EDTE 226  Agenda for June 23, 2009

- **Models of Instruction**
  - Student presentations of different models and how that model would look for one of the lessons in your unit
  - The slides in the PPT are for your reference but will not necessarily be viewed in today’s class session

- **Team work on unit plans**

- **Tomorrow:** Final class session/ PPT Presentations

- **Sunday night, June 28th:** Full Unit Plan and individual reflections due
Models of Instruction

- Presentation
- Direct Instruction
- Concept Teaching
- Classroom Discussion
- Cooperative Learning
- Problem-Based Learning
Presentation Model of Instruction

- A tightly structured teacher-centered model designed to help students acquire & assimilate information expected to be learned

- 4 phases:
  1. Presenting objectives
  2. Use of advanced organizers to scaffold new information
  3. Presenting information to be learned
  4. Helping students extend and strengthen their thinking
Using Presentation Lessons in the Classroom

- Connect content and advance organizers to student’s prior knowledge
- Be sure lesson delivery is clear by explaining links of information, providing examples with rules, and carefully planned verbal transitions
- Help students extend and discipline their thinking by using higher order questioning and discussions
Web Links for the Presentation Model

- Advance Organizers
- Increasing Comprehension by Activating Prior Knowledge.
- Lesson Presentation
Direct Instruction Model

- Designed to help students master well-structured academic content and acquire specified skills in step-by-step fashion
- 5 phases
  1. Establish rationale/goals of the lesson
  2. Explain and/or demonstrate knowledge or skill
  3. Guided practice
  4. Debrief/feedback/check for understanding
  5. Extended practice
Using Direct Instruction
Lessons in the Classroom

- Prepare specific learning objectives that address student behavior, testing situation, and performance criteria (STP)
- Break tasks/skills into logical steps
- Proceed through the 5 phases (goals, demonstrate, guided practice, debrief, extended practice)
Web Links to Direct Instruction

- The Madeline Hunter Direct Instruction Model
- Association for Direct Instruction
- Direct Instruction “really works”
- What direct instruction is & is not, with more links
- Observational (Social) Learning
- Praise in the Classroom
Concept Teaching

- Involves the learning of specific concepts, the nature of concepts, and the development of logical reasoning & critical thinking
- May be deductive (rule to example) or inductive (example to rule)
- Proceeds through 4 primary phases:
  1. Clarify goals & conditions
  2. Illustrate examples & nonexamples
  3. Students provide examples & nonexamples to demonstrate attainment of concept
  4. Guide students to think about their own thinking (examine their decisions, consequences of choices, how concept fits in with bigger picture)
Using Concept Teaching in the Classroom

- Select *Big Idea* concepts and determine the best approach:
  - *inductive* through *direct presentation* of the concept first, or
  - *Deductive (Concept Attainment)* through examples/nonexamples & guided discovery
- Clarify aims/establish a “hook” to draw students in
- Proceed through the selected inductive or deductive approach using examples & nonexamples
- Get students to demonstrate their understanding
- Employ higher-level questioning & discussion strategies -- help students analyze their own thinking processes
Web Links to Concept Teaching

- Concept Teaching strategies with additional links
- Concept Mapping Homepage
- Overview of Concept Attainment Teaching
- Concept Attainment
- Concept Formation
- Discovery Learning
- Concept Teaching through Inquiry
- Inductive Approach
- Inductive/Deductive links
Problem-Based Learning

- A problem situation is presented to students who then investigate & problem solve to find solutions.
- 5 major phases:
  1. Orientation to the problem & lesson objectives
  2. Review logistical details to tackle the problem
  3. Oversee student activities such as data collection, experimenting & finding solutions
  4. Extend the findings by preparing appropriate presentations, models, reports, etc.
  5. Reflective analysis on the processes & results student results
Using Problem-Based Learning in the Classroom

- Careful planning is paramount – in particular: clearly defined goals & objectives, puzzling & ill-defined problems to spark interest, & logistical organization of resources & tools.
- Work through the 5 phases of PBL instruction, bearing in mind that the teacher facilitates and the students investigate & problem-solve.
Web Links to Problem-Based Learning

- Problem-Based Learning Tutorial & Resource Guide
- Project-Based Learning with Multimedia
- Projects-L Listserv
- Center For Problem-Based Learning
- Project Approach in Early and Elementary Education
- Problem-Based Learning Overview & Resources
- PBL Checklist for Science (& other subjects)
Cooperative Learning

Students work together in small groups and learn through interaction with each other while the teacher coaches the process.
5 Major Phases

1. Teacher clarifies **goals**, provides a **hook** and **introductory** information
2. Organize student **teams** with clearly defined roles
3. **Facilitate** team activities, including **academic learning, social skills & cooperative behavior**
4. **Assess** student knowledge **throughout** the process and/or by team **presentations**
5. **Recognize both group & individual efforts** such as active participation and taking responsibility for learning
Phase 1: Goals, Hook & Introduction

- The 3 instructional goals of cooperative learning are:
  1. Academic achievement,
  2. Tolerance and acceptance of diversity, and
  3. Development of social skills
- Consider how you will communicate these goals in your introduction
Phase 2: Teams and Roles

- Organize materials, learning experiences and small group activities by paying attention to 4 key features:
  1. Form heterogeneous teams
  2. How students will work together in small groups (Student Teams, Jigsaw, Group Investigation, Think-Pair-Share)
  3. How behavior and results will be recognized or rewarded
  4. Realistic time estimate
Jigsaw-Teams

Home Teams
(Five or six members grouped heterogeneously)

Expert Teams
(Each expert team has one member from each of the home teams)
Four- and Six-Cluster Seating Arrangements
The Swing Seating Arrangement
Cooperative Learning Roles May Include …

- Group recorder
- Materials collector
- Reporter
- Final copy scribe
- Illustrator

- Timekeeper
- Cheerleader/Facilitator
- Monitor
- Messenger
Phase 3: Facilitate learning, social skills & cooperative learning

- Help with Transitions
- Teach Cooperation
  - Task Interdependence
  - Social Skills
    - Sharing Skills
    - Participation Skills
  - Communication Skills
- Group Skills
  - Team Building
- Teaching Social and Group Skills
Phase 4: Assess Throughout and/or with Presentations

- **Test** Academic Learning
- **Assess** Cooperation
- **Grade** Cooperative Learning
- **Recognize** Cooperative Effort
Scoring Procedures for Jigsaw

**Step 1**
Established base line.

Each student is given a base score based on averages on past quizzes.

**Step 2**
Find current quiz score.

Students receive points for the quiz associated with the current lesson.

**Step 3**
Find improvement score.

Students earn improvement points to the degree to which their current quiz score matches or exceeds their base score, using the scale provided below.

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<thead>
<tr>
<th>More than 10 points below base</th>
<th>0 points</th>
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<tbody>
<tr>
<td>10 points below to 1 point below base</td>
<td>10 points</td>
</tr>
<tr>
<td>Base score to 10 points above base</td>
<td>20 points</td>
</tr>
<tr>
<td>More than 10 points above base</td>
<td>30 points</td>
</tr>
<tr>
<td>Perfect paper (regardless of base)</td>
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## Quiz Score Sheet for Jigsaw

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<th>Date:</th>
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<tr>
<td>Tim B</td>
<td>95</td>
<td>100</td>
<td>50</td>
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<tr>
<td>Ursula C</td>
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<td>82</td>
<td>10</td>
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<td>Danielle B</td>
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<td>74</td>
<td>0</td>
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<td>Edith E</td>
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<td>Natasha F</td>
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<tr>
<td>Travis C</td>
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<tr>
<td>Andy J</td>
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<td>Jack E</td>
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**Quiz: Addition with Regrouping**

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Rubric for Cooperation and Collaboration

A. Works toward the achievement of group goals
   4 Actively helps identify group goals and works hard to meet them.
   3 Communicates commitment to the group goals and effectively carries out assigned roles.
   2 Communicates a commitment to the group goals but does not carry out assigned roles.
   1 Does not work toward group goals or actively works against them.

B. Demonstrates effective interpersonal skills
   4 Actively promotes effective group interaction and the expression of ideas and opinions in a way that is sensitive to the feelings and knowledge base of others.
   3 Participates in group interaction without prompting. Expresses ideas and opinions in a way that is sensitive to the feelings and knowledge base of others.
   2 Participates in group interaction with prompting or expresses ideas and opinions without considering the feelings and knowledge base of others.
   1 Does not participate in group interaction, even with prompting, or expresses ideas and opinions in a way that is insensitive to the feelings or knowledge base of others.

C. Contributes to group maintenance
   4 Actively helps the group identify changes or modifications necessary in the group process and works toward carrying out those changes.
   3 Helps identify changes or modifications necessary in the group process and works toward carrying out those changes.
   2 When prompted, helps identify changes or modifications necessary in the group process or is only minimally involved in carrying out those changes.
   1 Does not attempt to identify changes or modifications necessary in the group process, even when prompted, or refuses to work toward carrying out those changes.
Phase 5: Recognize Group & Individual Efforts

- Find ways to highlight group presentations by displaying results prominently in room.
- Maybe invite guests to hear final reports.
- Consider summarizing results through newsletters or other forums.
- Each individual makes some kind of unique contribution – highlight those.
Web Links to Cooperative Learning

- A guide to Cooperative Learning
- Overview of Cooperative Learning Strategies
- Jigsaw
- Group Investigation
- The Collaborative Classroom
Classroom Discourse

- An enhanced form of everyday class discussions, characterized by explicit attention to improved conceptual understanding, thinking processes, communication and social skills.

- 5 phases:
  1. Establish aims & ground rules of the discussion
  2. Ask a leading question or provide discrepant event/discussion topic
  3. Keep the flow going with questioning, responses, wait times, paraphrasing, summarizing, and so on
  4. Summarize the discussion
  5. Students self-evaluate the discussion and thinking processes
Using Classroom Discussion in the Classroom

- Recognize that good discussions require planning just like any other lesson. Look at the different kinds of discussions & choose the one that fits your purposes.
- In preparation, take into account the purpose of the discussion and students’ prior knowledge & communication/discussion skills.
- Remember the use of physical space – seating in a U-shape or circle is more conducive to engaging discussions that straight rows.
- Work through the 5 phases with attention to convergent & divergent questions (many prepared ahead of time), slowing the pace to broaden participation, use of wait time, refocusing the discussion as needed, and so on.
Web Links to Classroom Discourse

- Leading Classroom Discussions
- Teaching Science with Classroom Discussions
- The Socratic Method: Teaching by Asking Instead of by Telling
- Asking the Essential Questions
- Convergent, Divergent, Memory & Evaluative Questions
- Using "Think-Time" and "Wait-Time" Skillfully in the Classroom, ERIC Digest
- Classroom Questions, ERIC/AE Digest
- Questioning Techniques for Gifted Students
- Communication Apprehension: The Quiet Student in Your Classroom