

The purpose of this workshop series is to help you learn to create instructional activities using the **Instructional Architect** (<u>IA.usu.edu</u>). It allows you to **find**, **use**, and **share** online learning resources from the National Science Digital Library (<u>NSDL.org</u>) and the Internet, and create engaging and interactive educational web pages for teaching.

<u>Set Up</u>

1. Pre-survey:

1. Take the pre-survey at: http://ia.usu.edu/survey/

2. Register for an IA Account:

Create an Instructional Architect account:

- 1. Go to http://ia.usu.edu
- 2. Click I Am A Teacher.
- 3. Click on **Register** (at the bottom of the screen).
- 4. Read the information and instructions on how to fill out the registration form.
- 5. Decide on an account name, password, screen name, and student login.
- 6. Type in your information in the boxes provided (right hand side of screen).
- 5. Write your registration information in the blanks below (future reference).

My username is:

My password is:

My screen name is:

My student login name is:

3. Explore Some IA Projects:

- 1. Once you have logged in, click on **browse IA projects**. (It is in the gray box on the upper right hand side.)
- 2. Within the search box, type in one of the project numbers below. Then click **submit**.
- 3. Click on the **URL link**, which is right below the title. This will take you to the project.
- 4. Click on any of the links within the project to view them.
- 5. Repeat the process for the other projects.



List of IA Projects to Browse:

"Solving One Step Equations": "Seasons": "Newton's First Law of Motion": "Cells": **3391** "Rectangle Area":

Workshop Outline

4. Introductions and Overview of Workshop Series:

Introduce instructors and students. Explain workshop, requirements, and assignments.

5. Reflect Upon Your Own Teaching Needs:

Think of an upcoming instructional need or problem such as an activity, lesson plan, home work, small group work, etc. for which you might use online resources. The need should be something that you will teach or assign before our next workshop. You may want to jot down some notes, using the prompts below.

- 1. Upcoming topic or unit:
- 2. Objectives or ways you could use online resources:
- 3. What do the students need to know (e.g. "How crystals are formed"):

6. Introduction to Online Resources and the National Science Digital Library (nsdl.org):

The NSDL is the nation's **online library** for education in **science**, **technology**, **engineering**, **and mathematics**. It provides access to over 1 million cataloged online resources for learning. You will find great high quality resources for your science units in this library and it is much faster than using a search engine.

In this section, an in depth explanation of the National Science Digital Library will be presented. As we go through the steps in searching the NSDL, keep in mind the topic or subjects you will be teaching this year. You may find resources you are interested in.

Here are some useful resources in the NSDL:

First Time Users: http://nsdl.org/resources_for/first_time_users/ K12 Teachers: http://nsdl.org/resources_for/k12_teachers/ K12 Concept Maps: http://strandmaps.nsdl.org/

- On Your Own: search the NSDL for resources you may use.
- Large Group Discussion: What worked? What did not?

7. Introduction to the Instructional Architect:

In this section you will search and store online resources for your project. Then, you will



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create your first Instructional Architect project.

A. My Resources:

To create a new folder:

- a. Click in box: make a new folder and give it a title.
- b. Click on create folder.
- c. Place resources in the folder as you find your online resources.

There are three ways to gather resources within the IA:

- a. *Search* <u>NSDL</u> (using the Instructional Architect "Search NSDL")
- b. *Browse <u>IA projects</u>* (copy and use resources and ideas from other projects and links to other Instructional Architect projects)
- c. Add <u>Own Resources</u> (from websites outside of the IA and the NSDL)

There are two ways to search for NSDL resources:

- a. *Search by <u>Keyword</u>*: Searches for the specific word(s) within the IA project or NSDL resource(s).
- b. *Search by <u>Subject, Grade Level, and/or Format</u>: Searches for NSDL resource(s) within specific grades, for a specific subject, and/or for a specific format.*

There are three ways to search for IA projects:

- a. Search by Keyword: Searches for specific word(s) within IA projects.
- b. Search by <u>Subject, Grade Level, and/or Format</u>: Searches for IA projects within specific grades, for a specific subject, and/or for a specific format.
- c. *Search by <u>Author's Last Name, Title, or Project ID</u> (the last four or five numbers of the project's web address; for example: 3352). The browser searches for the author's name, a project title, or the number of a project.*
- On Your Own: Find your own resources and store them in the IA.
- Large Group Discussion: Ask questions about searching for resources.

B. My Project:

After you collect and store your resources, you are ready to create your IA project. Steps:

- 1. In the top menu, click on my projects.
- 2. Then, go to create new project.
- 3. Next, you will see **author project** and **step 1** underlined in the top menu list. You will follow steps 1-5 when creating a new project.

a. Do <u>step 1</u>:

Choose the **color** of your project and the **graphic** (or no graphic). This will appear on the top left corner of your new project.

b. Click on Save and Add Content.

c. Now, do step 2:

Your resources are on the left side of the screen. The right side of the screen



is where you can add your content.

d. Give your project a title, an overview statement of what your project will be about, and start to add your resources to your project. Use the formatting toolbar to format content.

(To add a resource in your content, just click the green underlined arrows (>>>) and it will move a number over to the right hand side. This represents the resource that will be used.)

- e. Click on Save and Preview.
- f. Do step 3: preview your project.
- g. Then, click on Publish Options.

h. Next, do step 4: Check each box that applies to your new project. Choose public or student only. This is where you can make your project available to the public, your students, both the public and students, or just yourself. You can also indicate the subject, grade level, and the relevant core content standard(s) of your project.

i. Click on Save and Finish.

j. Step 5 on this page, allows you to copy and paste the web address of your project or you can email the web address to yourself or write down the project number

- On Your Own: Create your IA project.
- Large Group Discussion: Ask questions and discussion about creating a project.

8. Quality Online Resources:

What did you look for when searching the NSDL, the IA, and other online resources? Now that you have seen what an IA project looks like, what do you think makes a good IA project?

- 1. Discuss criteria used to determine the quality of online resources.
- 2. Discuss the quality guide.
- 3. Add quality resources to your own projects.

List of IA projects for the Quality Guide

"Newton's Laws of Motion": 8340

- "Math/Solving Two-Step Algebra Equations": 7239
- "Marcia's Forensic Science Project": 4002
- **On Your Own:** Using the quality guide, look at your project. What would you do to improve your project? Write it down or change it.
- Large Group Discussion: Ask questions or discuss quality projects.
- 9. Finish Project: Extra time to finish your project.

<u>Wrap Up</u>

10. Large Group Discussion and Review:

1. As a large group, discuss the barriers and successes encountered in finding and designing projects.

2. Review the IA.

3. Review advanced features such as "Copy Project", "Rich Formatting Bar", project visits, and use of multi-media.

4. Example of an advanced feature project:

http://ia.usu.edu/viewproject.php?project=ia:12452

Remember these steps to go through to create your project:

- 1. Search the NSDL or the IA for resources that might help you with your need.
- 2. As needed, add your own resources from non-NSDL sites.
- 3. Start creating your own IA project, adding in your newly discovered resources.

11. Protocol for Student Surveys and Research Plan by IA Team:

Explain the requirements for administering surveys to the students and how the Instructional Architect Team will conduct research.





Use the following indicators to inform your choices when designing or reviewing IA projects. (Circle the best description for each category).

AccuracyInformation is credible, truthful, reliable, currentVery inaccurateInaccurateAccurateVery accurate

Text Clarity

Appropriate grade level, length, and amount (as concise as needed)						
Very unclear	Unclear	Clear	Very clear			

Links in Project

Work and go to the correct page					
All links fail	Most links fail	Most links work	All links work		

Project Completeness

Includes the state standard, objectives, learning goal, assessment, or an

exampl	e
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Very Incomplete	Incomplete	Complete	Very complete

The Project					
Provides a	Teaches a	Reinforces a	Provides a	Other	
resource list	concept	concept	summary of content		

Overall							
	Meets no criteria			Meets some criteria	Meets all criteria	Exceeds crite	ria
	Unaversity	DL	NSDL	2830 Old Main Hill Logan, Ut 84322 mimi.recker@usu.edu Funded by a grant from the National Science Foundation		ia.usu.edu	6

Overall

<u>Reminder</u>

To obtain **1 USU credit**, receive the **\$300 stipend** and **\$50 gift certificate**, you will need to complete the following:

- Attend all three workshops and complete the between workshop assignments listed below.
- Obtain informed consent from parents/guardians for your students' participation in a research study.
- Administer the survey to students twice, once after workshop 1 and once after workshop 2. (Note: for each administration students will do a pre- and a post-survey).
- You will also need to sign a research consent form that allows a member of the IA team to observe the lesson you have implemented utilizing the IA and online resources or to be interviewed. We will only observe or interview a few participants.

Assignments

Assignment 1:

You will need to complete the following **between** workshop activities before the 2nd workshop, on **Tuesday, Oct. 26 from 4:00 pm- 7:00 pm**.

- 1. Create an Instructional Architect project that meets an instructional need in your classroom. Use at least **three** online resources in the project.
- 2. Administer the pre-survey to your students.
- 3. Use your IA project with your students.
- 4. Administer the post-survey to students.
- 5. Write a one-page reflection paper. See attached questions on goldenrod paper.
- 6. Be prepared to share your experiences during Workshop 2.

Assignment 2 (Due after 2nd Workshop):

You will need to complete the following **between** workshop activities before the 3rd workshop, on **Tuesday, Nov.16 from 4:00 pm-7:00 pm**.

- 1. Create a **new** Instructional Architect project that meets an instructional need in your classroom. Use at least **three** online resources in the project.
- 2. Administer the 2^{nd} pre-survey to your students.
- 3. Use your IA project with your students.
- 4. Write a one-page reflection paper. Prompts will be provided at workshop 2.
- 5. Be prepared to share your experiences during Workshop 3.

Attend Workshop 3, Tuesday Nov. 16, from 4:00 pm – 7:00 pm.

- 1. Complete teacher post-survey.
- 2. Turn in reflection papers.

All workshop handouts (including this one) can be found here: <u>http://ia.usu.edu/viewproject.php?project=ia:14352</u>

Questions? Contact Linda Sellers at <u>linda.sellers@usu.edu</u> or call (435) 797- 2694. The department secretary will take a message. Linda will call back as soon as possible.





Directions: Please reflect on your experiences with the workshop so far and the Instructional Architect by answering the following questions. You can either use the form below or write it as a 1-2 page double-spaced paper. (To access an online form with these prompts, see the IA project for this workshop, #14352.)

1. Provide the web address (e.g., <u>http://ia.usu.edu/viewproject.php?project=ia:15</u>) for the IA project you created for classroom use.

2. Describe how you designed this lesson to be taught and used (e.g.: small groups, drill for review, whole class lesson, etc.). What influenced your decision-making as you began to develop your lesson?

3. Describe your successes and difficulties in implementing the activity with your students.

4. How did the use of the Instructional Architect change the way in which you taught this material compared to how you've taught it in the past?

5. Describe how you could use the learning resources you found to use in Instructional Architect projects in your classroom in the future.

6. How did you find learning resources to use in your IA project? What search terms did you use? What searches or search strategies were most successful, which ones were problematic? What were some of the successes and/or difficulties you encountered during your searching?

7. The goal of this workshop is to empower teachers with the skills and tools necessary to effectively integrate technology into their teaching practice. In your opinion, how effective is the workshop at accomplishing this goal? What could be improved? What worked well?

