

## Active Learning Online

Engaging students in meaningful discussion  
and creating a “learning community”



George Tuthill  
Online Instructor, MSU  
“World of Motion”



Jim Vanides  
Online Instructor, MSU  
“Science of Sound”

## Models of Online Learning

Dimensions:

- Completely Online vs. Hybrid (with F2F)
- Synchronous vs. Asynchronous
- Self Study vs. Instructor Facilitated Cohort
- Self Paced vs. Scheduled

*NTEN courses are online (only), asynchronous, instructor facilitated, scheduled (6 week) course for science teachers (elementary through high school).*

## Personal Introductions

- Get out a piece of paper and pen/pencil
  - Write down your name, area of expertise, and your location
  - Pass the paper to your site facilitator to enter into the chat window
- or -
- If you are logged into your own computer, enter your info yourself

## Personal Introductions

### **F2F**

- “Let’s go around the room...”
- “Pair-up & meet; introduce one another”

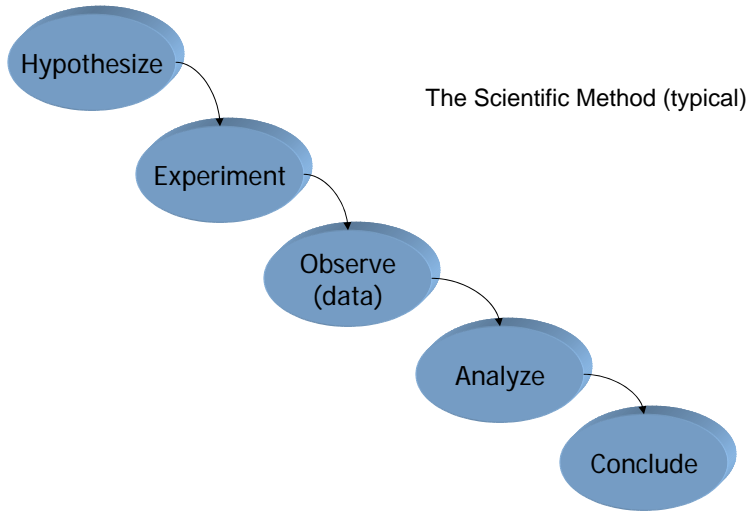
### **Online (sync)**

- Silent (parallel) introductions

### **Online (async)**

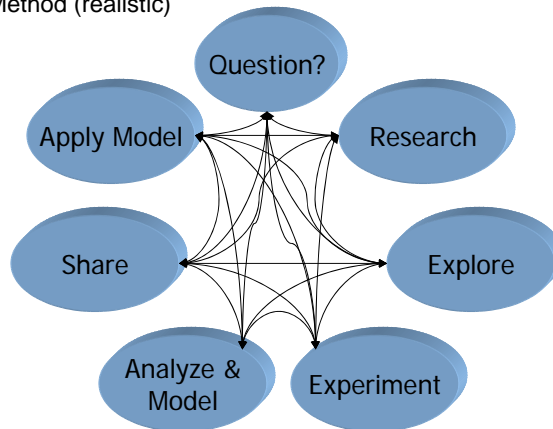
- Tells us about yourself! (Name, location, what grade you teach, why you are interested in this course; Please don’t forget to upload a photo of yourself...)

# Instructional Design

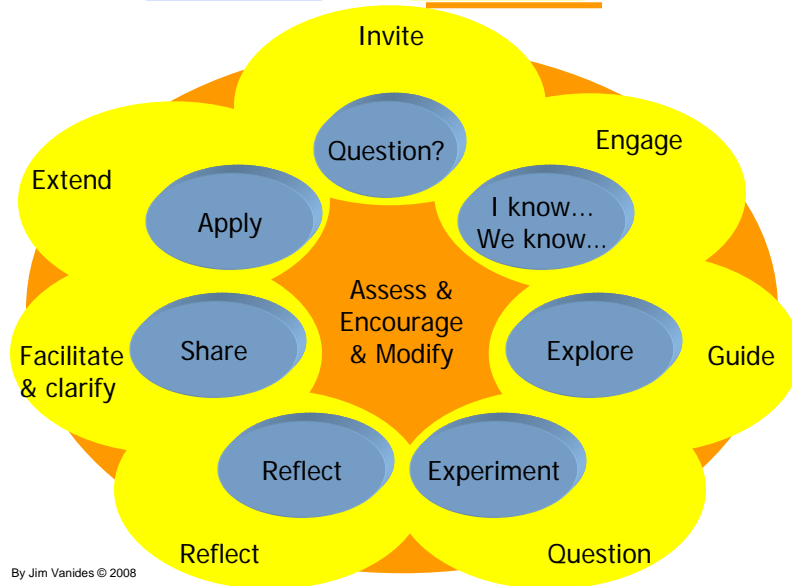


# Instructional Design

The Scientific Method (realistic)



## The Learning & Teaching Cycle



## Instructional Design Elements

(eg: Jim's "Science of Sound" course)

- A kit of supplies for hands-on experiments
- Reference material to read
- Multimedia to watch / explore
- Private science notebook
- Public "classroom" discussions (with thoughtful & active facilitation)
- Café ("a friendly place to relax and talk to one another...")
- Sandbox (for practicing posting)

## Reflection

- Get out a piece of paper and a pen/pencil
- Think of the WORST class you've ever been in as a student
- Why was this class such a disaster for you?

## Reflection

### **F2F (usually async)**

- Homework
- Weekly "diary"
- Science notebook

### **Online (async)**

- Weekly reflection (self assessment "quiz")
- "Science Notebook" (private discussion thread)

My Science Notebook - Susan G. (private)

My Science Notebook - Matt G. (private)

My Science Notebook - Patricia B. (private)

## Students need to feel supported

They should:

- know what is required of them, and how to succeed.
- feel that there are folks with whom they can exchange ideas.
- have someone to answer their questions readily, or at least pay attention to their questions. This applies to both content-related and delivery-related issues.
- have the opportunity for social as well as academic interaction.

## Design for Community

Course design contributes in important ways to feelings of community

- Encourage (better, require) that students interact with each other, and not just with the instructor. Leading discussions can be a shared responsibility, and online break-outs are often useful.
- It's important at the outset to have students and instructors introduce themselves (or each other) to the group. Sharing of personal information is OK to the extent that comfort levels are respected.

# Design for Community

(cont'd)

- The structure should be transparent – no need to puzzle out “what to do next”. Checklists are useful!
- Deadlines need to be frequent, reasonable, clear, and enforced. (But be flexible when circumstances call for it...)



## Science of Sound - Week 1 Checklist

### Hands-On Exploration

- Do the Cocoa Mystery
- Write about your experiment in your science notebook and in our class discussion area

### About Doing Science

- Read The Learning Cycle and The Scientific Method

### Describing Sounds

- Post your best words in our Discussion Area by Thursday
- By Saturday, respond to at least one of the postings with constructive comments, questions, and any other Sound Ideas that come to mind (see our guidelines for online discussions).

### Reflecting on Week One

- Fill out the discussion self-assessment "survey"

# Discussion Topics

- Meet One Another (week 0 orientation)
- Small group discussions (“team”)
- Private Science Notebooks
- Weekly “whole class” discussions
- Social Space (Coffee House)

Topic
IMPORTANT ANNOUNCEMENTS
TEAM- Hertz (concept map discussion)
My Science Notebook - Amanda C (private)
My Science Notebook - Robert C (private)
My Science Notebook - Jennifer C (private)
My Science Notebook - Brooke P (private)
Week 6 - Video Case - Science Understanding
Week 6 - Video Case (teaching/pedagogy)
Week 6: Ideas & Questions re: Misconceptions
Week 5 - Ear Model
QUESTIONS for Brook Raguskus, guest Audiologist
.....
Week 4 - Listening for the Properties of Materials
Week 4 - Ear Plugs
Week 4 - "Singing in the Shower" and resonance discussions
Week 4 - Speed of Sound Gallery
Week 3 - What's Vibrating? Goblets & Bottles
Week 3 - String Instruments
Week 3 - Reading Summaries "About Waves"
Week 3 - Ropes, Slinkies, and Sound Waves
Week 2 - Mystery Sound #1
Week 2 - "Feel the Frequency"
Week 2 - Measuring Sound - Loud Sounds?
Week 2 - "Weekly Wonders"
Week 2 - Sound Systems
Week 1 - Post Your Word Banks Here!
Week 1 - Cocoa Mystery
Week 0 - Practice Posting Here...
Week 0 - Meet One Another...!
Extra Credit --- Sound News & Resources
Extra Credit --- Lesson Plan Ideas
Coffee House --- "sip and chat"
Technical Support ---
Suggestion Box --- How can we improve this course?
Instructors' Private Blog
My Science Notebook --- Desi Belle (examples)

## Small Group Discussion

(3 minutes max)

- Break into groups of two (if you are online by yourself, send Jim or George a private chat message)
- Share your “worst class” experience with each other (30 seconds each)
- Discuss **how these examples affect** (or could affect!) **your approach to teaching** (2 min)

## Small Group Discussion

### **F2F**

- 2-4 students
- Discussion prompt or project
- “Pair and Share” or...

### **Online (sync)**

- Breakout “rooms”
- Private group chat

### **Online (async)**

- Semi-private (assigned) discussion thread

## Whole-Class Discussion

- Who would like to share a “worst class” experience and its accompanying “implications for instruction”?
- Can be yours or one you just heard about

## Whole-Class Discussion

### **F2F tips**

- Wait time -> count to 10 before calling on someone
- Don't always call on the “most eager” person

### **Online (async) tips**

- Instructor presence
- “speak” to everyone in the whole class discussion threads
- Expect and grade participation
- Explain what a “meaningful response” looks like

## Weekly Participation Self-Assessment

- Reinforces participation expectations
- Open ended reflection provides weekly insights about participants
- Instructor provides feedback weekly

Discussion Self-Assessment wk1

Name: Jim Vanides (Previous)

Start time: October 6, 2008 11:30pm

Number of questions: 5

[Finish](#) [Help](#)

**Question 1** (1.5 points)  
Respond to all the activities' questions this week?  
Did I respond at least once to each of the questions in this week's activities?

a. Yes (1.5 pts)

b. Mostly (1.0 pts)

c. A few (0.5 pts)

d. I didn't get around to answering any of this week's questions. (0 pts)

[Save answer](#)

**Question 2** (1.5 points)  
Original questions raised?  
Did my response(s) raise an original question or issue stemming from the readings or activities?

a. Yes, I posted at least one original question in the public discussion area. (1.5 pts)

b. I posted some questions, but I'm not sure they were original. (1.0 pts)

c. I thought of some questions and put them in my electronic lab-book, but I didn't share them with the rest of the class. (0.5 pts)

d. No, I didn't have any questions this week. (0 pts)

[Save answer](#)

**Question 3** (1.5 points)  
Meaningful responses?  
Did I post at least two meaningful and constructive responses to other participants' messages?

a. Yes (1.5 pts)

b. Well, I know of one response I posted. (1.0 pt)

c. I at least responded privately in my electronic lab notebook. (0.5 pts)

d. No, not this week. (0 pts)

[Save answer](#)

**Question 4** (0.5 points)  
On time?  
Did I complete the self-assessment on time?

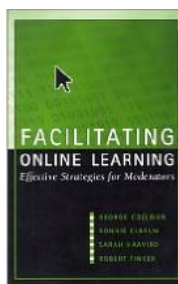
a. Yes (0.5 pts)

b. No... (0 pts)

[Save answer](#)

**Question 5** (1.0 points)  
Most interesting aspect of this week's discussion...  
What I found to be most interesting in this week's discussion was... (describe what aspect of the discussion was most memorable or meaningful, and earn up to 1 pt)

## Facilitating Discussions



[Facilitating Online Learning: Effective Strategies for Moderators](#)  
By Collison, Elbaum, Haavind, and Tinker; Atwood Publishing, 2000



[Learning & Leading With Technology, May 2007, Vol. 34 No. 8](#)  
See [www.vanides2.com/publications](http://www.vanides2.com/publications) for PDF reprint

## Instructor Presence

... is key to students' feelings of support and community

- “being there” but not being a dominating presence
- responding promptly to student questions, or to student remarks directed at them (turnaround time is important)
- responding in ways that encourage further interaction, even when not providing pat answers (or providing direct answers at all)

## Instructor Presence

... also means:

- articulating high standards while also being respectful of students' efforts
- acknowledging differences in students' needs for communication. What seems appropriate (or even barely adequate) to some may feel like pestering to others.

## What instructors can expect

- **Course design:** The content is the same, but you're designing a new experience
- **Your role:** More focus on students, less on "presenting information"
- **Your time:** It's not easier – just different; If students are spending 8-12 hours a week, you will be spending at least that much time, too
- **Student response:** HIGH satisfaction and MANY postings; a very rich conversation

More Questions?