

## Technology in the Content Areas Spring 2011

**Overarching Goals:** Identify and explain ways to meaningfully and powerfully engage technology that supports subject area learning and thinking. Generate a unit that draws on meaningful use of technology. Examine the nature of youth's engagement with technology and identify what is involved in effective scaffolding for the development of Digital Literacy and Citizenship. Know how to access professional development in order to develop your skills in this area.

### What essential questions will be considered?

- Why engage technology in the classroom? What are different points of view about the purpose of technology in education? (explain, perspective)
- What does meaningful and powerful use of technology in the classroom look like? (explain, application)
- What are my strengths with technology? What would be worthwhile goals and strategies for refining my skills? (self-knowledge)

### What knowledge and skills will you acquire as a result of this unit?

#### You will thoughtfully consider:

- The nature, issues surrounding and purpose of youth engagement with technology.

#### You will know:

- Types of technology used in their content areas.
- The difference between tier 1, 2 & 3 uses of technology.
- Characteristics/principles of technology used in a way that invites active critical engagement as consumers, participants and/or authors.
- Strategies for refining their technology knowledge and skill within the public school setting.

#### You will be able to:

- Use reliable resources to inform planning and professional development.
- Plan a unit that meaningfully leverages technology in order to meet content learning goals.
- Complete a multimedia project such as the kind that your students might do.
- Analyze and identify the kinds of teaching/scaffolding that are implicated with such a multimedia project
- Develop a professional development plan for engaging technology.

### What evidence will show that you understand?

#### Performance tasks

- Create the outline for a unit in your content area which would be supported by students' use of technology
- Complete a multimedia communication project to both refine skills and examine the kinds of scaffolding that effective use of technology in this context entails.

#### Other evidence of learning in light of objectives:

- Formative assessment prompts in which you communicate insights and refinements to your understanding of effective uses of technology in the classroom.

#### Self-assessment and reflection:

- Self-assessment of the unit plan
- Self-assessment and goal setting for multimedia project.
- Analysis and self-assessment of technology EALRs & Technology professional development plan

## ASSESSMENT TASK DESCRIPTIONS

1. **Create the outline for a unit in your content area which would be supported by students' use of technology** (*see weekly assignments for preparations to support project due weeks 2-4, final due week 5*)

### Task overview

OSPI and the school districts are increasingly interested in seeing teachers engage students in 21<sup>st</sup> century skills. They have agreed to provide resources and professional development to the teachers who show initiative to make use of Tier 2 & 3 technologies in the classroom. You are part of a professional learning community at your school that has been purposeful about investigating and practicing ways to support students meeting the content area standards. In discussing this opportunity, people were both intrigued and cautious about the possibilities technology integration offered. Some people in your PLC expressed concern that this initiative will dilute the time available for helping students meet these standards. Others were concerned that the use of technology, while potentially exciting, won't necessarily help students learn the content and skills of the subject area. Others were concerned about not having the technology knowledge and skills necessary to effectively engage students. As a group you decided to explore the possibilities for technology in a way that addresses these concerns by each trying to develop a unit plan that would meaningfully integrate technology. You would all come prepared to explain how the technology would serve student learning in the content area and the kinds of scaffolding students would need to successfully engage the technology. Finally, you all agreed to investigate specific resources that would help you to learn how effectively use the technology implicated in your unit.

Here are the specific things you should bring to your PLC meeting:

A document in which you provide

- (a) A description of the unit using Wiggin's and McTighe's unit development template for stage 1 (this part of the template outlines the big idea, goals, standards, essential questions, new knowledge & skills refined by the unit)
- (b) A stage 2 description of the assignment that would involve student's use of technology in order to meet the larger conceptual/skill goal of the unit.
- (c) A written explanation of how this use of technology would serve student learning and engagement towards the larger goal of the unit.
- (d) A written explanation of what you'd need to anticipate through structure or mini lessons to help students be successful in this project.
- (e) A self assessment of your skill in both using and teaching with this tool.
- (f) A concrete plan for how you could develop your skills that entails: (i) knowledge of Professional Development (PD)resources in the district, (ii) on-line tools for learning, and (iii) teacher models to emulate/adapt.

Be prepared to give a presentation 8 minute presentation of parts a-d above using powerpoint.

### Criteria by which your unit outlines will be evaluated

- Meaningful leveraging = Use of technology serves a content goal  
= Explanation shows how and why it's important/useful to student learning (e.g. how does technology support knowledge building, or knowledge expression )
- Awareness of scaffolding = considers ways to structure critical engagement, student thinking, problem solving, collaboration, project management, etc.
- Meaningful reasons and ideas for professional development  
= specific about what knows /doesn't yet know as related to the specific project.  
= specific vs. general (i) knowledge of PD resources in the district, (ii) on-line tools for learning, and (iii) teacher models to emulate/adapt.
- Backward design = clear and accurate use of stages 1 & 2 of template

2. **Complete a multimedia communication project to both refine skills and examine the kinds of scaffolding that effective use of technology in this context entails.** (*see weekly assignments for preparations due weeks 6-8; final due week9*)

**Task overview:**

One way to prepare yourself to engage your students in using technology is for you to participate in the same kinds of projects. It's a strategy for you to anticipate the kinds of thinking, skills, scaffolding and mini-lessons the project entails. Communicating for a particular purpose, critically evaluating and selecting evidence for that purpose, and communicating in a way that is meaningful to a particular audience are goals that are relevant to many disciplines. For this project you will exercise your skills in communicating for a purpose by creating a thesis based digital essay. You will engage in the learning cycle of producing such an essay, and then together with your PLC, you will analyze the process and identify the implications for structuring and scaffolding learning when students engage this technology.

Your task involves the following three tasks:

*(a) Create a digital essay*

- Pick an important person/issue in your content area.
- Identify a thesis about that person/issue and three stories that would support that thesis.
- Gather evidence (i.e. media elements to support and illustrate the story elements).
- Create storyboard to outline and organize the structure of your project.
- Create a draft of the digital story.
- Present the final version.

*(b) Engage the creation process*

- For each step of the project, go as far as you can on your own, then solicit feedback from your colleagues to help you make it better.
- Keep an author's log in which you identify (i) your questions, (ii) the feedback you receive for how to make the project better meet your goals, and (iii) your rationale for revisions and design decisions showing how you took feedback into account.

*(c) Analyze the task and anticipate the kinds of things that you need to provide students by way of structure, scaffolding and classroom management to support learning and engagement.*

**Criteria by which your products and performances will be evaluated?**

Digital essay:           (i) Essay has a clear thesis;  
                                 (ii) Includes 3 stories that effectively support thesis;  
                                 (iii) Organization supports the telling of the thesis;  
                                 (iv) Media & effects contribute rather than distract from the essay.

Author's log & weekly preparation  
engaged creative cycle:

- (i) Came prepared to engage peer feedback,
- (ii) engaged the feedback in refining project,
- (iii) rationale for design decisions took feedback into account.

Synthesis of things that need to provide students by way of structure, scaffolding and classroom management includes specific (vs. general) list of practices and provisions to support student learning.

## WEEKLY SCHEDULE OF TOPIC/QUESTION AND WORK DUE

<b>Fridays</b>	<b>Preparation due today</b>
<b>Week 1</b> Introduction  What is the role of technology in the public school?  What distinguishes strong and weak uses of technology?	<b>Purpose:</b> How do the EALR's illustrate what Washington State considers to be the purpose of technology in the classroom and the role of the teacher in meeting that purpose?  <b>Task:</b> Read the technology EALRs
<b>Week 2</b>  What does it mean to engage "technology for a purpose?" What does it look like?	<b>Purpose:</b> To identify types of technology used in content areas to support instruction To begin developing an informed technology professional development plan  <b>Task:</b> <ol style="list-style-type: none"> <li>1. Review the technology EALRs paying particular attention to the examples in bottom row of each page of the standards.</li> <li>2. Complete the self-assessment chart as it pertains to the grade levels you'll be teaching in the following quarter (ELM)</li> <li>3. Bring complete chart with you to class.</li> </ol>
<b>Week 3</b>  Technology and powerful literacy	<b>Purpose:</b> To identify types of technology resources available to you, To help you examine and articulate the purpose the technology serves for the content goal To examine a model of a backward design template for an integrated unit plan.  <b>Read</b> <ul style="list-style-type: none"> <li>• Examine activity types for your content area (<a href="http://activitytypes.wmwikis.net/">http://activitytypes.wmwikis.net/</a>). (<i>Arts—take a peek at another content area that interests you, ELL folks look at LA and at World languages</i>)</li> <li>• Choose 1 of the following CBPA's to read: (<a href="http://www.k12.wa.us/EdTech/Assessment/draftedtechcbaFieldTest.aspx">http://www.k12.wa.us/EdTech/Assessment/draftedtechcbaFieldTest.aspx</a>)</li> </ul> <b>Task:</b> <ul style="list-style-type: none"> <li>• Write up stage 1 of the backward design template for your unit.</li> <li>• List the possible types of technology that you could integrate to support learning in your unit.</li> </ul>
<b>Week 4</b> Use resources to learn about technology and implications for pedagogy	<b>Purpose:</b> Gain insights on effective scaffolding of technology use.  <b>Task:</b> <ul style="list-style-type: none"> <li>• Find information to help you understand and explain the nature of technology you plan to use</li> <li>• Write up a list of the things to attend to in order to effectively scaffolding this form of technology.</li> <li>• List 3-4 "live" links of examples that are available on the web that illustrate its use</li> <li>• Bring to class and post on ELM as a resource.</li> </ul>
<b>Week 5</b> Presentations of units using Powerpoint	<b>Project due:</b> <ul style="list-style-type: none"> <li>• Unit outline in your content area which would be supported by students' use of technology</li> <li>• Power point presentation.</li> </ul> <div style="text-align: right;"><i>(see assignment details)</i></div>

<b>Week 6</b> Introduction to Digital Essay and project 2	<b>Purpose: Examine an example of Tier 3 technology use of technology</b>  <b>Task:</b> <ul style="list-style-type: none"> <li>Find out about digital stories &amp; youth radio type essays (see websites links &amp; questions -- TBA)</li> <li>Bring a list of 3-4 kinds of stories or essays that would be relevant to your content area investigations.</li> </ul>
<b>Week 7</b> Engaging the creative cycle, part 1	<b>Purpose: Engage the creative cycle</b>  <b>Task:</b> <ul style="list-style-type: none"> <li>Gather evidence (i.e. media elements to support and illustrate the story elements).</li> <li>Create and bring storyboard that outlines and organizes the structure of essay and placement of evidence.</li> </ul>
<b>Week 8</b> Engaging the creative cycle, part 2	<b>Purpose: Engage the creative cycle</b>  <b>Task:</b> <ul style="list-style-type: none"> <li>Use KeyNote to create draft of digital essay.</li> <li>Write up author's note entry to show how used feedback in creation of draft, and to track new questions.</li> </ul>
<b>Week 9</b> Presentations & final reflection	<b>Final project due</b> <ul style="list-style-type: none"> <li>Revise final presentation of digital essay.</li> <li>Write up author's note entry to show how used feedback in creation of draft, and to track new questions.</li> </ul> <p style="text-align: right;"><i>(see assignment details)</i></p>