Overview of unit design template using technology

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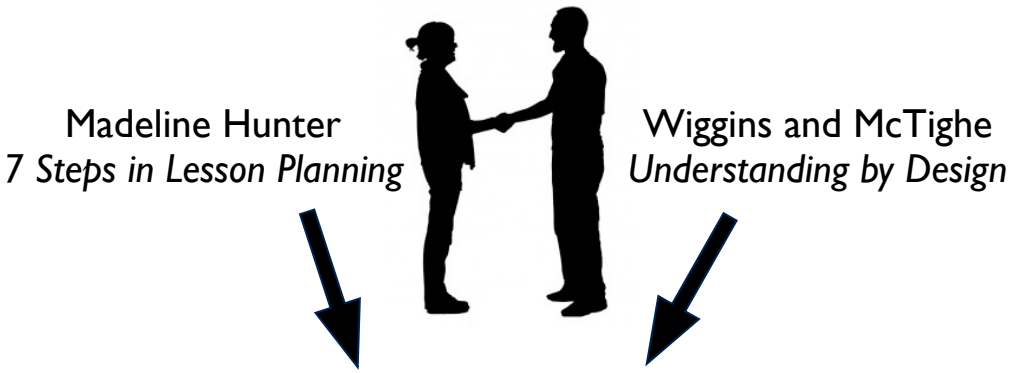
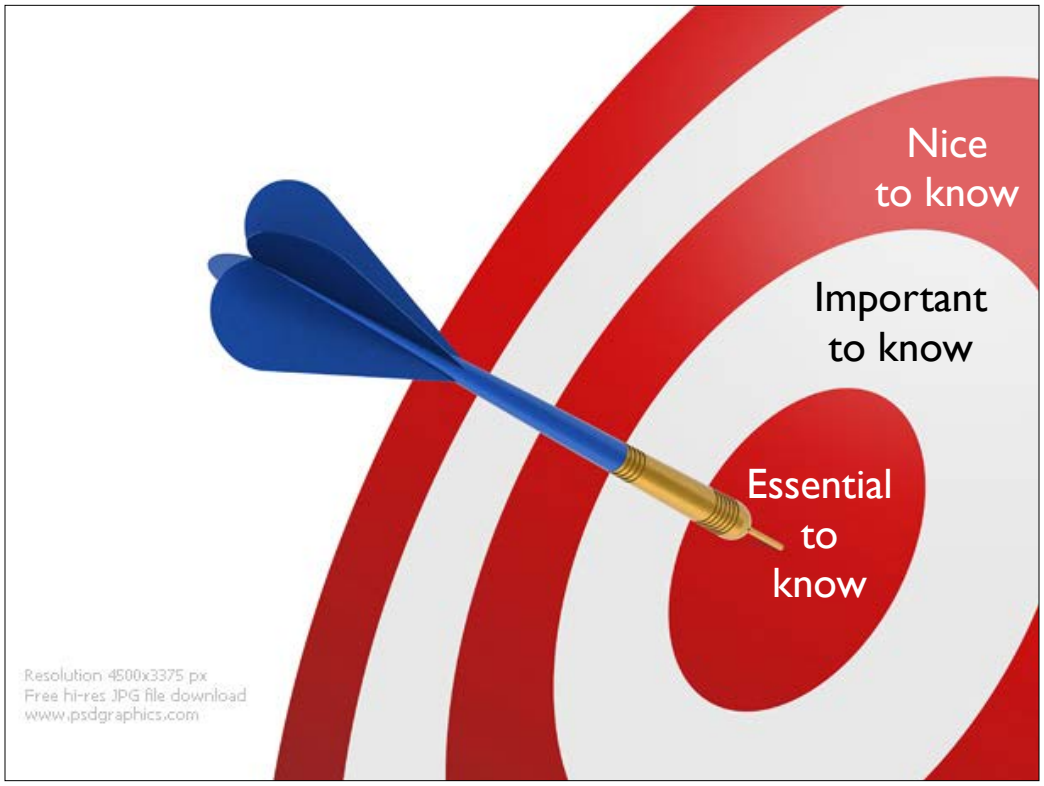
ETUD model: background

- All staff took a standards-based graduate course
- Expectations and shared methodology were understood

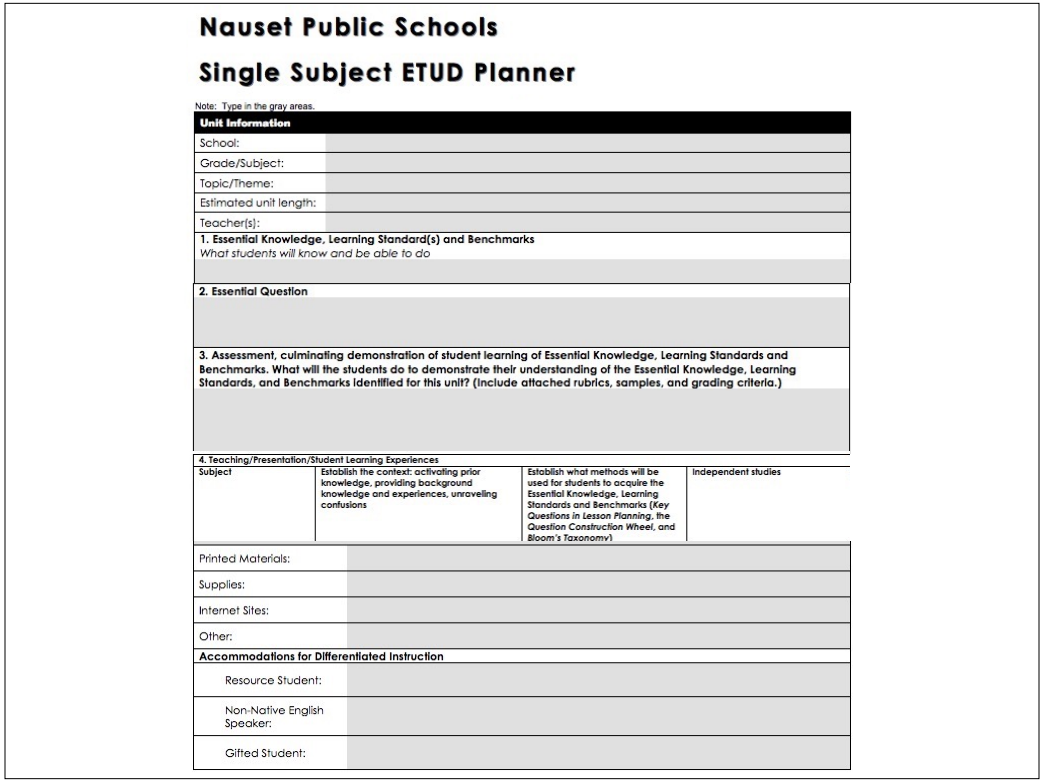


A little background on the adoption of the ETUD (Effective Teaching Unit Design) model of unit development.
Over a period of 2 years, all administrators and teachers took the same graduate level course dealing with standards-based unit design.
The idea is that the expectations for use and a shared vocabulary were to be adopted district-wide
The ETUD was a district creation that borrowed the best parts of both the Understanding by Design model and Madeline Hunter's 7 steps in lesson plan

http://jfmueller.faculty.noctrl.edu/205/madelinehunter.htm
http://www.d.umn.edu/~hrallis/courses/3204fa06/assignments/lessonplanning/ubd_template.htm



The biggest challenge when developing the EUTD was first differentiating what was essential to know, important to know and nice to know and developing the essential question for the unit.



Nauset Public Schools

Single Subject ETUD Planner

Note: Type in the gray areas.

Unit Information	
School:	
Grade/Subject:	
Topic/Theme:	
Estimated unit length:	
Teacher(s):	

1. Essential Knowledge, Learning Standard(s) and Benchmarks
What students will know and be able to do

2. Essential Question

3. Assessment, culminating demonstration of student learning of Essential Knowledge, Learning Standards and Benchmarks. What will the students do to demonstrate their understanding of the Essential Knowledge, Learning Standards, and Benchmarks identified for this unit? (Include attached rubrics, samples, and grading criteria.)

4. Teaching/Presentation/Student Learning Experiences

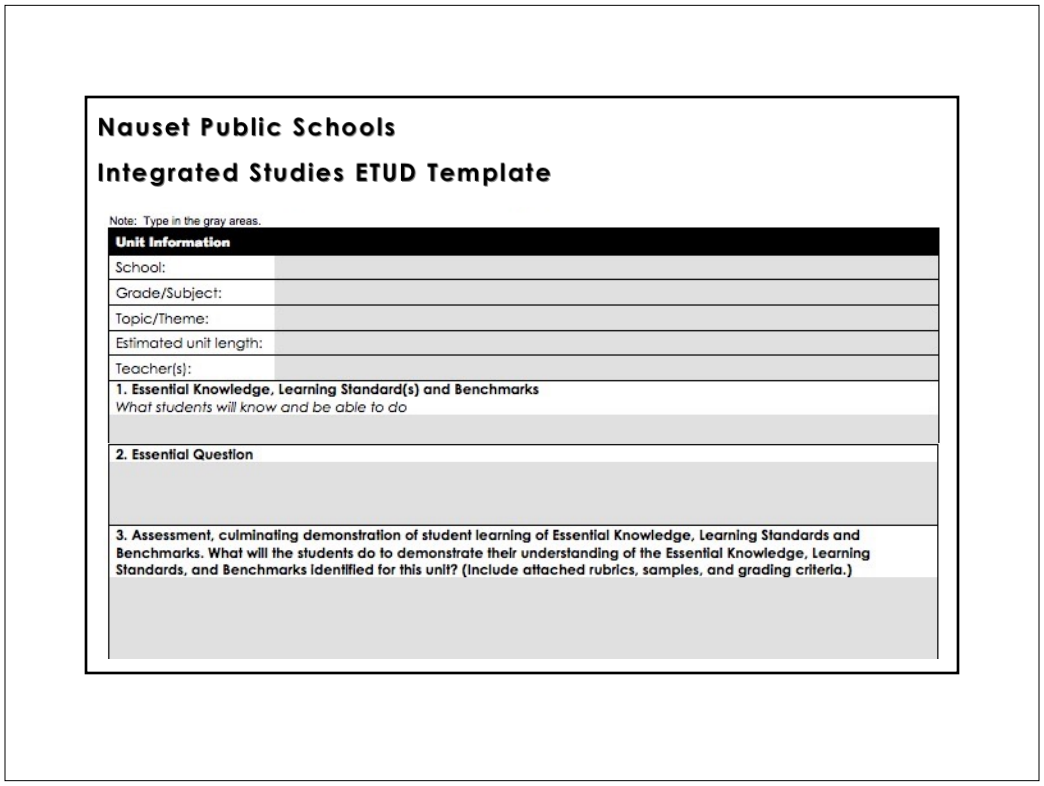
Subject	**Establish the context: activating prior knowledge, providing background knowledge and experiences, unraveling confusions**	**Establish what methods will be used for students to acquire the Essential Knowledge, Learning Standards and Benchmarks (*Key Questions in Lesson Planning*, the *Question Construction Wheel*, and *Bloom's Taxonomy*)**	**Independent studies**

Printed Materials:	
Supplies:	
Internet Sites:	
Other:	
Accommodations for Differentiated Instruction	
Resource Student:	
Non-Native English Speaker:	
Gifted Student:	

There were two versions of the ETUD template. Teachers had to use to move and adapt their current units and lessons to this newly adopted model.

There was a single subject template and an integrated subject version. Of course, since most teachers had single-content area units, that was the form that was primarily used.

And, there was no real plan for technology infusion at that point.



Nauset Public Schools

Integrated Studies ETUD Template

Note: Type in the gray areas.

Unit Information	
School:	
Grade/Subject:	
Topic/Theme:	
Estimated unit length:	
Teacher(s):	

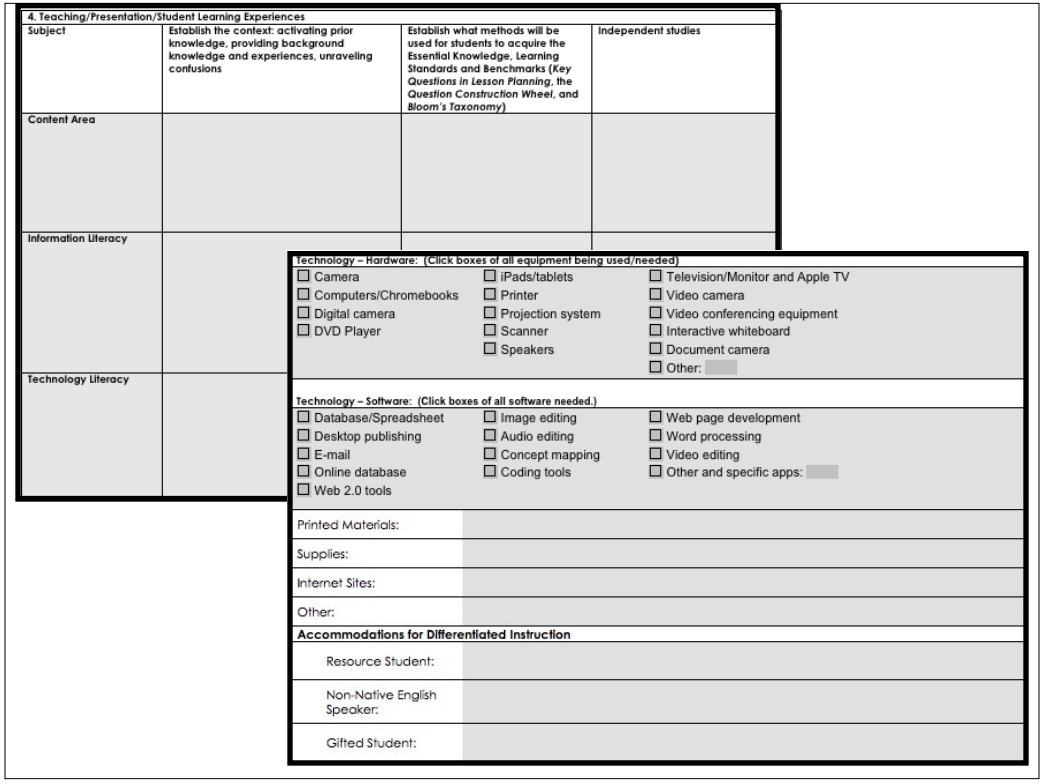
1. Essential Knowledge, Learning Standard(s) and Benchmarks
What students will know and be able to do

2. Essential Question

3. Assessment, culminating demonstration of student learning of Essential Knowledge, Learning Standards and Benchmarks. What will the students do to demonstrate their understanding of the Essential Knowledge, Learning Standards, and Benchmarks identified for this unit? (Include attached rubrics, samples, and grading criteria.)

To help teachers think more about the use of technology as an assessment tool, the library media specialists and the instructional technology specialists created a version of the integrated subject ETUD.

The top part was the same.



4. Teaching/Presentation/Student Learning Experiences

Subject	Establish the context: activating prior knowledge, providing background knowledge and experiences, unraveling confusions	Establish what methods will be used for students to acquire the Essential Knowledge, Learning Standards and Benchmarks (*Key Questions in Lesson Planning*, the *Question Construction Wheel*, and *Bloom's Taxonomy*)	Independent studies
Content Area			
Information Literacy			
Technology Literacy			

Technology – Hardware: (Click boxes of all equipment being used/needed)

- ☐ Camera
- ☐ Computers/Chromebooks
- ☐ Digital camera
- ☐ DVD Player
- ☐ iPads/tablets
- ☐ Printer
- ☐ Projection system
- ☐ Scanner
- ☐ Speakers
- ☐ Television/Monitor and Apple TV
- ☐ Video camera
- ☐ Video conferencing equipment
- ☐ Interactive whiteboard
- ☐ Document camera
- ☐ Other:

Technology – Software: (Click boxes of all software needed.)

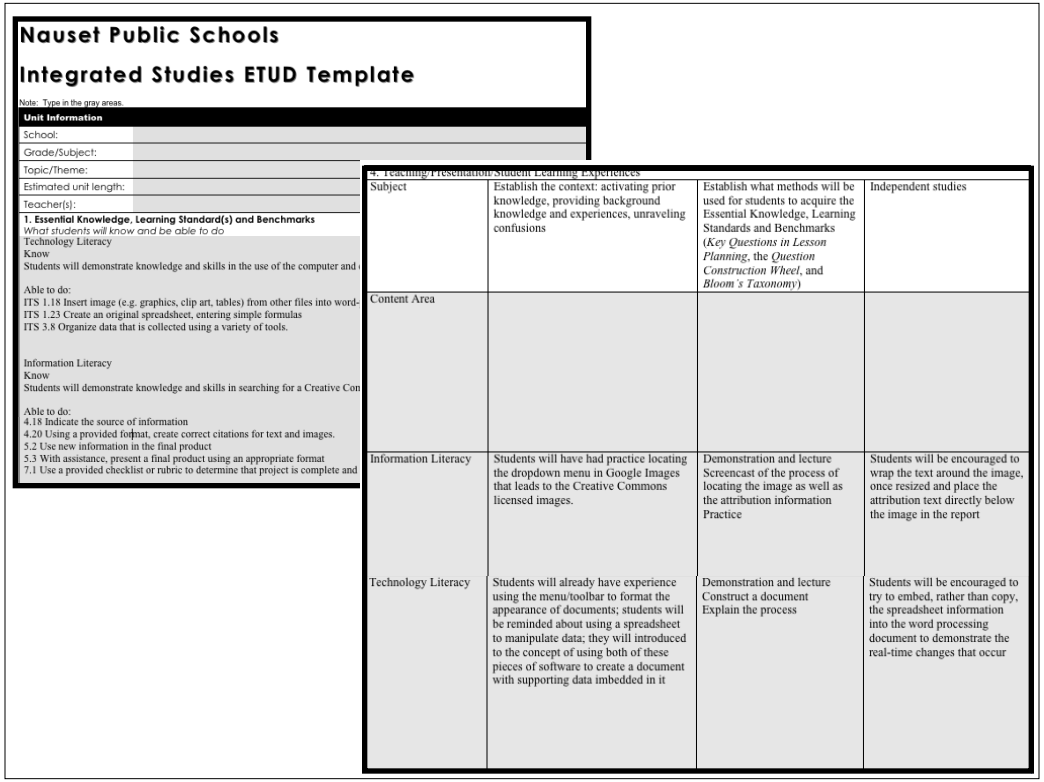
- ☐ Database/Spreadsheet
- ☐ Desktop publishing
- ☐ E-mail
- ☐ Online database
- ☐ Web 2.0 tools
- ☐ Image editing
- ☐ Audio editing
- ☐ Concept mapping
- ☐ Coding tools
- ☐ Web page development
- ☐ Word processing
- ☐ Video editing
- ☐ Other and specific apps:

Printed Materials:	
Supplies:	
Internet Sites:	
Other:	

Accommodations for Differentiated Instruction

Resource Student:	
Non-Native English Speaker:	
Gifted Student:	

However, they added both the information literacy and technology skills areas and included technology tools to pick from.
They left the content area blank, so the ETUD could be adapted for any subject area.



Nauset Public Schools

Integrated Studies ETUD Template

Note: Type in the gray areas.

Unit Information

School:	
Grade/Subject:	
Topic/Theme:	
Estimated unit length:	
Teacher(s):	

1. Essential Knowledge, Learning Standard(s) and Benchmarks

What students will know and be able to do

Technology Literacy
Know
Students will demonstrate knowledge and skills in the use of the computer and

Able to do:
ITS 1.18 Insert image (e.g. graphics, clip art, tables) from other files into word-
ITS 1.23 Create an original spreadsheet, entering simple formulas
ITS 3.8 Organize data that is collected using a variety of tools.

Information Literacy
Know
Students will demonstrate knowledge and skills in searching for a Creative Con

Able to do:
4.18 Indicate the source of information
4.20 Using a provided format, create correct citations for text and images.
5.2 Use new information in the final product
5.3 With assistance, present a final product using an appropriate format
7.1 Use a provided checklist or rubric to determine that project is complete and

4. Teaching/Presentation/Student Learning Experiences

Subject	Establish the context: activating prior knowledge, providing background knowledge and experiences, unraveling confusions	Establish what methods will be used for students to acquire the Essential Knowledge, Learning Standards and Benchmarks (*Key Questions in Lesson Planning*, the *Question Construction Wheel*, and *Bloom's Taxonomy*)	Independent studies
Content Area			
Information Literacy	Students will have had practice locating the dropdown menu in Google Images that leads to the Creative Commons licensed images.	Demonstration and lecture Screencast of the process of locating the image as well as the attribution information Practice	Students will be encouraged to wrap the text around the image, once resized and place the attribution text directly below the image in the report
Technology Literacy	Students will already have experience using the menu/toolbar to format the appearance of documents; students will be reminded about using a spreadsheet to manipulate data; they will introduced to the concept of using both of these pieces of software to create a document with supporting data imbedded in it	Demonstration and lecture Construct a document Explain the process	Students will be encouraged to try to embed, rather than copy, the spreadsheet information into the word processing document to demonstrate the real-time changes that occur

This group of librarians and tech teachers, from grades K-8, then looked at the technology and information literacy standards and chose the ones that they felt a classroom teacher could handle on their own with a cart of devices or in a lab.

They then created 4 project-based assessments at each grade level that were content-neutral, but included the tech and information literacy components.

GRADING RUBRIC	Exceeds Expectations	Meets Expectations	Does Not Meet Expectations	Not Present
Students will locate a CC-licensed image and the attribution for such and insert both into the document	The student includes the image, the attribution is below the image, and the text is wrapped around the image to provide a better viewing experience.	The student includes the image, the attribution is below the image,	The student includes th image but the correct attribution is not includ	
Students will create a spreadsheet with row and column headings	The spreadsheet includes descriptive row and column headings with color/shading.	The spreadsheet includes descriptive row and column headings.	The spreadsheet includ row and columns that have headers that may be meaningful.	
Students will use menus and toolbar items to add borders to their spreadsheet.		The spreadsheet includes both inside and outside borders.	The spreadsheet contai some borders, but not a cells are bordered.	
Students will include a row/column with sum/avg of data in the spreadsheet		The spreadsheet includes the use of the SUM/AVG functions in the summary row.	Some columns have sum/avg functions utilized.	
Students will enter data into the cells of the spreadsheet	Data is in the cells is added with background colors.	The spreadsheet includes entered data in each cell.	Some cells of the spreadsheet are empty.	
Students will create a word processing document with a minimum of one paragraph	The word processing document includes advanced formatting functions (change in font, etc.)	The word processing document adheres to proper format and includes an opening paragraph.	The word processing document includes only brief amount of information.	
Students will copy-and-paste their spreadsheet into the word processing document and resize as necessary	Students embed the spreadsheet into the word processing document so data is changeable by edits to the spreadsheet.	The spreadsheet is inserted after the opening paragraph in the word processing document and re-sized if necessary.	The spreadsheet is inserted in the incorrec place in the word processing document o not resized for easy viewing.	
Students will add an additional paragraph of information following their pasted spreadsheet.	The additional paragraph includes advanced formatting functions (change in font, etc.)	The additional paragraph is added after the inserted graph and follows proper format.	The additional paragra includes only a small b of information and/or i added in the incorrect place.	

EXEMPLAR OF COMPLETED WORD PROCESSING DOCUMENT WITH INSERTED SPREADSHEET AND IMAGE

Science

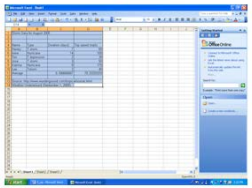
Hurricane Katrina was one of the most powerful hurricanes to hit the coast of the United States in recorded meteorological history. The wind speeds reached up to 175 miles per hour, making it a Category 5 storm. During August of 2005, there were six hurricanes, tropical depressions, and tropical storms. Each of these types of weather events are determined by their wind speed. Following is a spreadsheet that lists the storms and the total average length of duration and average wind speed.

http://upload.wikimedia.org/wikipedia/commons/9/97/Hurricane_Katrina_LA_landfall_radar.gif

Storm Data for August 2005			
Name	Type	Duration (days)	Top speed (mph)
Harvey	T storm	7	65
Irene	Hurricane	14	105
Ten	T depression	2	35
Jose	T storm	3	50
Katrina	Hurricane	9	175
Lee	Tstorm	2	40
Average		6.166666667	78.33333333
Source: http://www.wunderground.com/tropical/sumat.html			
Weather Underground (September 1, 2005)			

As one can see from the data above, there were some weather events that lasted for many days, such as Hurricane Irene and Hurricane Katrina, which made the average number of days of the events number over six days. In addition, the very high top speed of Katrina pushed the average speed of these weather events to over seventy-eight miles per hour.

A screenshot of the highlighted spreadsheet which was copied to insert in the word processing document.



They also included a rubric and an exemplar assessment, as well as how-to instructions for the teacher.

https://www.flickr.com/photos/virtuallearningcenter/3611202988/

We then had the teachers come together by grade level in computer labs, and, take a single discipline ETUD and move it into the new format with a technology assessment. Then, the teachers created the technology exemplar for that unit with support from both the computer teachers and library media specialists. The idea is that they would feel comfortable supporting students creating the same or similar assessment.