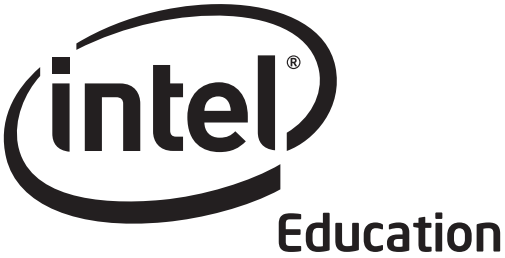

Intel® Teach Program
Essentials Online Course

The Essentials Online Course curriculum materials were developed by Intel Corporation in cooperation with the Institute of Computer Technology (ICT), a nonprofit organization.

Programs of the Intel® Education Initiative are funded by the Intel Foundation and Intel Corporation.
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Workbook, Version 1.0

Statement of Alignment

The International Society for Technology in Education reviewed the **Intel® Teach Program Essentials Course** on March 15, 2007 and determined that the program clearly supports the implementation of the ISTE National Educational Technology Standards (NETS) for Teachers in a specific, carefully reviewed and documented manner and prepares participants to substantially meet the following standards:

NETS•T ALIGNMENT

- Meets: I.A., II.A., II.B., II.C., II.D., II.E., V.C., VI.A.
- Supports significant growth for: I.B., III.C., III.D., IV.A., IV.C., V.A., V.B., V.D.

Programs of the Intel® Education Initiative are funded by the Intel Foundation and Intel Corporation.

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Introduction

The Intel® Teach Essentials Online Course is one of many professional development courses in the Intel® Teach Program portfolio that provides teachers with the skills to effectively integrate computer technology to improve student learning.

Goal

The goal of Essentials Online is to help teachers discover how to use computer technology to captivate, motivate, and, ultimately, move students toward 21st century learning.

Strategies

To meet the goal of the course, we use four major strategies:

- Focus on the ways students and teachers use technology to enhance learning through research, communication, collaboration, and productivity strategies and tools
- Emphasize hands-on learning and creation of curricular units and assessments
- Promote student-centered learning that encourages self-direction and higher-order thinking
- Encourage teachers to collaborate with colleagues to improve instruction by problem solving and participating in peer reviews of units

Content

The course addresses an Essential Question: *How can technology be used most effectively to support and assess student learning?* Teachers work as curriculum designers and explore this question in eight modules and create a technology-infused, student-centered, standards-based unit.

Through a hybrid face-to-face and online training model, teachers participate in 36 hours of professional development infused with research-based approaches to integrate technology into the classroom. Teachers explore the possibilities of current web-based collaborative technologies and other software applications before selecting the most appropriate tools to support student learning in their unit design. The resulting unit includes a sample student project, student self-direction tools, and multiple types of assessment that are embedded throughout the unit. Teachers who participate as Master Teacher candidates complete an additional four hours which prepares them to facilitate their own hybrid face-to-face and online course.

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About the Workbook

This workbook is to be used in conjunction with the Intel Teach Essentials Online Course. Throughout the online course you have the option of using an online notebook or this workbook to capture your ideas, plans, and notes. If you choose to use the online notebook, your notes will be saved to the electronic Notebook located under **My Work** tab in the online course. Using this printed workbook is a good option if you have limited Internet connectivity or you prefer to plan or take notes on paper.

About the Institute of Computer Technology

The Intel Teach Essentials Online Course and materials were prepared by the Institute of Computer Technology (ICT). ICT, a nonprofit organization, provides K–12 curriculum development and technology training services for corporations, nonprofit agencies, and the education community.

Founded in 1982, ICT has become a trusted partner worldwide in designing standards-based, student-centered computer science, science, engineering, and math curriculum, including technology integration professional development programs for educators. A key part of ICT's mission is to advocate for technology literacy in all curricula. The organization's goal is simple, but ambitious: to harness the power of technology to transform teaching and learning for all K–12 students worldwide.

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Login Information

You may want to use this page to write down the login information you will be using during this course. This may make it easier for you to reference this information as you proceed through the course modules and use the Web resources with your students. You will receive an electronic copy of this document from your facilitator. In Module 1, Activity 1, you will save this document to your Portfolio folder.

Intel® Teach Essentials Online Course

URL: **http://teachonline.intel.com/us/login**
Login ID: _____
Password: _____

Tagging/Bookmarking Site

URL: _____
Log in: _____
Password: _____

Blogging Site

My blog URL: _____
Log in: _____
Password: _____
Student sample URL (if needed): _____
Log in: _____
Password: _____

Wiki Site

Course wiki URL: _____
Log in: _____
Password: _____
Student sample or facilitation wiki URL (if needed): _____
Log in: _____
Password: _____

Online Collaborative Web Site

URL: _____
Log in: _____
Password: _____

Intel® Education Teacher Workspace (for *Assessing Projects*)

URL: **www.intel.com/education/AssessingProjects**
(Click **Enter** and navigate to the teacher workspace login.)

Teacher ID: _____
Password: _____

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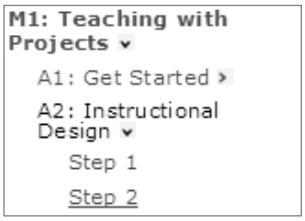
Module 1

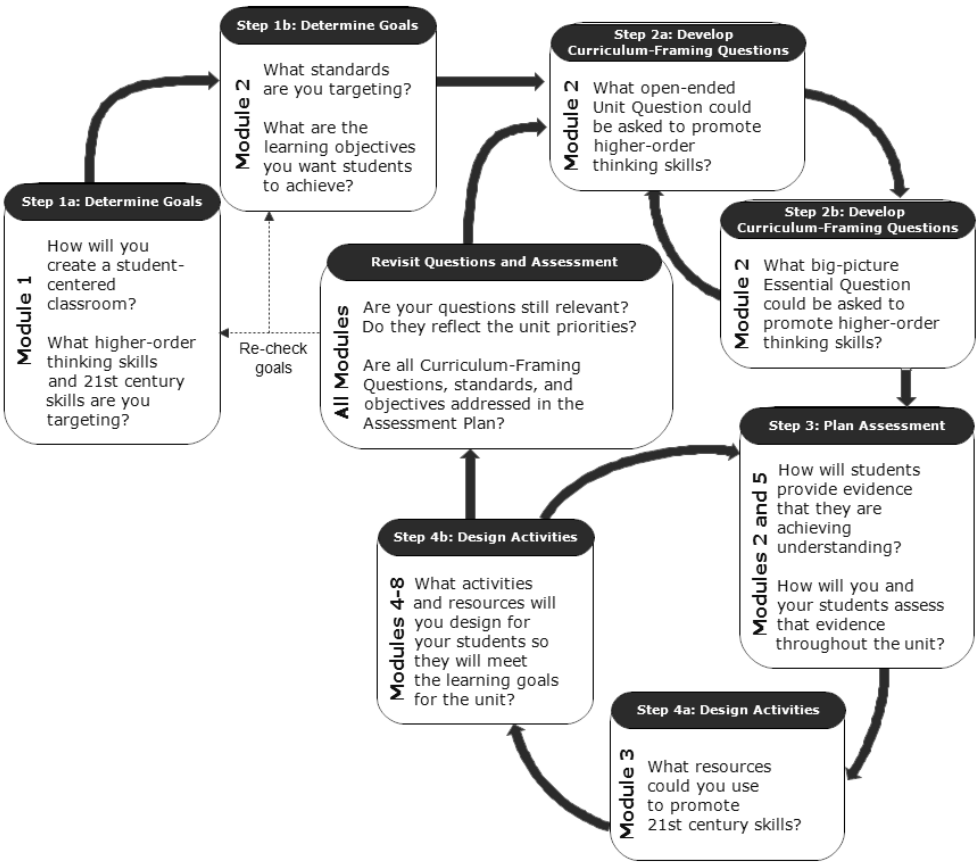
Teaching with Projects

The screenshots in this margin are provided for context. They show where the workbook spaces are located in the Essentials Course tab of the online course.

Activity 2: Examining Good Instructional Design

Step 2: Looking at Unit Planning





1. Which steps do you know the most about?

2. Which areas do you need to learn more about?

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3. Set your learning goals and specific action steps in the following table:

Unit Planning Steps	Areas Where I Want to Focus My Learning	Specific Action Steps to Meet My Goals
Determine specific learning goals		
Develop Curriculum-Framing Questions		
Make an Assessment Plan		
Design activities		

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Activity 3: Looking at Projects

Step 2: Viewing Unit Portfolios

1. View sample Unit Portfolios located in the **Resources** tab > **Unit Portfolios** link or in the *Sample Unit Portfolios* folder on the Curriculum Resource CD. (See Intel® Education Help Guide, Essentials Course Skill 1.4: To open and view files from the CD).
2. As you review the Unit Portfolios, consider where and how they address the various elements of the Project Characteristics Checklist

   Note: This project characteristics list is also available as a checklist in the **My Work** tab > **Checklists** link, the **Resources** tab > **Assessment** link, and as a paper copy in your folder.
3. Take notes on any ideas you could adapt for use in your own Unit Portfolio.

4. Discuss the following questions briefly with a partner:
   - In what ways did the units incorporate projects?
   - How could you use these project ideas to enhance your own units?

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Activity 4: Planning a Publication to Explain Projects

M1: Teaching with Projects
- A1: Get Started
- A2: Instructional Design
- A3: Look at Projects
- A4: Plan Publication
  - Step 1
  - Step 2
  - Step 3

Step 1: Planning the Publication

Think about how you currently use projects or plan to use projects in your classroom. What questions might your students, their parents, or other teachers in your school have about projects or project-based learning? How could you best answer their questions? What would you need to consider in your publication to explain projects? Use the following form to help with the initial planning of your publication.

Considering who would benefit, what would you like to include in your publication?

- ☐ How projects are used in my classroom
- ☐ Various student roles in a project and the tasks students may complete
- ☐ Benefits of projects
- ☐ How projects address standards
- ☐ What students can expect once a project is underway
- ☐ How a project is assessed
- ☐ How projects have been used in my classroom in the past
- ☐ Pictures to use _____
- ☐ Other _____
- ☐ Other _____
- ☐ Other _____

List the content ideas for your newsletter, newspaper, brochure, or poster:

_____

_____

_____

_____

List topics and content that need additional research:

_____

_____

_____

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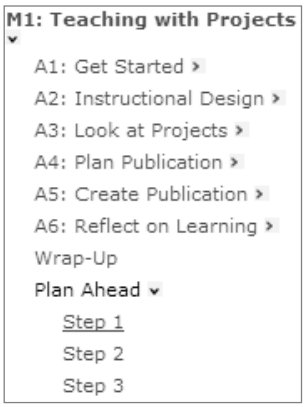
Step 3: Viewing Sample Publications

View sample publications located in the **Resources** tab > **Project Learning** > **Sample Publications** link of the online course or the *Module 1, Activity 4* folder on the Curriculum Resource CD for ideas on design and content for your own newsletter, newspaper, brochure, or poster.

Note any ideas below that you may want to include in your own publication.

Planning Ahead

Step 1: Thinking about My Unit Plan and Project Design



In Module 2: Planning My Unit, you will share your Unit Plan ideas with your colleagues. Use the following questions to think through the possibilities for your unit.

1. What is the topic of the unit that you will develop during this course?

2. What real-world connections are you considering for your unit?

3. How might you integrate the use of technology?

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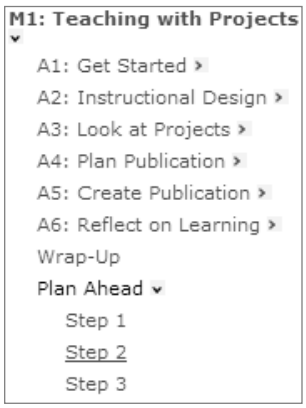
4. What project scenario are you considering? What is the big picture or general idea of your project?

5. What roles will your students play and what tasks will they complete?



Step 2: Targeting Higher-Order and 21st Century Skills

The following 21st century skills are all important for your students to master to achieve success in the future. Review the descriptions of each skill and brainstorm what it could mean in your subject and grade level. How can you incorporate these skills into your Unit Plan? What would these skills look like in your classroom?

Essential 21st Century Skills[1]

- **Accountability and Adaptability**—Exercising personal responsibility and flexibility in personal, workplace, and community contexts; setting and meeting high standards and goals for one's self and others; tolerating ambiguity

- **Communication Skills**—Understanding, managing, and creating effective oral, written, and multimedia communication in a variety of forms and contexts

- **Creativity and Intellectual Curiosity**—Developing, implementing, and communicating new ideas to others; staying open and responsive to new and diverse perspectives

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- **Critical Thinking and Systems Thinking**—Exercising sound reasoning in understanding and making complex choices; understanding the interconnections among systems

- **Information and Media Literacy Skills**—Analyzing, accessing, managing, integrating, evaluating, and creating information in a variety of forms and media

- **Interpersonal and Collaborative Skills**—Demonstrating teamwork and leadership; adapting to varied roles and responsibilities; working productively with others; exercising empathy; respecting diverse perspectives

- **Problem Identification, Formulation, and Solution**—Ability to frame, analyze, and solve problems

- **Self-Direction**—Monitoring one's own understanding and learning needs; locating appropriate resources; transferring learning from one domain to another

- **Social Responsibility**—Acting responsibly with the interests of the larger community in mind; demonstrating ethical behavior in personal, workplace, and community contexts

[1]Partnership for 21st Century Skills. (2003). *Learning for the 21st century*. Washington, DC: Partnership for 21st Century Skills. Retrieved from www.21stcenturyskills.org/downloads/P21_Report.pdf

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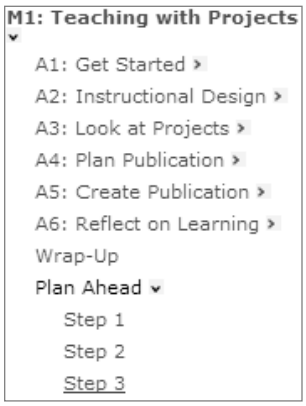

Step 3: Locating Curricular Resource Materials

Before the next course session, collect materials (such as textbooks, curricular support materials, grade-level expectations, district standards, samples of student work, and so forth) that will help you develop your Unit Plan. Bring these materials with you to the next session to assist in the development of your Unit Portfolio.

List the items you need to collect.

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Module 2

Planning My Unit

Activity 2: Developing Curriculum-Framing Questions to Engage Students

Step 1: Understanding Essential, Unit, and Content Questions

After viewing the Curriculum-Framing Questions presentation, "What Are They, and How Do They Help Teachers and Students?", and the Curriculum-Framing Questions Rubric discuss the following points with a partner:

a. What new insights do you have after reviewing the rubric?

b. What parts of the rubric do you feel will be most helpful to keep in mind as you develop your own Curriculum-Framing Questions?

Note your thoughts below.

Work with a small group to complete the first set of Essential, Unit, and Content Questions on the following pages.

Optional: Pick any other two to three sets of questions and fill in the blanks with your own questions.

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Planning My Unit

Essential Question(s)	Unit Question(s)	Content Question(s)
What does it take to change the world?		
What is essential for life?	Am I really growing like a weed? How would you grow a big, strong beanstalk to reach the giant's house?	
	Are rainforests worth saving?	What is a rainforest? What lives in a rainforests? Where are rainforests located?
		What are igneous, sedimentary, and metamorphic rocks? How are rocks formed? What is the rock cycle?
Is math more than numbers?		
	What can music teach us about history? How does music inspire people today?	
		What is the life cycle of a frog? What do frogs need to survive? Where do frogs live?
Am I healthy?		

(continued)

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Essential Question(s)	Unit Question(s)	Content Question(s)
	How is Ancient Egypt still with us today?	
Why is the universe the way it is?		
		What is the capital of _____? What are three interesting places to visit in _____? How much would it cost to visit _____ for a week?
	How do our lives change with the seasons? What is it like right now in other parts of the world?	
Why do we need others? What is a community?		
	Why do we still read Shakespeare? How is Shakespeare's work relevant to my life?	
Are we that different?		
		What are the qualities of a Greek hero? Who are some famous heroes of the 20th century?

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Step 2: Brainstorming My Own Questions

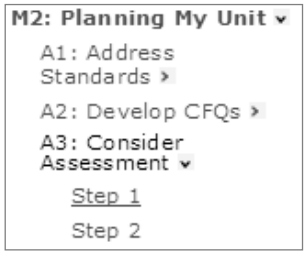
If you want to brainstorm your Curriculum-Framing Questions offline, save the "Writing Curriculum-Framing Questions for Your Unit" file to your computer that is located in the **Resources** tab > **CFQs** link. Or, use the "Writing Curriculum-Framing Questions" document in the *Module 2, Activity 2* folder on the Curriculum Resource CD.

Step 3: Sharing Curriculum-Framing Questions

Break into pairs and share the first draft of your Curriculum-Framing Questions. Use the Unit Plan Checklist and Curriculum-Framing Questions Rubric as you provide feedback to each other about your questions.

Take notes on the ideas provided by your partner.

Activity 3: Considering Multiple Methods of Assessment



Step 1: Exploring Formative and Summative Assessments

Use the information in the Intel® Education *Assessing Projects* resource to help you brainstorm answers for the following questions while you think about your unit.

Planning Assessment Strategies

a. What strategies are you considering to gauge student readiness for the unit?

Note: Review the *Strategies for Gauging Student Needs* section carefully. In the next activity, you create a presentation to help you determine student needs at the beginning of your unit.

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b. How will you involve students in understanding the project expectations and criteria? How can you help your students become independent learners who are efficient at planning and following through without prompting? What assessments could you use to help students collaborate with other students and provide effective feedback?

c. What reporting and monitoring strategies could you use to encourage student self-management and progress during independent and group work? How could you help students stay on track during a project? What monitoring and reporting instruments would you need to create?

d. What assessment strategies will help students reflect on their learning (metacognition) and help you to check understanding? What assessments will you need to create?

e. What strategies could you use to assess final understanding and demonstration of learning? How will you and your students know they have met the learning goals?

f. Record any other information you find useful as well as your insights.

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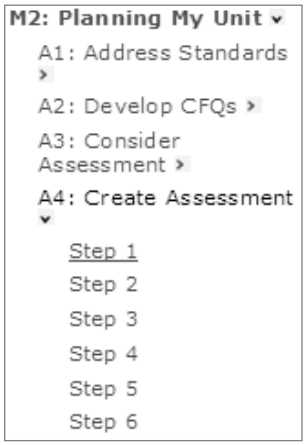
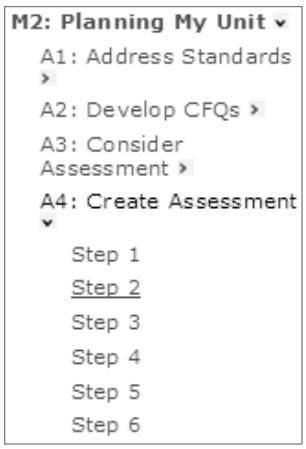
Activity 4: Creating an Assessment to Gauge Student Needs



Step 1: Tapping into Prior Knowledge

1. Review your notes about the strategies you are considering for gauging student readiness.
2. Explore the sample presentations to gauge student needs in the **Resources** tab > **Assessment** > **Gauging Needs** link.
3. Note any ideas you might want to use in your presentation.



Step 2: Planning My Presentation

With a partner, discuss the following questions. As needed, take notes below.

- How can your Essential and Unit Questions be used at the very beginning of your unit to help gather assessment information?
- What ideas are you thinking about for introducing your Essential Question and Unit Questions to your students?
- What kind of assessment information do you need to gather from your students? How will you gather it?
- How can you use questioning in this presentation to help ensure your unit targets higher-order thinking skills?
- How do you plan to promote 21st century skills in your unit?

This information can provide the teacher with an overall picture of the students' knowledge. Think about how you might collect and use this kind of information.

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Planning My Unit

Use the following planning area to help you think through the content of your presentation.

Introducing the Essential Question and Unit Questions	
Prior knowledge information needed	
Promoting 21st century skills	
Other discussion starters	

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Planning Ahead

M2: Planning My Unit
A1: Address Standards
A2: Develop CFQs
A3: Consider Assessment
A4: Create Assessment
A5: Pedagogical Practices
A6: Reflect on Learning
Wrap-Up
Plan Ahead
Step 1
Step 2

Step 1: Creating Project Ideas for an Essential Question

In the following table, an Essential Question has been created for each unit described in the middle column. Since Essential Questions by design cross units and subject areas, discuss creating other project ideas that address the same Essential Question. Some examples are provided for you.

1. Read the following four unit descriptions and the corresponding Essential Questions.
2. Choose one Essential Question based on your group's interest.
3. In the column on the right, brainstorm other student project ideas that connect to that same Essential Question.

Essential Question	Unit Title and Description	Other Project Ideas Relating to the Essential Question
How does the world change?	**Seasoning the School Year** (Science, Math, and Language Arts, Grades 3–5): Students become botanists and climatologists to investigate seasonal changes. Students observe and record changes in the weather, the length of the day, and the animal and plant life around them. They create multimedia presentations and weather graphs to compare weather in other parts of the world. With a partner class, students publish seasonal newsletters and class books to celebrate changes in and promote awareness of the environment.	Examples: ▪ Students compare changes in the characters of several stories. ▪ Students imitate the masters by creating drawings and paintings in the style of artists from three different periods and analyze the stylistic differences. ▪ ▪ ▪ ▪

(continued)

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Essential Question	Unit Title and Description	Other Project Ideas Relating to the Essential Question
How do ordinary people accomplish extraordinary things?	**Enduring Heroes** (Language Arts, Grades 6–8): Students read stories about the heroes of Greek mythology and analyze what it takes to be a hero. They compare Greek and modern day heroes to determine how the definition has changed over time and across cultures. They then synthesize their thinking when they write a myth based on a contemporary hero. The myths are compiled into books that can be read to younger students or shared with senior citizens as a service-learning project.	Example: ▪ Students reflect on their experiences as explorers during the 13th to 15th centuries. ▪ ▪ ▪
What does the past tell us about the future?	**Track the Trends** (Algebra 1 and 2): Taking on the role of statisticians, students choose a subject of interest (AIDS rate, rise of average baseball salaries, state population growth, and so forth) and collect statistical information about the subject over time. Using a graphing calculator and an exponential regression function, students derive the equation for curve of best fit for the data. The actual data and curve of best fit are graphed, and future predictions are made using the equation. Finally, students evaluate and present the socioeconomic implications of their predictions and the validity of their statistical investigation as a tool for predicting the future.	Example: ▪ Students analyze the rise and fall of the Roman Empire to predict the future of contemporary cultures. ▪ ▪ ▪

(continued)

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Essential Question	Unit Title and Description	Other Project Ideas Relating to the Essential Question
How has the past shaped who I am?	**The Mystery of the Mayans** (World Language, Social Studies, Grades 6–8): Mist and mystery still shroud the ancient Maya ruins of Mesoamerica. Students become anthropologists, conducting research into history and archaeology to learn how the fascinating and mysterious Mayas still influence us.	Example: ▪ Students research how great breakthroughs in science have influenced our world. ▪ ▪ ▪ ▪

Brainstorming Connections for My Own Essential Question

Use the following table to apply the idea of broadening your Essential Question to support other units or projects that you teach.

1. Write the Essential Question for your unit.
2. Brainstorm other student projects or units that you teach, as well as units that colleagues in your school teach, that would connect to your Essential Question.

Essential Question	Units That Could Relate to My Essential Question
	▪ ▪ ▪ ▪ ▪

3. Consider ways that you could broaden your Essential Question without weakening its impact.

Revised Essential Question:

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Module 3

Making Connections

Pair and Share: Sharing Presentations to Gauge Student Needs

Review feedback from your partner. Record ideas for modifying your Curriculum-Framing Questions and presentation to gauge student needs below.

Activity 2: Modeling and Teaching Legal and Ethical Practice Related to Technology Use

Step 1: Exploring Copyright

Although teachers and students may use copyrighted materials in their educational projects, the use of such materials is not clear-cut. To better understand your rights and limitations, view the Copyright Chaos presentation (see **Resources** tab > **Copyright** > **Copyright Activity** > **Activity Resources** link or the *Module 3, Activity 2* folder on the Curriculum Resource CD). Use the space below for notes.

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Think about how copyright law and following Fair Use guidelines will impact your classroom. Answer the following prompts in the space below:

- What are strategies for ensuring that your students understand copyright and fair use?
- What specific support procedures can you implement in your classroom to ensure that the guidelines are followed?

Activity 3: Targeting 21st Century Skills

Think about the following questions as you review your objectives and write your ideas below.

1. Where in your unit do students need to conduct research?

2. In your unit, when could students' learning be enhanced by communicating with others?

3. Where in your unit would collaboration be beneficial?

4. How can you ensure students are using problem solving strategies throughout your unit?

5. How can you incorporate the Internet into your classroom to further enhance student learning in regards to research, communication, collaboration, and problem solving?

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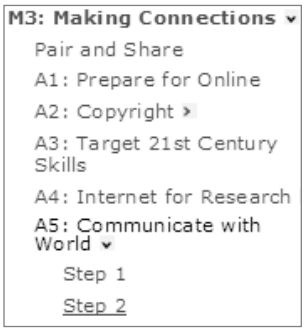
Activity 4: Using the Internet for Research

Step 2: Evaluating Web Resources

Record your thoughts about how you could help your students think more critically about the Web resources they use.

Activity 5: Communicating with the World through the Internet

Step 2: Considering Communication Tools for Your Unit



Examine one or more communication tools (e-mail, chats, instant messaging, online surveys, or VoIP) in more depth for possible use in your unit. Take notes below.

Option selected:

Notes:

Option selected:

Notes:

Option selected:

Notes:

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M3: Making Connections
Pair and Share
A1: Prepare for Online
A2: Copyright
A3: Target 21st Century Skills
A4: Internet for Research
A5: Communicate with World
A6: Collaborative Learning

Activity 6: Considering Web-based Collaborative Learning

Take notes below as you research blogs, wikis, and online collaborative Web sites.

Blogs

Wikis

Online Collaborative Web Sites

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Planning Ahead

M3: Making Connections
Pair and Share
A1: Prepare for Online
A2: Copyright
A3: Target 21st Century Skills
A4: Internet for Research
A5: Communicate with World
A6: Collaborative Learning
A7: Online Collaborative Site
A8: Pedagogical Practices
A9: Reflect on Learning
Wrap-Up
Plan Ahead

Incorporating the Internet

In the following table, select one or more Internet tools and briefly describe ways you can use them to support the learning goals of your unit.

- How might any of the following technologies enhance your students' learning in your unit?
- What resources and instruction will you need to provide students to ensure that their use of the Internet enhances their learning?

Internet Resources to Support Student Learning

Internet Search Engines	Learning goals it would address: Instruction needed:
Internet Research	Learning goals it would address: Instruction needed:
Tagging/ Bookmarking	Learning goals it would address: Instruction needed:
E-mail	Learning goals it would address: Instruction needed:
Instant Messaging (IM)	Learning goals it would address: Instruction needed:

(continued)

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Chats	Learning goals it would address: Instruction needed:
Surveys/ Opinion Polls	Learning goals it would address: Instruction needed:
Voice Over Internet Protocol (VoIP)	Learning goals it would address: Instruction needed:
Blogs	Learning goals it would address: Instruction needed:
Wikis	Learning goals it would address: Instruction needed:
Online Collaborative Resources	Learning goals it would address: Instruction needed:
Other:	Learning goals it would address: Instruction needed:

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Module 4

Creating Samples of Learning

Pair and Share: Incorporating the Internet into Units

M4: Creating Learning Samples
Pair and Share

Review feedback from your partner, and record ideas for incorporating the Internet.

Activity 1: Examining Student Samples

M4: Creating Learning Samples
Pair and Share
A1: Examine Samples

As you review the student samples and their associated Unit Plans and assessments, think about the following questions:

- Considering the learning objectives and assessment, how does the student sample effectively demonstrate student learning?
- What higher-order thinking and 21st century skills does the student sample target?
- How does the student sample help to answer the Curriculum-Framing Questions?
- How does the chosen technology tool help to showcase student learning?

Note your responses or ideas that you could use for your own student sample below.

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Activity 2: Planning My Student Sample

M4: Creating Learning Samples
Pair and Share
A1: Examine Samples
A2: Plan Student Sample
Step 1
Step 2
Step 3
Step 4
Step 5

Step 1: Answering the Big Questions

Although the use of Curriculum-Framing Questions should be referenced and discussed throughout your unit, they are often most notably addressed in the student sample.

1. Consider how your questions will be answered, at least in part, in the student sample.
2. Answer the following questions.
   a. Which of your Unit and Content Questions will be answered in the student sample?

   b. How will your Essential Question be addressed in the student sample?

   c. How will you ensure that the student sample will show that students have thought deeply about the questions?

M4: Creating Learning Samples
Pair and Share
A1: Examine Samples
A2: Plan Student Sample
Step 1
Step 2
Step 3
Step 4
Step 5

Step 2: Considering the Learning Goals for My Student Sample

Review your notes from the Module 1: Teaching with Projects: Planning Ahead activity regarding how students will practice 21st century skills in your classroom. If you used the workbook for these notes, refer to pages 10–11.

Keeping this information in mind, record your answers to the questions on the following page.

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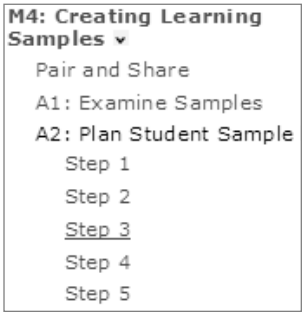
a. What concepts, skills, and knowledge do you want students to demonstrate through this sample?

b. What higher-order thinking skills do you want students to demonstrate through this sample?

c. What other 21st century skills should students demonstrate through this sample?

Step 3: Reviewing Project Design



Think about how a project-approach to learning can help your students meet the learning goals you identified in Step 2. Record your answers to the following questions.

- What real-world connections are you considering for your unit?

- What project scenario are you considering? How will you incorporate some element of project design into your unit?

- What roles will students play, and what tasks will they complete when carrying out those roles?

- How will the creation of the student project help support the unit's goals?

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M4: Creating Learning Samples
Pair and Share
A1: Examine Samples
A2: Plan Student Sample
Step 1
Step 2
Step 3
Step 4
Step 5

Step 4: Brainstorming the Best Tool for the Job

Possible Match	Type of Tool	Strengths/Purpose of the Tool	Possible Student Use/Purpose
☐	**Presentation**	An aid to oral presentations to an audience; use of short sentences or incomplete sentences; various multimedia elements, such as images, sound, video, hyperlinks to Web sites or other files, and so forth	▪ Present research, proposal, or findings to an authentic audience outside of the classroom ▪ Create a portfolio of student work ▪ Create a picture story book ▪ Show the results of surveys and questionnaires ▪ Present science fair projects ▪ Present nonlinear projects ▪ Provide an information kiosk without a presenter Your ideas: ▪ ▪ ▪
☐	**Publication** (newsletter, newspaper, or brochure)	Text-oriented, full sentences, usually meant to be read by one person at a time; combination of text and images; possibly charts and graphs	▪ Create a newsletter for a community organization, school club, or fictional organization ▪ Create a fictional newsletter for a historical group ▪ Create a fictional newspaper for a particular period in time ▪ Prepare a guidebook or travel brochure ▪ Create an informational or persuasive brochure Your ideas: ▪ ▪ ▪

(continued)

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Possible Match	Type of Tool	Strengths/Purpose of the Tool	Possible Student Use/Purpose
☐	**Publication** (poster)	Limited text, few sentences; images important to support and reinforce meaning; "published" for mass communication; suitable for younger students with limited writing skills	▪ Create flyers or other announcements for a nonprofit group, school, community event, or service project ▪ Design informational, persuasive, or instructional posters ▪ Create an invitation or program for a special presentation, meeting, or concert ▪ Create a menu with appropriate period-specific or culture-specific foods Your ideas: ▪ ▪ ▪
☐	**Web-based Resource: Wiki**	Web-based, text-oriented with possible hyperlinks and images; subpages and categories possible; editing history available; publication of current information or research for an audience beyond the classroom; communication with a worldwide audience; collaborative writing with other students and/or experts; contribution to real-world research and problem solving; sharing or reflection of learning or process	▪ Create student portfolios ▪ Provide a graphic organizer for research ▪ Provide a space for collaborative understanding of readings, experiments, music, art, and so on ▪ Provide a space for collaborative writing (plays, stories, or articles) ▪ Organize and collect links to student blogs ▪ Showcase opinion pieces ▪ Organize and present information for science fair projects Your ideas: ▪ ▪ ▪

(continued)

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Possible Match	Type of Tool	Strengths/Purpose of the Tool	Possible Student Use/Purpose
☐	**Web-based Resource: Blog**	Web-based, text-oriented with possible hyperlinks and images; journal-like format, date-stamped entries with current information on top; responses from readers; publication of current information or research for an audience beyond the classroom; gathering and sharing information with others outside the classroom; sharing or reflection of learning or process	▪ Reflect on reading or classroom discussions ▪ Investigate topics online and then report on research ▪ Record group progress on a project ▪ Talk about shared classroom experiences ▪ Copy and paste thought-provoking quotes from other blogs or other web resources, and then offer thoughts on the topic ▪ Ask professional writers to review the blogs and provide feedback (Jackson, 2005) Your ideas: ▪ ▪ ▪

M4: Creating Learning Samples
Pair and Share
A1: Examine Samples
A2: Plan Student Sample
Step 1
Step 2
Step 3
Step 4
Step 5

Step 5: Discussing My Plan

Review feedback from your colleagues, and record ideas for your student sample below.

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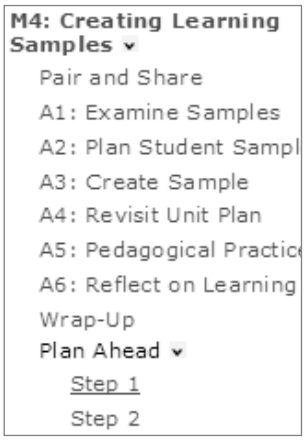
Planning Ahead

Step 1: Reflecting on My Student Sample



The use of technology should enable your students to enhance their learning, increase productivity, and promote creativity. As you review your student sample, think about these questions:

- Does the integration of technology help students to effectively demonstrate their learning?
- Does your student sample address the Essential and Unit Questions?
- Is it possible to implement the activity in your classroom with the resources you have available?

Record your thoughts below.

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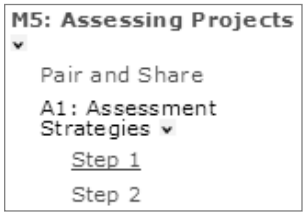
Module 5

Assessing Student Projects

Pair and Share: Using Feedback to Improve My Student Sample

Review feedback from your partner. Record ideas for modifying your student sample in the space below.

Activity 1: Examining Assessment Strategies



Step 1: Reflecting on Assessment in My Classroom

Review your responses to the self-assessment on your current assessment practices and note areas in which you would like to improve.

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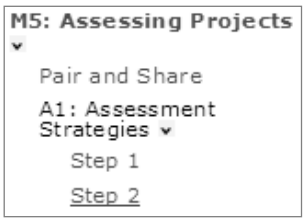
Step 2: Reviewing Assessment Plans



In this step, you review teacher-created assessment plans to find ideas for your own assessment plan. As you read through the samples, look for ways the teachers have incorporated assessment strategies that apply to the areas on which you want to focus.

Think about the questions below and continue to highlight or add notes as you find answers to the questions.

- Which of the assessments would be most important to you and your students?

- What kind of information would you and your students gain by using the assessments?

- Are there other assessments that could be used instead of or in addition to those you viewed? What kind of information would they reveal?

- How would the assessments help students become self-directed collaborative learners?

- How do the assessments assess higher-order thinking, 21st century skills, and a student's ability to answer the Curriculum-Framing Questions?

- What instruction would your students need to use the assessments effectively?

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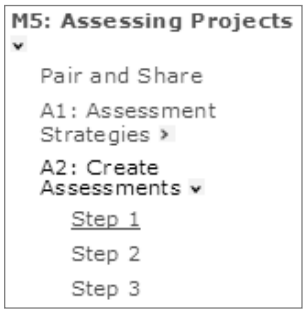
Activity 2: Creating Student Assessments



Step 1: Focusing on My Assessment Plan

1. Review your draft Assessment Timeline in your Unit Plan.
2. Use the Assessment Planning Table below to determine and describe which types of assessments you will use throughout your unit.
3. Add your assessment to gauge student needs to the Assessment Planning Table.

   Note: Consider modifying assessment descriptions you found in the Assessment Plans to suit your needs.

Assessment Planning Table

Assessment	Description and Purpose of Assessment	Phase of Unit		
		Before	During	After
☐ Checklist		☐	☐	☐
☐ Goal-setting		☐	☐	☐
☐ Graphic organizers		☐	☐	☐
☐ Peer feedback		☐	☐	☐
☐ Questioning		☐	☐	☐
☐ Reflective prompts		☐	☐	☐
☐ Rubric		☐	☐	☐
☐ Scoring Guide		☐	☐	☐

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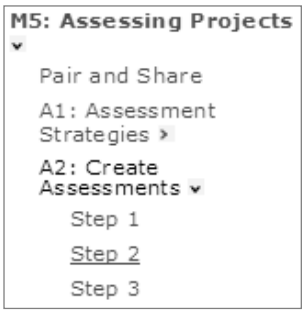
Assessment	Description and Purpose of Assessment	Phase of Unit		
		Before	During	After
☐		☐	☐	☐
☐		☐	☐	☐
☐		☐	☐	☐
☐		☐	☐	☐
☐		☐	☐	☐

Step 2: Planning the Assessment for My Student Sample



Factors to Consider When Planning a Summative Assessment

A clearly defined purpose is the first step in designing classroom assessment. To help focus on your assessment purpose, think about the questions below as you review the student sample you created in Module 4: Creating Samples of Learning.

What concepts, skills, and knowledge will be assessed?
How will the Curriculum-Framing Questions be assessed?
What higher-order thinking skills will be assessed?

(continued)

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Assessing Student Projects

What 21st century skills will be assessed? (See Module 1 Planning Ahead or notes on pages 10–11.)		
Will you assess any process skills with this assessment or will these be assessed using other instruments?		
Process Skill	**Assessed in Summative**	**Assessed Using Other Instrument**
Collaboration/Teamwork		
Communication		
Peer Feedback		
Reading		
Research		
Self-Direction/Self-Management		
Self-Assessment		
Writing		
Other:		
At what level should your students be performing all of the identified learning goals?		
What kind of assessment will best suit you and your students' needs? ☐ Checklist ☐ Rubric ☐ Scoring guide		

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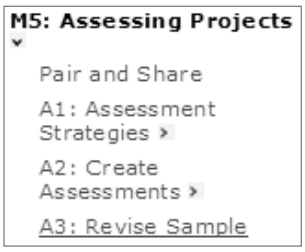
Activity 3: Revising My Student Sample



Use your notes from previous activities to identify areas for improvement.

a. Review the Student Sample Self-Assessment in the **My Work** tab > **Self-Assessments** link.

b. Review your notes from this module's Pair and Share either in your workbook on page 36 or in the notebook space in the course for ideas from your colleague on improving your student sample.

c. Review your assessment against the student sample and note any areas of the sample that are not fully met by the assessment.

Offline Tip: Review your student sample and assessment offline and make notes in this workbook or in a word processing document.

d. Make a list of changes below that you would like to incorporate into your student sample to improve it.

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Module 6

Planning for Student Success

M6: Planning Student Success
Pair and Share

Pair and Share: Sharing Student Samples and Assessments

Review feedback from your partner. Record ideas below for modifying your student sample and assessment.

Activity 1: Creating Accommodations for All Learners

M6: Planning Student Success
Pair and Share
A1: Create Accommodations
Step 1
Step 2

Step 1: Considering Different Learning Modalities

Read about the different frameworks for understanding learning styles:

- Visual-auditory-kinesthetic
- Left brain/right brain
- Multiple intelligences

Think about how this particular look at learning styles could have an impact on how you meet students' needs in your unit. Record your ideas below.

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Step 2: Supporting Students with Special Needs

Go to the **Resources** tab > **Student Support** > **Differentiation** link. Review the strategies for accommodating all learners in your classroom (students with special needs, nonnative language speakers, and gifted/talented students).

What instructional strategies will help you meet student needs? Use the space below to record your thoughts.

- Students with different levels of learning difficulties (resource students):

- Nonnative language speakers:

- Students who are gifted/talented:

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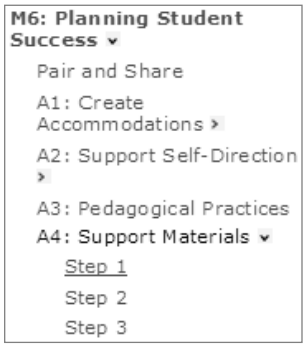
Activity 4: Creating Support Materials to Facilitate Student Success



Step 1: Exploring Sample Resources to Support Student Learning

Consider which templates, forms, or other documents you might use in your unit to support student learning.

Note any ideas below that you may want to incorporate into your student support material.

Step 2: Supporting Mathematical Thinking

Think about some ways you could integrate math into your unit, and record your ideas below.

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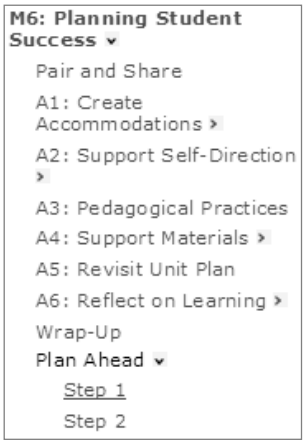
Planning Ahead

Step 1: Pre-Planning Facilitation Materials



Marzano, Pickering, and Pollock, in *Classroom Instruction that Works* (2001, p. 146)[2], discuss teaching strategies that teachers should include in the various stages of a unit:

- At the *beginning* of a unit, include strategies for setting learning goals.
- *During* a unit, include strategies for:
  - monitoring progress toward learning goals
  - introducing new knowledge
  - practicing, reviewing, and applying knowledge
- At the *end* of a unit, include strategies for helping students determine how well they have achieved their goals.

These teaching strategies support the learning process and mirror the assessment strategies addressed in Module 2: Planning My Unit. Review the following ideas and add your own. Consider how these strategies could be supported technologically in your unit.

- At the *beginning* of a unit, include strategies for setting learning goals.
  - This can be accomplished through the use of:
    - **Presentations** to foster curiosity and structure student inquiry
    - **Presentations** or **publications** to discuss unit expectations and deadlines with students and/or parents
    - A **printed project plan** that helps students understand and contribute to the expectations, steps, and deadlines of the unit
    - **Electronic communications** to parents through e-mails or web-based resources to identify and clarify the milestones of the project
    - **Other:** _____

      _____

      _____

(continued)

[2]Marzano, R. J., Pickering, D. J., & Pollock, J. E. (2001). *Classroom instruction that works: Research-based strategies for increasing student achievement.* Alexandria, VA: Association for Supervision and Curriculum Development.

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- *During* a unit, include strategies for:
  - monitoring progress toward learning goals
    - Possible tools could be:
      - **Spreadsheets** or **forms** to keep track of completed tasks for each student or team
      - **Electronic communications** to parents through e-mails or web-based resources to communicate student progress
      - **Observational anecdotal checklists** to record students' use of 21st century skills and content knowledge
      - **Other:** _____

        _____

        _____
  - introducing new knowledge and skills
    - Possible tools could be:
      - **Web-based resources,** such as **wikis** or **blogs,** that are created to launch students into research with links to resources
      - **Presentations** for tapping prior knowledge, introducing new concepts or the next stage of the unit
      - **Handouts** for interactive activities to introduce key concepts and skills
      - **Other:** _____

        _____

        _____
  - Practicing, reviewing, and applying knowledge and skills
    - Possible tools could be:
      - **Web-based resources** to archive lessons and activities for student review; provide resources and guidance for project assistance; provide resources for collaboration
      - **Presentations** to model 21st century skills or introduce a daily activity or warm-up
      - **Other:** _____

        _____

        _____

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- At the *end* of a unit, include strategies for helping students determine how well they have achieved their goals
  - Possible tools could be:
    - **Online surveys, forms,** or **web-based resources** for reflection questions and setting new goals
    - **Presentations** with pictures of students working and completing project tasks for end-of-project review and prompts for group discussion
    - **Spreadsheets** and **forms** to collect and analyze student data
    - **Web-based resources** to communicate project results
    - **Other:** _____

      _____

      _____

Brainstorming Facilitation Materials for Your Unit

Using the ideas presented on the previous pages, answer the following questions to brainstorm ideas for facilitation materials that would help you to be more efficient, aid student learning, and implement your unit.

1. What facilitation materials have you already created that you would like to use as is or modify for your unit?

   _____

   _____

   _____

   _____

   _____

2. What teacher support materials would help you be more efficient?

   _____

   _____

   _____

   _____

   _____

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3. What new facilitation materials would enhance your students' learning?

4. What additional facilitation materials would be helpful to facilitate the implementation of your unit?

Note: You have the option of modifying the publication that introduces projects in your classroom or the presentation to gauge student needs instead of creating a new resource in the next module. Although you will have several facilitation resources in your Unit Portfolio, you will only need to share one resource from your **unit_support** folder in the Module 8 Portfolio Showcase.

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Module 7

Facilitating with Technology

Pair and Share: Sharing Facilitation Resource Ideas

Review feedback from your partner. Record ideas for your facilitation material below.

Activity 1: Using Technology to Support Facilitation

Step 1: Focusing on Facilitation

Review your self-assessment and ideas for how technology could help you support a student-centered classroom. In what ways could you foster an environment and provide appropriate scaffolding to move students to self-directed learners and you to a facilitator role? Note your impressions and ideas below.

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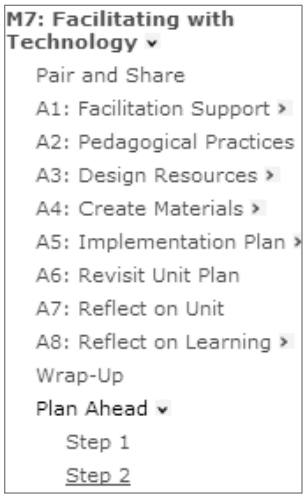
Planning Ahead



Step 2: Thinking About My Future Development

Reflecting on Future Professional Development and Resources

During this step, locate additional professional development opportunities that you may want to pursue beyond the Intel Teach Essentials Online Course. Use the space below to record Web addresses and site descriptions.

Locating Grants, Discount Rates, or Freeware for Educators

The cost of purchasing hardware and software limits the amount and types of technologies available to schools. However, opportunities are available for schools to acquire technology through grants, academic pricing, and freeware.

During this step, locate Web sites that offer grants, discount rates, or freeware for educators. Use the space below to record Web addresses and site descriptions.

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Module 8

Showcasing Unit Portfolios

Activity 3: Managing Technology in the Classroom

How could you incorporate any of the ideas from the sample management resources or Web sites into your unit or classroom? Use the space below to record your ideas.

Activity 5: Showcasing My Unit Portfolio

Following the showcase, list ideas for revising your Unit Portfolio.

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Notes

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