking Tool Skill 1.7: Creating a new Visual Ranking project
- Visual Ranking Tool Skill 1.7.6: Showing correlation when students compare lists
- Visual Ranking Tool Skill 1.8: Editing a project
- Word Processing Skill 2.6: To copy words or text
- Word Processing Skill 2.8: To paste words or text in a new place

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Step 3: Creating Teams IDs with the Project Wizard

The project wizard allows you to create all your team IDs and passwords at one time, using the same base word with a unique number (Team01, Team02, and so forth). The team ID identifies the different teams in the drop-down comparison box. The student teams you create will be available for future projects.

If you plan on having anyone outside of the class participate in the ranking or having your students rank using different criteria, you may want to create unique team IDs (such as florist, mother, student) to identify the perspective so that it is clear to students when they compare lists. To create unique team names, skip to Step 4 on the next page. To create multiple teams with the same perspective (or all teams with the same perspective), you can use the following steps to use the project wizard to create several (or all) teams with the same base name (such as florist1, florist2). You can always add more teams after you use the project wizard to create your initial set of teams.

Refer to the following skills in the Help Guide for this section:

- Visual Ranking Tool Skill 1.9: Creating a new set of student teams
- Visual Ranking Tool Skill 1.14: Unassigning teams from a project
- Visual Ranking Tool Skill 1.28: Deleting a project
- Word Processing Skill 2.8: To paste words or text in a new place



1. Create new teams using the project wizard. Consider whether you want to keep the default word of Team as the base word of your team IDs. Change if desired. (See Teaching Tools, Visual Ranking Tool Skill 1.9.)

Note: The passwords will be the same as the team names.



2. Go to Overview page vii and write down your team IDs and passwords or use the Login Information form in the *Unit Development* folder on the Curriculum Resource CD or saved in your Project Folder.



Note: When you assign a team ID, you may end up changing the team members later (for example, for the next project or for the next school year). When the new members log on under that same team ID and password, they will be able to see all the work that was done by the previous team members. To clear existing work before new team members are assigned to an existing team ID, you should either delete the completed project(s) or unassign the old team IDs and reassign them. (See Teaching Tools, Visual Ranking Tool Skills 1.14 and 1.28.)

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Step 4: Creating Specialized Student Teams

You may want to create specialized team IDs (such as florist, mother, student, and so forth) to help students identify different perspectives or ranking criteria when comparing ranked lists.

1. Go to the *Manage Project Teams* page of your project.
2. Add a new student team with a unique team ID that identifies the team's perspective so that it is clear to students when they compare lists. (See Teaching Tools, Visual Ranking Tool Skill 1.11.)

Note: The *Team Members* section is an optional field.

3. Type a unique password for the team.

Note: You may want to keep the team ID and password the same so students can remember them more easily. If they forget their password, you can see what their password is in the Teacher Workspace. (See Teaching Tools, Visual Ranking Tool Skill 1.12.)

4. Submit the team information and the team will be added to your project as well as to your list of teams available for other projects.
5. Create at least one additional team.
6. Go to Overview page vii and write down your team IDs and passwords or use the Login Information form in the *Unit Development* folder on the Curriculum Resource CD or saved in your Project Folder.

Refer to the following skills in the Help Guide for this section:

- Visual Ranking Tool Skill 1.11: Creating unique team names
- Visual Ranking Tool Skill 1.12: Viewing or editing team information

Step 5: Recording Your Team ID Information

Go to Overview vii to write down the login information for your practice project or type the information in the "Login Information" document. You need one team login for you to try your ranking activity and a second team login for another teacher/team to try your ranking activity.



Note: The Login Information document is available in the *Unit Development* folder on the Curriculum Resource CD. You may have already saved this document into your Project Folder.

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Activity 4: Trying Out Your Visual Ranking Idea


The purpose of creating a practice ranking is to test your concepts; check for different interpretations of the prompt and new avenues of thought; practice the type of discussions and questions you would ask your students; and then revise your project, prompt, and requirements, as needed. Use the *Help Guide* if you need assistance in completing any technology skills identified below.

Step 1: Creating a Practice Ranking

Follow the steps below to create a practice ranking. These are the same directions you would provide to your students when you are ready to have them create their own rankings. Use the *Help Guide* if you need assistance in completing any technology skills identified below.

To make the reviewing session go more smoothly, you may want to write your reviewing team login information on a sticky note or index card to give to the reviewer(s).




1. Select another teacher or team to help you rank your list. Your team will also help rank the other teacher's or team's list.
 2. Share your learning objectives for this project.
 3. Open *Visual Ranking* from your Favorites.
(www.intel.com/education/visualranking)
 4. Click **Student Log-In**.
 5. Type your **Teacher ID**, your practice **Team ID**, and **Password** for your practice ranking (see Overview page vii or the Login Information document) and click **Sign In**.
-  **Note:** All your student teams will use the same teacher ID, so you can write it on the board or on their assignment sheets. You will need to inform each team of their individual team ID and password.
6. At the same time you are completing your ranking, have the other teacher or team log in using your teacher ID and your second team's ID and password. (See Teaching Tools, Visual Ranking Tool Skill 1.2.)
 7. Click the name of the project to load the *Visual Ranking Tool* with the appropriate list.
 8. Rank the list. (See Teaching Tools, Visual Ranking Tool Skill 1.15.)

Refer to the following skills in the Help Guide for this section:

- Visual Ranking Tool Skill 1.2: Logging in as a student
- Visual Ranking Tool Skill 1.15: Ranking items in a list
1.12: Viewing or editing team information

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-  9. Enter your rationale for the first, last, and middle two items into the appropriate comment boxes. Explain why you placed the ranked item where you did. An item's rationale should reflect the sorting criteria, as well as the item's relative placement. For example, in ranking inventions in order of how they have improved people's lives, students might write about their third choice (printing press) in relation to their second choice (computers) this way: *Information is power. Books and other printed work gave people access to information prior to computers.* (See Teaching Tools, Visual Ranking Tool Skill 1.16.)
- When sorting items objectively, students can use the item's *Comments* box to enter the data that justifies their sorting. For example, if students are asked to sort the planets by distance from the sun, they put the distance in miles in the Comments box.
 - For sorting subjectively ranked items, students enter their *justification* for where they are placing an item based on the sorting criteria.

Note: *Comments* boxes do not have spell check.

10. Compare your list with the list ranked by the authoring teacher or team. (See Teaching Tools, Visual Ranking Tool Skill 1.20.)
11. Look at the correlation between the two lists and discuss the differences. (See Teaching Tools, Visual Ranking Tool Skills 1.21 and 1.22.)

Note: If a team assigned to the project is not being used, it should be unassigned so the class average will not be skewed. (See Teaching Tools, Visual Ranking Tool Skill 1.14.)



12. Discuss your rankings with the other team. Ask questions to foster discussion about the other team's interpretation of the items in the lists as well as their criteria for ranking. The following questions model the types of questions you might ask your students as they work on ranking their list:
- What does this item mean to your group?
 - You put this item first/last. Why?
 - Why is this item ranked higher/lower than that one?
 - Why are these two in the middle? Why is the fourth one above the fifth one?
 - What criteria are you using to rank? Have you mentioned that in the item's comments?
 - How do you distinguish between this item and that one?
 - What did you discuss that lead you to decide...?

Refer to the following skills in the Help Guide for this section:

- Visual Ranking Tool Skill 1.14: Unassigning teams from a project
- Visual Ranking Tool Skill 1.16: Commenting on an item
- Visual Ranking Tool Skill 1.20: Comparing lists
- Visual Ranking Tool Skill 1.21: Understanding results
- Visual Ranking Tool Skill 1.22: Understanding correlations

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- Where would you expect Team B (group with alternate perspective) to place this item? Why?
 - What evidence could you supply that would convince another team to see it your way?
 - What team ranks most like you do? What team ranks most differently?
 - To what do you attribute the differences in ranking?
 - What more would you like to know about Team B's rating of this item?
 - The placement of this item is the same on both lists, but the reasons are different. What do you make of that?
 - Have any other teams influenced your thinking? How?
 - What does a tie mean in this case?
- 14.** Decide whether you want to make any changes to your ranking based on the comparison of the two lists and your discussion.
- 15.** Switch roles and complete a ranking for the other teacher's or team's project.

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Step 2: Assessing Your Practice Ranking

With the other team, take turns looking at the overall concept of each other’s project, as well as the prompt and ranked list. Consider whether your practice ranking supports and begins to provide answers for the overall questions of the unit. Use the checklist below and the Project Rubric on page 2.18-2.19 to help guide your discussion. Use the comments section on the checklist to note any needed revisions.

This activity models what is necessary in your classroom. When using the *Visual Ranking Tool*, plan for self-assessment and reflection activities with your students.

Visual Ranking Project Reflection Checklist

Checklist	Comments
<ul style="list-style-type: none"> <input type="checkbox"/> The project description is focused and clear. The description provides background and/or context for how the use of the <i>Visual Ranking Tool</i> fits within the unit. <input type="checkbox"/> The project description defines what the students will be trying to solve, produce, respond to, test, recommend, or find out. <input type="checkbox"/> The prompt clearly indicates the criteria by which to sort. <input type="checkbox"/> The ranking activity incorporates role play, perspectives, or contributors from outside of the classroom. <input type="checkbox"/> A well-designed, definite reason exists for students to compare their ranking with the rankings of other teams. The students use the knowledge gained from the ranking comparisons to consider new ways of looking at the issue or to reconsider their position. <input type="checkbox"/> The ranking and overall project require students to use higher-order thinking skills. <input type="checkbox"/> The use of the <i>Visual Ranking Tool</i> helps students meet the learning objectives of the unit. <input type="checkbox"/> The overall project idea meets the highest ratings of the Project Rubric on pages 2.18-2.19. 	


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Refer to the following skills in the Help Guide for this section:

- Visual Ranking Tool Skill 1.5: Opening a Visual Ranking project in the Teacher Workspace
- Visual Ranking Tool Skill 1.8: Editing a project
- Visual Ranking Tool Skill 1.10: Adding a new student team
- Visual Ranking Tool Skill 1.11: Creating unique team names
- Visual Ranking Tool Skill 1.12: Viewing or editing team information
- Visual Ranking Tool Skill 1.17: Opening and closing a comment attached to an item
- Visual Ranking Tool Skill 1.23: Reviewing student or team work
- Visual Ranking Tool Skill 1.24: Commenting on a project
- Visual Ranking Tool Skill 1.26: Viewing a report
- Visual Ranking Tool Skill 1.27: Printing a report
- Visual Ranking Tool Skill 1.28: Deleting a project
- Web Technologies Skill x.xx: Turning off a pop-up blocker/results
- Visual Ranking Tool Skill 1.22: Understanding correlations


Step 3: Editing Your Project

After the discussion with your colleagues, you may need to modify the scope of the project or the prompt. To edit the project, or to practice editing a project, follow the directions below.

1. Log in to your Teacher Workspace.
-  2. Open the project name you want to edit, and then change any of the project information. (See Teaching Tools, Visual Ranking Tool Skill 1.5.)
3. Add or edit student team information. (See Teaching Tools, Visual Ranking Tool Skills 1.10, 1.11, and 1.12.)

Step 4: Reviewing Student Work

Follow the steps below to practice reviewing a student ranked list.

1. Log in to your Teacher Workspace.
-  2. Review the work for the desired team. (See Teaching Tools, Visual Ranking Tool Skill 1.23.)



Note: In this review mode, the ranking is fully functional. Be sure not to change any of your students' work as these changes will become permanent.

3. Enter your comments to the team. (See Teaching Tools, Visual Ranking Tool Skill 1.24.)

Note: You can add more than a single line of text. When you update your comments, all comments, past and present, will appear in the *Comments* section.

4. View the team's ranking of the items as well as the rationale the students entered for any of the items' ranking. View the report to show all the ranking comments in one place. (See Teaching Tools, Visual Ranking Tool Skills 1.17 and 1.26.)

Note: If you have a pop-up blocker, you need to turn it off for this feature to work. Another way to override your pop-up blocker is to hold down the **Ctrl** key as you click the link to view the maps. **Macintosh* users:** You may be able to override a pop-up blocker by holding down the **Command** key as you click the link.

5. If desired, print the report. (See Teaching Tools, Visual Ranking Tool Skills 1.27.)

Step 5: Deleting a Project



Your projects will be saved until you delete them. Use this step if you copied a project into your workspace and you do not want to keep it. Delete a project within the *Manage Projects* section. (See Teaching Tools, Visual Ranking Tool Skill 1.28.)

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Activity 5: Revisiting Your Unit Plan

During this activity, you will discuss ways to implement and manage projects that use the *Visual Ranking Tool* and continue working on your Unit Plan. If you are not going to use *Visual Ranking* in your unit, continue working on other parts of your Unit Plan that need completion.

Step 1: Understanding Best Classroom Practices

Review the following items as you plan how best to implement your unit ideas.

Working in Teams

- Group students into teams of two to four. When students share their opinions about an item or convince their teammate to change a ranking, they are engaged in their learning. They are more likely to share opinions in a smaller group.
- On the road to “making thinking visible,” the tool makes thinking discussible. Students—as a team—need to make decisions, prioritize, negotiate, or seek consensus.
- Create ground rules. The most important rule is that all members of the team must agree to the placement of the items in the list. When agreement cannot be attained, students need to understand the process of consensus. Each team member must be able to justify why the item was placed where it was—why is it below a certain item, why it is at the very top, and so forth.
- You may want to put two groups together after they have ranked the same list and see if one group can convince the other group to change their rankings. See how persuasive students can be.
- Consider ways to extend the learning community. You can add outside experts, students in other classrooms or schools, parents, and others as team members in your project. Because the tool is web-based, others can contribute their rankings and join the discussion from anywhere.

Setting Up and Implementing a Project

- Many teachers use a whole-class activity to determine which items to sort. The process of arriving at this list can be a meaningful activity in itself. Through brainstorming and class discussion, students negotiate wording, build understanding, and decide which items are most important to include.
- The list of items to sort can be edited after the activity begins. If a new item is added or an existing item is changed, ask your students to reevaluate all of the items in the list.

Considering the Visual Ranking Tool for Your Unit

- If you have a team that is not being used, make sure you unassign that team. If you do not remove all unassigned teams, the class average will be skewed, because all assigned teams are automatically calculated in the class average. You will want to make sure the pull-down menu only displays working teams.
- Think about how or whether to use the correlation feature in class discussions.
- Think about how to discuss the class average and its meaning.
- Set up different projects for each class. This is particularly important to ensure that the “class average” is not skewed.

Comparing Rankings

- Give students a reason to compare their lists. Part of the power of the *Visual Ranking Tool* is that it allows students to make comparisons.
- Have two teams negotiate to get their lists more similar. You could include a requirement that the teams reach at least a “moderate” correlation between their lists.
- Ask teams to reflect on why they think their lists differ from the class average.
- Use the class average as the pooled wisdom of the group. This could lead to a discussion of why taking an average is or is not “fair.”
- Have students identify the team whose list is most different (that is, the lowest correlation) from their own. Have the teams review each others’ comments to determine whether they are using the same criteria to make decisions about rankings.

Reflecting on Learning

- Have teams discuss the differences in their rankings.
 - Ask teams to reflect on why they think their lists differ from the class average.
 - Have students identify the team whose list is most different (that is, the lowest correlation number) from their own. Have the teams review each others’ comments to determine whether they are using the same criteria to make decisions about rankings.
- Look at how opinions change over time. Consider projects where comparisons with earlier lists can lead to reflection on learning. One way to accomplish this is to compare teams over time by creating a new team name for each revised ranking. For example, the Red team might have a team name of Red1 for the activity at the beginning of a project and a team name of Red2 for the activity at the end. Their password can be the same for each.

Considering the Visual Ranking Tool for Your Unit

- As students are ranking, be ready to listen, question, and direct their efforts. Ask questions to foster discussion about their interpretation of the items in the lists and their criteria for ranking. Encourage students to write what they are thinking and discussing in the comments field associated with each item. See sample questions from your practice ranking on page 6.17.
- Use the *Show Report* feature to print a team's current thinking in order to compare it to a previous or future ranking.

Using Multiple Methods of Assessment Throughout the Project

The *Visual Ranking Tool* provides multiple opportunities to monitor student progress and learning during a project, as well as assess final products and performances. An effective unit plan will include assessment that provides explicit expectations and methods for students to demonstrate their learning, promote student self-management, and allow for teacher monitoring of progress.

- Assess students using multiple forms:
 - Multiple assessors—such as the students themselves, peers, the teacher, and mentors
 - Multiple units of assessment—such as individual students, groups, the whole class
 - Multiple formats—such as written work (formal assignments and informal journal entries), observations (of group activities and individual work), presentations, informal discussions and questions, project designs, and the final media product
- Ask your students at the beginning of a project to rank what they think is important in assessing the project. Their data will provide you with a good starting point for discussions about assessment.
- Require students to complete daily journal entries, learning logs, essays, or other written reflection activities for regular monitoring of progress during the project.
- Set aside time for team progress reports and ask students to discuss what is working, what needs improvement, and what are the next steps.
- Assess how student opinions, attitudes, or beliefs change over the life of a project by having your students rank a list at the beginning of the project and again at the end. After students complete each ranking, they can use the print feature of the list to copy and paste the report into a document. Have them analyze and explain the changes in their thinking that becomes part of a portfolio.

Considering the Visual Ranking Tool for Your Unit

- Use the data contained in the items' *Comments* boxes of a team's list as a rich source of assessment information. You will have a record of the degree to which students applied criteria to their rankings, the logic they used in resolving equally strong justifications for a ranking, and even their reflections on their work.
- Use your Teacher Workspace to make comments, ask for information, and enter your own reflections in a comment dialog between you and each student team.
- Assess lists directly that are sorted according to objective criteria. If you want students to self-assess, you can add an "answer key" team to the project and sort that list in the correct order. The correlation of students' lists to the "answer key" list will give a good indication of how close each team was to the correct ranking, but should not be used for grading purposes.
- Set up a role-play, experiment, scenario, or other hands-on activity to assess skills and knowledge.
- Use debates, interviews, or oral presentations to uncover the depth of students' understanding and comprehension.
- Have students create a final project, such as a presentation or publication, that analyzes, evaluates, and proposes new action based on the use of the online thinking tools and the students' corresponding research.

Some of the information above is modified from:



Rubric to Assess a PBL (Project-Based Learning) and Rubric

www.idecorp.com/assessrubric.pdf

Project Based Learning with Multimedia

Originally from: <http://pblmm.k12.ca.us/PBLGuide/AssessPBL.html>
(link no longer active)

Considering the Visual Ranking Tool for Your Unit

Step 2: Revising Your Unit Plan

Considering the information in the previous step and what you have learned through your practice ranking, revise your ideas for your Unit. Step back from just the use of the *Visual Ranking Tool* and sketch out the larger picture of the overall unit.

1. Open your Unit Plan.
2. Revise the **Visual Ranking Project Name, Project Description, Project Prompt, and Sorting List**, if needed.
3. Consider whether additional standards or learning objectives could be targeted in your Unit. Revise the **Standards or Learning Objectives**, if necessary.
4. Review your **Curriculum-Framing Questions** and revise if necessary.
5. Considering the ideas on the previous two pages about ongoing assessment, in the **Assessment Summary** section, add your ideas for how you would assess the learning during the unit. Revise the **Timeline** section, if needed.
6. In the **Procedures** section, draft the activities that will occur in the classroom that lead up to, include, and follow the use of the thinking tools and assessments.
7. Draft or outline the **Unit Summary** by briefly describing your ideas for the overall unit. Include your general concept of the whole unit, not just the activity that will use the *Visual Ranking Tool*. Explain the main task, scenario, or challenge you will use to engage your students.



8. Save your work.

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Activity 6: Sharing Your Results

If you are using a wiki, create another entry to reflect on and share your experience with the *Visual Ranking Tool*. Review and provide feedback to one or two other colleagues that you have not reviewed earlier. If you are not using a wiki, share in small groups.



1. Go to the wiki site for this course and log in.

Note: The URL and login information may be written down on Overview page vi or in your login Information document.

2. Use the following questions to help you reflect on your use of *Visual Ranking*.
 - Did you try out an idea for your main unit or for a different project idea?
 - Considering your test results, do you think you will keep this tool in your Unit Plan?
 - How do you see the use of the *Visual Ranking Tool* fitting in with the objectives and standards you are trying to target—and your overall plan for your unit? How will the use of this tool help students meet those requirements?
 - How do you see the *Visual Ranking Tool* enhancing your students' higher-order thinking skills, as well as collaboration and communication in your classroom?
 - What questions do you still have about this project's design, implementation, or assessment?



3. Save your wiki page.

4. Review one or two other wiki entries from colleagues you have not reviewed before.



5. Provide suggestions and feedback on their ideas, concerns, or questions.

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Extension Activity: Finalizing Your Visual Ranking Project

The following resources are available to you for self-study or as an optional extension within your course.

If you anticipate that this *Visual Ranking* project will be implemented for your unit because it is a good fit for the unit's objectives, complete any unfinished elements of your *Visual Ranking* project. Include appropriate references, comments, and analysis in your student sample that you would expect your students to include in their *Visual Ranking* projects. Make any necessary edits to the project itself, if necessary.



1. Go to: www.intel.com/education/visualranking
2. Click **Teacher Workspace** or **Student Log** in depending on whether you need to edit the project parameters or your sample student project.
3. Enter the login information, which may be written down on Overview page vii or in your login Information document.
4. Make any necessary additions or changes.



5. Save your changes.

Considering the Visual Ranking Tool for Your Unit

References

Assessing student work with project-based learning. (1997–2001). *The multimedia project: Project-based learning with multimedia*. Retrieved from San Mateo County Office of Education Web site: <http://pblmm.k12.ca.us/PBLGuide/AssessPBL.html>

Guidelines for reviewers. (n.d.). Retrieved from University of Delaware, Problem-Based Learning Clearinghouse Web site: www.udel.edu/pblc/reviewers

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Considering the Visual Ranking Tool for Your Unit

Module 6 Summary

Review the central ideas in this module and the plans or materials you created to help improve student learning.

Use this summary to review this module's main points and check for understanding.

Module 6 Key Points:

- The *Visual Ranking Tool* helps to develop students' collaboration, cooperation, and persuasion skills, as well as their ability to analyze, evaluate, and prioritize information—often with consideration of different perspectives.
- The *Visual Ranking Tool* provides an opportunity to extend the learning community by adding outside experts, students in other classrooms or schools, parents, and others as team members in a project.
- A team's verbal and written explanations for a ranking may be useful to determine the depth of understanding. Questions should be a part of the process to foster discussion about list item interpretations and ranking criteria. Ongoing assessment throughout a project is essential.

Accomplishments:

- Integrated the use of the *Visual Ranking Tool* into a unit or project idea
- Used a wiki to document the evolution of my unit ideas and use of *Visual Ranking*
- Completed a practice ranking
- Revised my project and overall unit based on feedback and reflection

In Module 11, you will make your final decisions regarding which thinking tools would best meet your unit's learning objectives for your students.

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Notes:

Lined area for notes, consisting of multiple horizontal lines.