Intel® Teach Program
Essentials Online Course

May 2008

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Orientation

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Activity 4: Exploring Unit Ideas

Activity 4: Exploring Unit Ideas

Step 1: Reviewing Unit Plans and Taking Notes

Based on your review of unit plans, what ideas do you have for your Unit Plan? What was helpful from other unit plans? What topics are you considering at this point?

Module 1

Teaching with Projects

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Activity 1: Getting Started

Step 2: Introducing the Intel® Teach Essentials Online Course

After discussing the Course Overview, think about the areas in which you would like to focus your learning and write your initial goals for the course below. You will revisit these goals later in the module.

My Goals for the Intel Essentials Online Course:

Activity 3: Looking at Projects

Step 2: Viewing Unit Portfolios

Review the Unit Portfolios and take notes on any ideas you could adapt for use in your own Unit Portfolio.

Activity 4: Planning a Publication to Explain Projects

Step 1: Planning the Publication

In order to clearly explain projects to an audience, 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

Use the areas below to plan your publication.

Pictures to use

Other

List the content ideas for your newsletter, newspaper, brochure, or poster. Note content that needs additional research.

Step 3: Viewing Sample Publications

View sample publications for design and content ideas for your newsletter, newspaper, brochure, or poster and take note on ideas you can use in your publication.

Planning Ahead (Optional)

Thinking about My Unit Plan and Project Design

Use the following questions to refine your project idea.

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

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

How might you integrate the use of technology?

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

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

Gathering Resources
List any items you need to collect to help you develop your Unit Plan, such as textbooks, curricular support materials, grade-level expectations, district standards, samples of student work, and so forth.

Module 2

Planning My Unit

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Activity 2: Developing Curriculum-Framing Questions to Engage Students

Step 1: Understanding Essential, Unit, and Content Questions

Take notes on ideas for your Curriculum-Framing Questions.

Step 3: Sharing Curriculum-Framing Questions

Take notes on the ideas provided by your colleagues about your Curriculum-Framing Questions.

Activity 3: Considering Multiple Methods of Assessment

Step 1: Exploring Formative and Summative Assessments
Planning Assessment Strategies

Gauging Student Needs
What strategies are you considering to gauge student readiness for the unit?

Monitoring Progress
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?

Encouraging Self-Direction and Collaboration
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?

Checking for Understanding and Encouraging Metacognition

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

Demonstrating Understanding and Skill

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?

Activity 4: Creating an Assessment to Gauge Student Needs

Step 1: Tapping into Prior Knowledge

Take notes on strategies you might use to gauge student needs.

Optional Resources

Review information from *Designing Effective Projects* and *Assessing Projects*, take notes on Tapping Prior Knowledge, Curriculum-Framing Questions, and Gauging Student Needs.

Tapping Prior Knowledge

Curriculum-Framing Questions

Gauging Student Needs

Step 2: Planning My Assessment

Based on your discussion, take notes as needed on the following questions:

- What kinds of information do you need to gather from your students to better understand their learning needs? How will you collect it?

- How can your Essential and Unit Questions be used for gauging student needs?

- In what ways can you gather information about your students' higher-order thinking and 21st century skills related to this unit?

- How will you use the information you collect?

Gauging Student Needs Assessment Content

Use the following planning area to help you think through the content of your gauging student needs assessment and the methods to use.

Assessment Information Needed	
Prior knowledge information	
Misconceptions or areas of weakness	
Strategies for Gathering Assessment Information	
How to use the Essential and Unit Questions?	
How to pre-assess necessary 21st century skills?	
What is most effective assessment method?	

Activity 5: Creating a Presentation about My Unit

Step 1: Planning My Presentation

Take notes on the Unit Portfolio Presentations, focusing on the Unit Summaries.

Unit Portfolio Presentation Preparation

Take notes as you consider the following questions in preparation for creating your Unit Portfolio Presentation:

- What do you want to learn by creating this unit? What about this unit makes it suitable for helping you achieve your goals for the course?

- How will your project-based approaches, ongoing assessment, and Curriculum-Framing Questions help your students meet 21st century learning goals?

Planning Ahead (Optional)

Step 1: Creating Project Ideas for an Essential Question

1. Read the following four unit descriptions and the corresponding Essential Questions.
2. Choose one Essential Question based on your group's interests.
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 take on the role of the masters by creating drawings and paintings in the style of artists from three different periods and analyze the stylistic differences. • • • •

| 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 during a service-learning project. | Example:

• Students reflect on their experiences as explorers during the 13th to 15th centuries.

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| 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.

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| 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.

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Module 3

Making Connections

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Activity 2: Targeting 21st Century Skills

Note ideas for addressing 21st century skills in your learning objectives. Consider the following questions:

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

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

   c. Where in your unit would collaboration be beneficial?

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

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

Activity 3: Modeling and Teaching Legal and Ethical Practice Related to Technology Use

Step 1: Exploring Copyright

View the Copyright Chaos Presentation and take notes.

Take notes in response to the following prompts about copyright.

- 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 4: Using the Internet for Research

Step 2: Evaluating Web Resources

Take notes as you review the student form for your grade level and other checklists.

Take notes 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

Take notes about how you might use communication tools (e-mail, chats, instant messaging, online surveys, or VoIP) in your unit.

Activity 6: Considering Web-based Collaborative Learning

Step 2: Sharing Ideas

Take notes on your colleagues' comments on communication and collaboration tools.

Planning Ahead

Incorporating the Internet

Record your ideas about using Internet tools in your unit.

Search Resources

Communication (Tagging and bookmarking sites, E-mail, Instant Messaging, Chats, \
Surveys/Opinion Polls)

Collaboration (Blogs, Wikis, Online Collaborative Web Sites)

Module 4

Creating Learning Samples

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Activity 1: Examining Student Samples

Note ideas you may want to use from the example student samples. Consider the following questions:

    a. What 21st century skills does the student sample demonstrate?
    b. How does the student sample help to answer the Curriculum-Framing Questions?
    c. How does the chosen technology tool enable students to enhance their learning, increase productivity, and promote creativity?

Activity 2: Planning My Student Sample

Step 1: Reviewing Project Design

Consider a project scenario in which your students take on real-world roles. Record your thoughts on the following questions:

- What real-world connections are possible for your unit?
- What scenarios might help your students make those real-world connections?
- What roles might your students play?
- What tasks might they complete as they carry out those roles?

Step 2: Connecting My Student Sample to Questions, Objectives and 21st Century Skills

Take notes on what learning you want your students to show in their student product or performance. Consider the concepts, skills, knowledge and 21st century skills you want your students to demonstrate. Record ideas on the Curriculum-Framing Questions that will be incorporated into the student sample. Also, consider ways you can use math in your unit to improve students' thinking skills.

Step 3: Choosing the Best Tool for the Job

In the Your Ideas section of the following table, brainstorm possible ideas for using technology tools for your student sample.

Strengths/Purpose of 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 digital 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:

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:

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:

Module 5

Assessing Student Projects

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Activity 1: Examining Assessment Strategies

Step 1: Reflecting on Assessment in My Classroom

Based on your formative self-assessment, note areas which you would like to improve as you develop your assessment plan.

Step 2: Reviewing Assessment Plans

As you review assessments, record notes that may help you develop your own assessment plan.

Activity 2: Creating Student Assessments

Step 1: Focusing on My Assessment Plan

Use the Assessment Planning Table to determine and describe the types of assessments you will use throughout your unit.

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

☐		☐ Before ☐ During ☐ After
☐		☐ Before ☐ During ☐ After
☐		☐ Before ☐ During ☐ After

Step 2: Planning an Assessment for your Student Sample

Review your student sample and record your thoughts below and in the table.

What concepts, skills, and knowledge will be assessed?

How will the Curriculum-Framing Questions be assessed?

What higher-order thinking skills will be assessed?

What 21st century skills will be assessed?

Summarize how you 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:		
What kind of assessment will best suit you and your students' needs? ☐ Checklist ☐ Rubric ☐ Scoring guide		

Activity 3: Revising My Student Sample and Unit Plan

Step 1: Revising My Student Sample

Note any revisions to your student sample based on your colleagues' feedback and your student sample assessment.

Activity 4: Pedagogical Practices

Involving Students in the Assessment Process

Based on the brainstormed list of challenges and solutions when involving students in the assessment process, answer the questions:

- Which challenges will be the most difficult for you to overcome?

- What steps could you take to implement some of the solutions under consideration?

Module 6

Planning Student Success

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Activity 1: Creating Accommodations for All Learners

Step 1: Considering Different Learning Modalities

Note how different learning styles could have an impact on how you meet students' needs in your unit.

Step 2: Differentiating for Student Learning

Note your ideas for accommodating all students' needs in your unit.

Activity 4: Creating Support Materials to Facilitate Student Success

Step 1: Exploring Sample Resources to Support Student Learning

Take notes on ideas for using templates, forms, or other documents to support student learning.

Planning Ahead

Considering Facilitation Resources

Record your ideas for the types of facilitation materials you might use before, during, and after a project.

Module 7

Facilitating with Technology

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Activity 3: Implementing a Successful Project

Activity 3: Implementing a Successful Project

Step 2: Planning for a Successful Project

Take notes on how you could address the outlined topics in your classroom.

Topics to consider:

Communicating about the project
- Project introduction
- Expectations, key tasks and responsibilities
- Celebration and wrap-up

Timing and transitions
- School schedule
- Student attendance

Collaboration
- Group size
- Types of groups
- Managing and monitoring groups

Materials/Equipment/Technology/Outside Resources/Facilities
- File management
- Technology management
- Field trips
- Guests
- Extra Help (Mentors, student aides, resource staff, library/media)

Grading
- 21st century skills
- Self-direction
- Group work