

# **Differentiating Instruction with Technology**

**Mary Capobianco: Differentiated Instruction**  
**Kim Greiner: Technology Integration (NERIC)**  
**Bram Moreinis: Technology Integration (TH)**



# Orientation/Welcome



- **Getting Acquainted**

- Introductions
- Course Design
- Course Technologies

- **Technology Integration's Role**

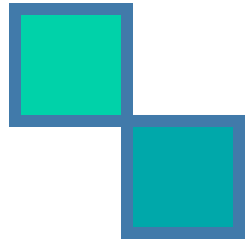
- Multimedia for Multiple Intelligences
- Project-Based Learning
- Authentic, Student-Centered Activities

.....and more!





## Tech Integration Modes



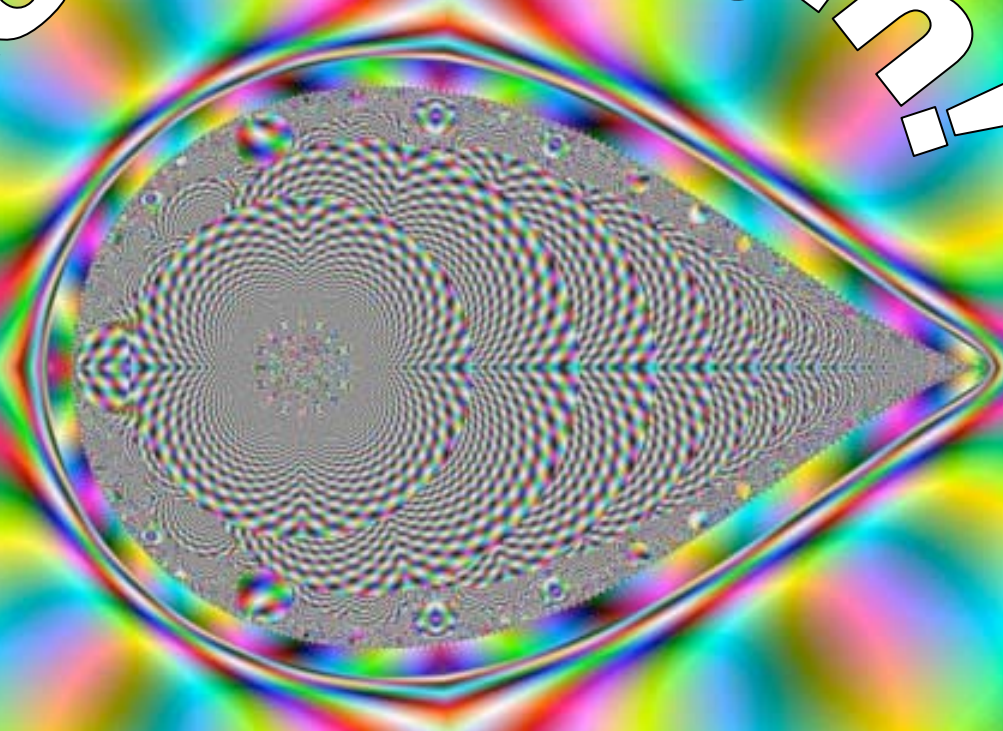
- **One-Computer Classroom**
  - Teacher Presentation (Powerpoint)
  - Visualization (Excel, Web)
  - Virtual Field Trips (Web, VCing)
  - Simulations (Web, Software)
- **Computer Clusters & Labs**
  - Webquests
  - Collaborative Publications

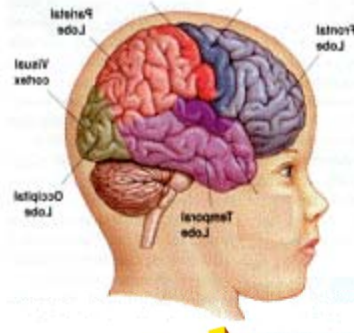
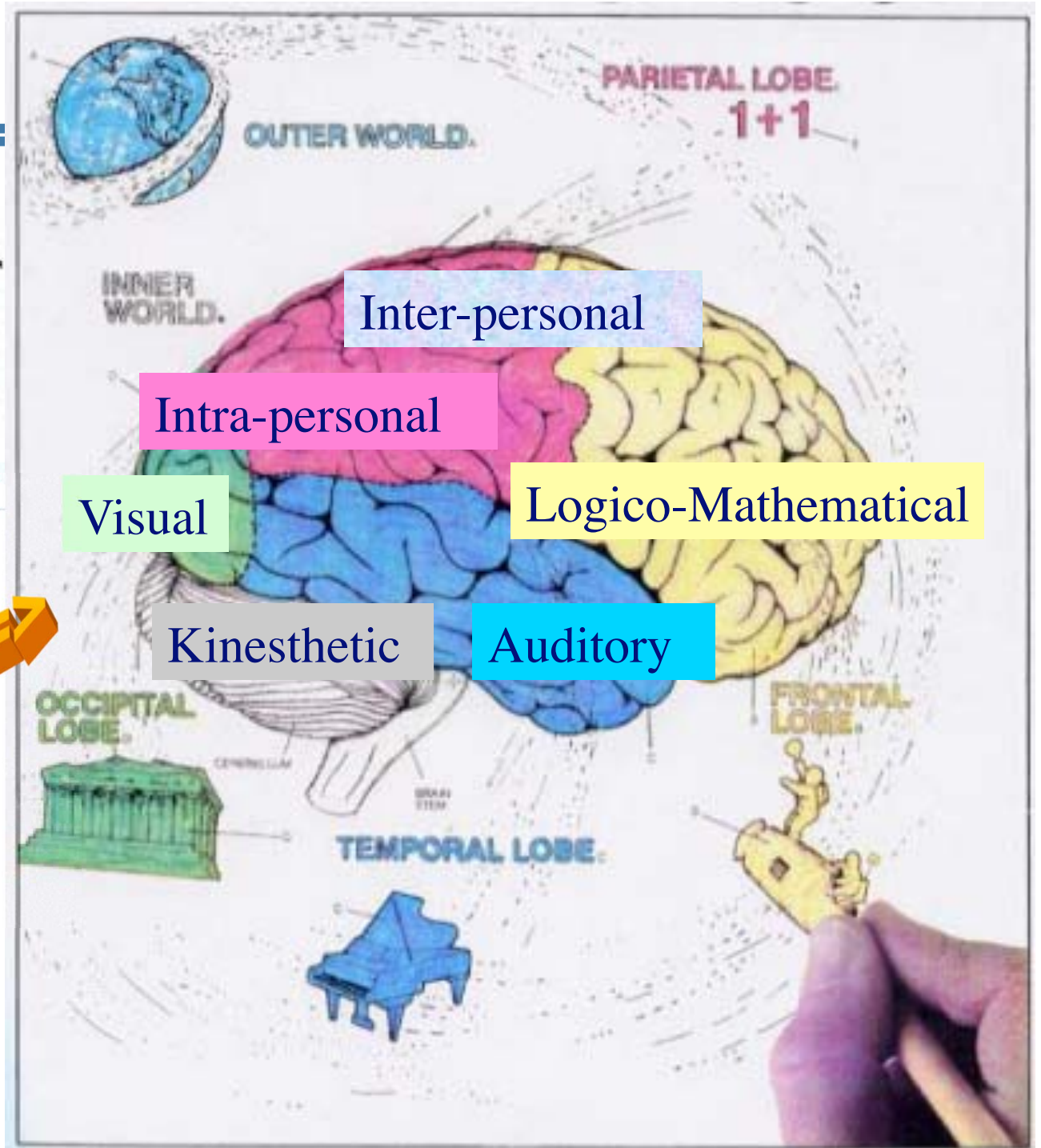
....and more!



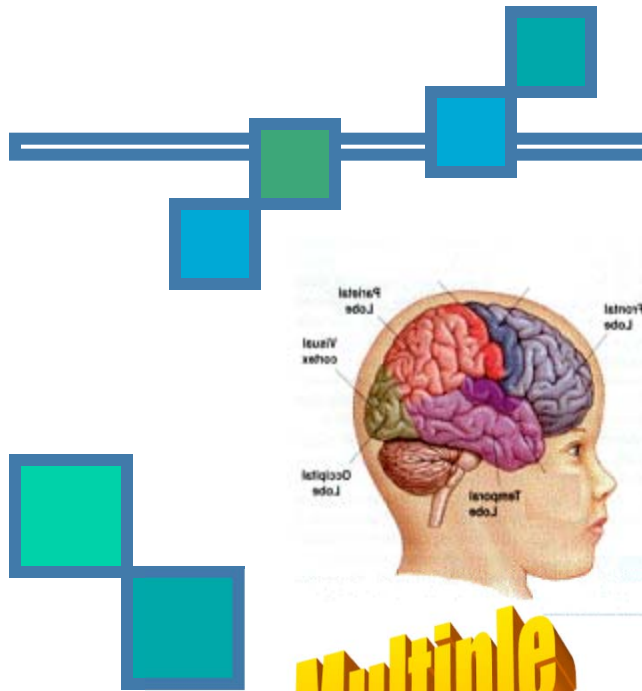


Let's Begin!





Multiple  
Intelligences =>





Preparing an investigation to compare the solubility of tablets

**Focus Question:** Compare the solubility of capsules, tablets, enteric coated, buffered and slow-release tablets.

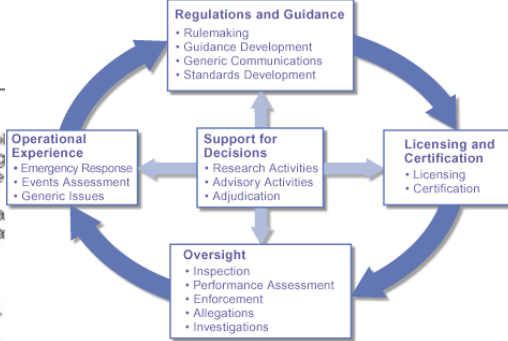
**What do I know?**  
solubility  
soluble  
insoluble  
solvent  
factors that affect solubility  
acids, bases and pH  
pH varies in human body

**Further Research:**  
What effect did the dissolution on the pH of the resulting solution?  
Should I compare the weight of the advertised dosage?  
Does the packaging list a weight?  
Why is it necessary to have tablets?

**Claims:**  
Did all tablets dissolve in water, base, warm water?  
What are the implications of this for drug ingestion?

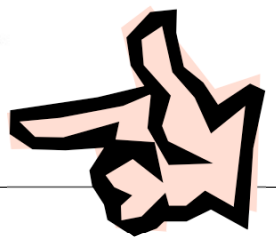
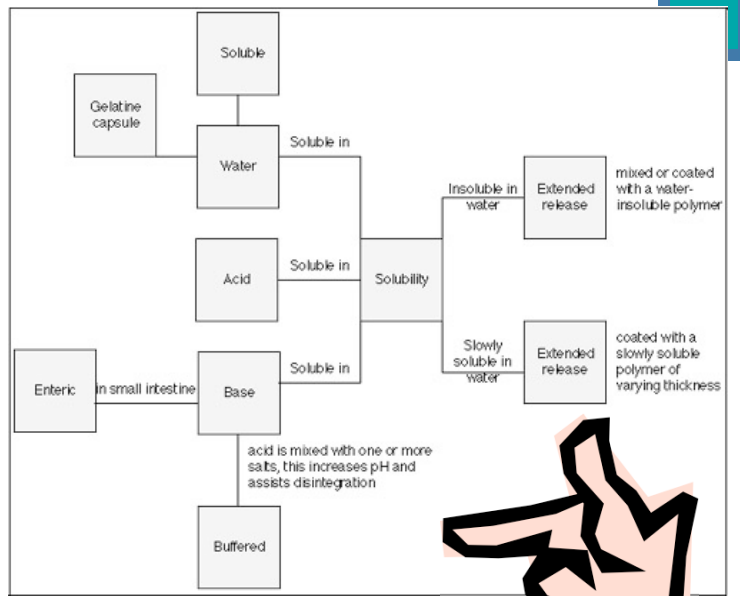
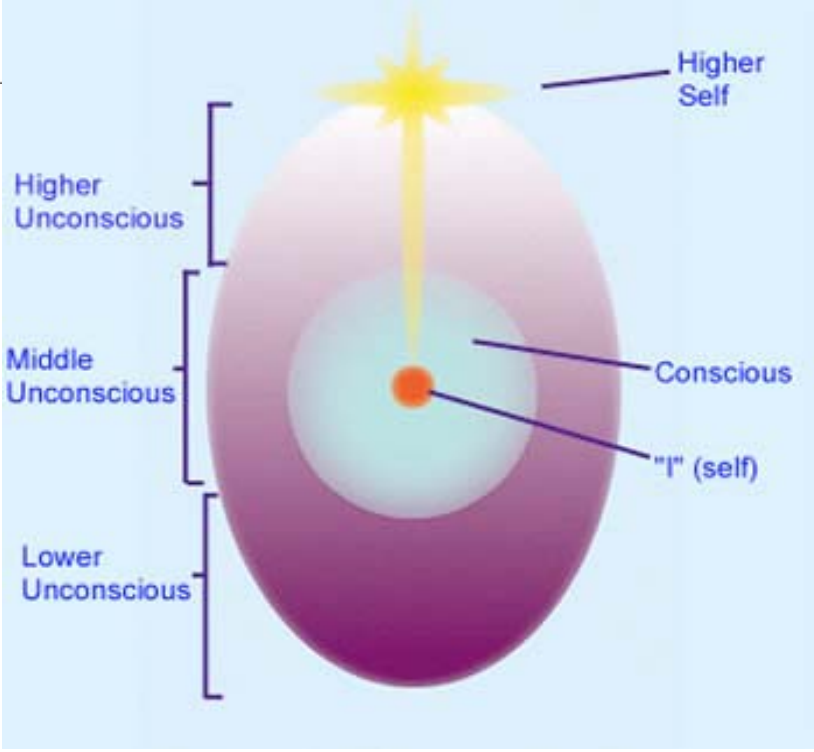
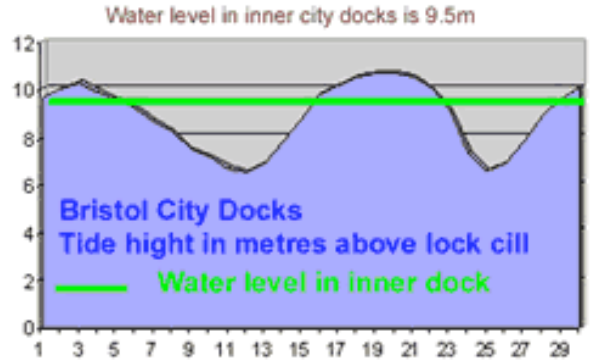
**How will I present my data?**  
data should be presented as table as this is a comparison, would a graph be appropriate  
will it be possible to give an objective value to the observed changes

**How will I go about this investigation?**  
I will need



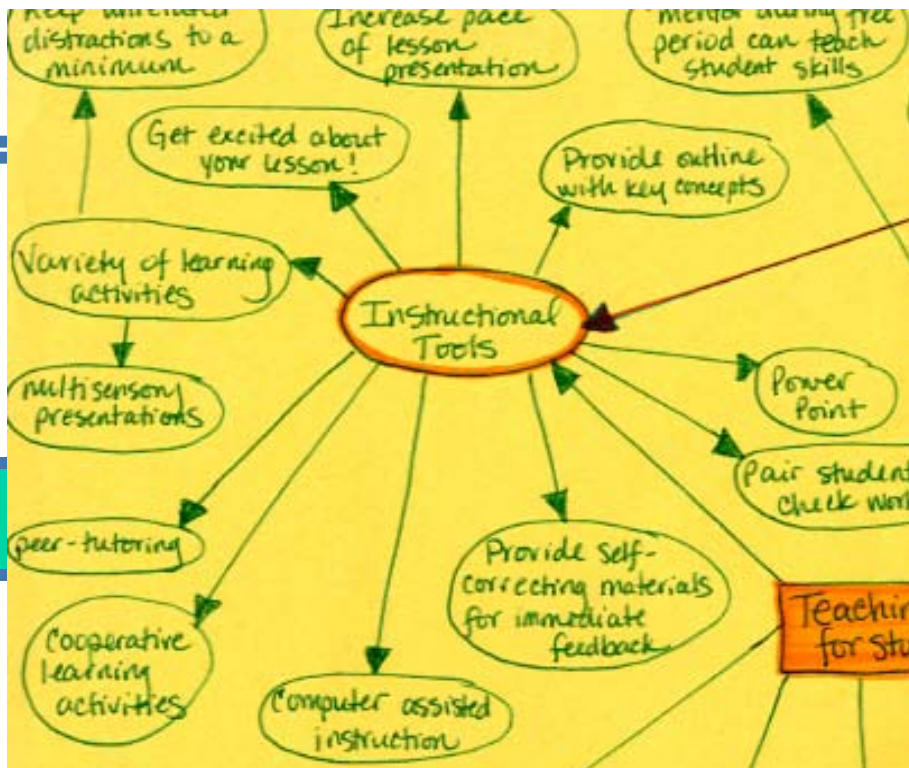
**High tides in Bristol**

1	2	3	4	5	6	7	8	9	10
8.9	9.6	10.1	10.2	10.0	9.7	9.3	8.9	8.5	7.9
11	12	13	14	15	16	17	18	19	20
7.1	6.9	6.3	6.5	7.5	8.7	9.7	10.4	10.9	11.2
21	22	23	24	25	26	27	28	29	30
11.1	10.7	10.0	8.9	8.2	7.0	6.3	6.8	7.8	8.5

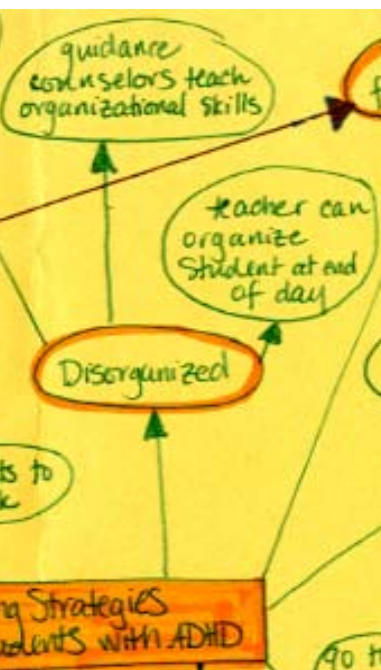


# Teaching Strategies for Students with ADHD

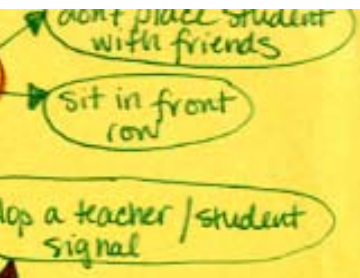
## Instructional Tools



## Disorganized



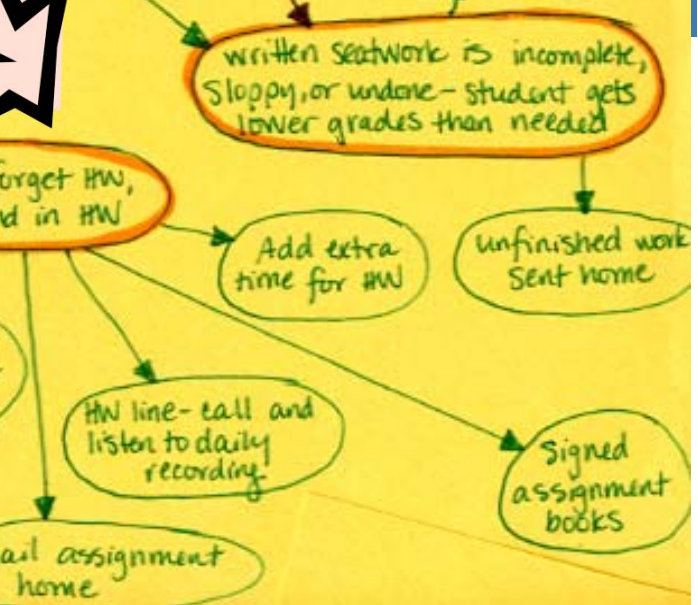
## Distraction from lessons



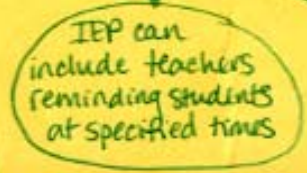
## "freeze up" during tests



## written seatwork is incomplete, sloppy, or undone - student gets lower grades than needed



## Forgets to take medication at nurses office



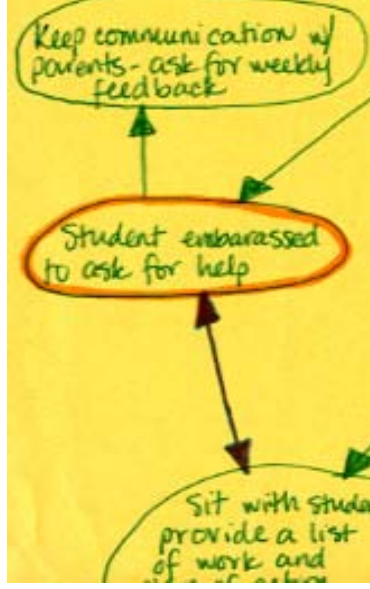
## Lose HW, forget HW, doesn't hand in HW



## Child out sick - hard to get back on track



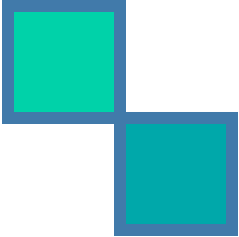

## Student embarrassed to ask for help







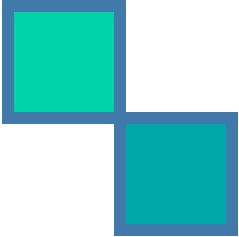

## Instructional Technology improves student achievement when used as follows (ISTE):

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- Curriculum.** IT directly supports the curriculum objectives being assessed.
  - Collaboration.** IT provides opportunities for student collaboration.
  - Feedback.** IT adjusts for student ability and prior experience, and provides feedback to the student and teacher about student performance or progress with the application.
  - Integration.** IT is integrated into the typical instructional day.
  - Assessment.** IT provides opportunities for students to design and implement projects that extend the curriculum content being assessed by a particular standardized test.
  - Support.** IT is used in environments where teachers, the school community, and school and district administrators support the use of technology.
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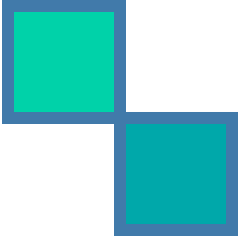



# Course Design

- 
- Six Sessions: 4/22, 4/27, 5/4, 5/6, 5/11 and 5/13
  - Sessions include:
    - Expert presentations on DI & Technology Integration
    - Demonstrations of DI teaching strategies
    - Teacher-created project sharing
    - Roundtable discussion
  - Online Communication
    - Bulletin board discussions
    - Posting of lessons / projects under development
    - One-on-one tech support
- 



# Course Technologies

- 
- **Why Videoconference?**
    - **Access:** Enables Mary and Kim to join us from Albany for brief sessions.
    - **Comfort:** Videoconferencing is easy and opens your classroom to the world.
  - **Why Blackboard?**
    - **Convenience:** Online follow-up easy at home/prep time.
    - **Group Learning:** Discussion Boards let everyone learn from the conversation, share resources.
    - **Formative Evaluation:** Projects can be uploaded, shared, and discussed.
- 



# Course Requirements

Evaluation/Grading:							
<b>Assignments:</b>	<ul style="list-style-type: none"> <li>• Successful completion of all course assignments</li> <li>• Successful completion of final class project/journal</li> </ul>						
<b>Participation: (quantity &amp; quality)</b>	Participation in the online course is weighed heavily because the processes learned through interaction with peers are an essential component of the course. In order to receive credit for participation, students <b>must</b> log on and answer questions posed in the discussion board and respond at least twice, on separate days, to other students posts each week. Responses should be well-developed and new ideas should be introduced.						
<b>Project:</b>	There will be a final project required at the end of the five-week course. This project will be an individual effort and will be required in order to get credit for the course. The following <b>rubric</b> will be used to evaluate the final project.						
<b>Collaboration:</b>	Collaboration is an important component of TeachStar's online program and the formation of a community of learners. Students should interact to give one another feedback and constructive suggestions on their ideas.						
<b>Discussion Rubrics:</b>	<table border="1"> <tbody> <tr> <td><b>No Credit:</b></td> <td><b>Inconsistent participation in discussion topics</b></td> </tr> <tr> <td><b>Minimum pass:</b></td> <td> <b>For each discussion topic:</b> <ul style="list-style-type: none"> <li>• a thoughtful response</li> <li>• two replies to other participants' posting</li> <li>• answer ALL questions that others ask you</li> </ul> </td> </tr> <tr> <td><b>High Pass:</b></td> <td><b>After initial post to each topic, post responses to build on the ideas of other participants and take the discussion deeper into the issues and concepts. Offer perspectives that others may not have considered.</b></td> </tr> </tbody> </table>	<b>No Credit:</b>	<b>Inconsistent participation in discussion topics</b>	<b>Minimum pass:</b>	<b>For each discussion topic:</b> <ul style="list-style-type: none"> <li>• a thoughtful response</li> <li>• two replies to other participants' posting</li> <li>• answer ALL questions that others ask you</li> </ul>	<b>High Pass:</b>	<b>After initial post to each topic, post responses to build on the ideas of other participants and take the discussion deeper into the issues and concepts. Offer perspectives that others may not have considered.</b>
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<b>Criteria for Passing Grade:</b>	Logging-in several times a week. Completion of all weekly assignments, including regular participation in course discussion board, and completion of final project.						

- Start on time
- Log in regularly
- Complete all assignments
- Participate in Discussion Board
- Final Project

