



***EDUC 4331: Knowing and Learning in  
Mathematics and Science***

***Fall 2012***

**Instructor Information:**

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<b>Office Hrs:</b>	Tuesday	Wednesday	Thursday
	By Appointment	By Appointment	By Appointment

**Instructor Web Site:** <http://www.uta.edu/faculty/kjwhite/>  
**Course Web Site:** <http://elearn.uta.edu>

**Course Information:**

<b>Course Title:</b>	Knowing and Learning: Math & Science
<b>Course Number:</b>	EDUC 4331-002
<b>Semester:</b>	Spring 2012
<b>Course Location and Time:</b>	TuTh 12:30 – 1:50 PM, Room 115 Trimble Hall

**Catalog Description:**

Psychological foundations of learning; problem solving in mathematics and science education utilizing technology; principles of expertise and novice understanding of subject matter; implications of high-stakes testing; and foundations of formative and summative assessment. Three lecture hours a week for one semester; additional hours may be required.

**Course Prerequisites:**

SCIE 1101 with a grade of C or better or concurrent enrollment

**Textbook(s) and Materials:**

***Required***

- Clicker: Response Card NXT (TurningTechnologies, <http://store.turningtechnologies.com/>)
- Tk20 (see <http://uta.edu/coehp/tk20>)
- Composition book

### Further Course Description:

This course revolves around an exploration of Essential Questions (see below) specifically relevant to teaching mathematics and science. Students begin by considering what standards for knowing are to be used, how knowing and learning are structured, and how what is known changes and develops. Ultimately, students must think about the tensions between general, cross-disciplinary characterizations of knowing (e.g., intelligence) and the specifics of coming to understand powerful ideas in mathematics and science.

#### Essential Questions:

- ❖ What does it mean to know something?
- ❖ What does it mean to learn something?
- ❖ How can we understand what students are thinking?
- ❖ What are the links between knowing and developing in learning theory, and the content and evolution of mathematical and scientific ideas?
- ❖ What are the connections between kinds of assessments and theories of knowing and learning?
- ❖ For the science and mathematics educator, what are the tensions between general, cross-disciplinary characterizations of knowing (e.g., intelligence) and the specifics of coming to understand powerful ideas in mathematics and science?
- ❖ How are various uses of technology associated with specific approaches to learning?

### Course Objectives

Course Objectives and Evidence of Student Learning	
Students will be able to...	Evidence of Student Learning:
construct models of knowing and learning to guide classroom practice.	<ul style="list-style-type: none"><li>• meaningful contributions to class discussions</li><li>• comments posted about analysis of readings</li><li>• clinical interviews</li><li>• TBL</li><li>• written examinations</li></ul>
articulate various standards for knowing science and mathematics and articulate the implications of these standards for assessment, especially standardized assessment.	<ul style="list-style-type: none"><li>• meaningful contributions to class discussions</li><li>• comments posted about analysis of readings</li><li>• clinical interviews</li><li>• TBL</li><li>• written examinations</li></ul>
articulate what it means to know and learn relative to cognitive structures and describe how what people know changes and develops.	<ul style="list-style-type: none"><li>• meaningful contributions to class discussions</li><li>• comments posted about analysis of readings</li><li>• clinical interviews</li><li>• TBL</li><li>• written examinations</li></ul>
describe various paradigms for evaluating science and mathematics understanding.	<ul style="list-style-type: none"><li>• meaningful contributions to class discussions</li><li>• comments posted about analysis of readings</li><li>• clinical interviews</li><li>• TBL</li><li>• written examinations</li></ul>
use the clinical interview method to make sense of someone's reasoning about a topic in science or mathematics.	<ul style="list-style-type: none"><li>• report including transcription and analysis of think aloud</li><li>• clinical interviews</li></ul>

Students will be able to...	Evidence of Student Learning:
express informed opinions on current issues and tensions in education, especially as they relate to mathematics and science instruction.	<ul style="list-style-type: none"> <li>• meaningful contributions to class discussions</li> <li>• comments posted about analysis of readings</li> <li>• TBL</li> <li>• written examinations</li> </ul>

### **University Mission:**

*The mission of The University of Texas at Arlington is to pursue knowledge, truth and excellence in a student-centered academic community characterized by shared values, unity of purpose, diversity of opinion, mutual respect and social responsibility. The University is committed to lifelong learning through its academic and continuing education programs, to discovering new knowledge through research and to enhancing its position as a comprehensive educational institution with bachelor's, master's, doctoral and non-degree continuing education programs.*

### **College Mission:**

*The mission of the UTA College of Education is to develop and deliver educational programs that ensure the highest levels of teacher, administrator, and allied health science practitioner preparation and performance. As a recognized contributor to the fields of education and allied health science, the College engages in effective teaching, quality research, and meaningful service. The College is committed to diversity and to the advancement of active teaching and learning in all educational environments and at all levels.*

**Core Values: *Effective teaching, Active learning, Quality research, Meaningful service***

### **Conceptual Framework:**

The work of the College of Education is grounded in constructivism as a theory of teaching and learning and is done in a spirit of expectation that all involved in the College of Education, whether candidate, faculty or administrator, will hold the following as important: **Excellence, Student-Centered Environments, Research, Collaboration, Diversity, Technology, Field Experiences and Life-Long Learning.**

Partners for the Future serves as the theme of the College of Education and epitomizes the understanding that it takes a village of partners to insure the future of education for all

### **Policies:**

Course assignments must be word-processed, transmitted electronically and citations will follow the rules from the American Psychological Association, 6<sup>th</sup> Edition (e.g., see format of references in "Textbook and Materials: Required and Supplemental.")

The course website found at [www.elearn.uta.edu](http://www.elearn.uta.edu) will be utilized where all course materials and additional resources will be posted. Email messages and other discussion/correspondence will take place via the course website, as well as student posting of assignments and course grading. **Utilizing this website is a required function of the course. Students must access course materials and be able to post discussion on the course Blackboard website to be successful in this course.**

### **UNIVERSITY AND COLLEGE OF EDUCATION POLICIES**

1. **Academic Integrity/Honesty Statement:** This experience demands a high level of scholarly behavior and academic honesty on the part of all students. Examples of academic dishonesty include but are not limited to: (1) turning in work as original that was used in whole or part for another course and/or instructor without obtaining permission from this instructor in advance; (2) turning in another person's work, in part or in whole, as your own; (3) copying from professional works without citing them; and (4) any form of cheating on exams. Violations of academic integrity/honesty while carrying out academic assignments may, at the discretion of the instructor, receive a zero on the particular work in question, receive an "F" in course, or be brought before a higher level of governance for possible dismissal from the university. Discipline

may include suspension or expulsion from the University. This is a matter of professional ethics for anyone involved in the field of education. According to the UT System Regents Rules and Regulations, Part One, Chapter VI, Section 3, Subsection 3.2, Subdivision 3.22: *Scholastic dishonesty includes but is not limited to cheating, plagiarism, collusion, the submission for credit of any work or materials that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student or the attempt to commit such acts.*

2. **Americans with Disabilities Act:** The University of Texas at Arlington Center for Professional Teacher Education does not discriminate on the basis of disability in the recruitment and admission of students, the recruitment and employment of faculty and staff, and the operation of any of its programs and activities, as specified by federal laws and regulations. Copies of this document may be obtained in the Office for Students with Disabilities located in the University Center, lower level, UTA. The student has the responsibility of informing the course instructor (at the beginning of the course) of any disabling condition, which will require modification to avoid discrimination. As a faculty member, I am required by law to provide “reasonable accommodation” to students with disabilities, so as not to discriminate on the basis of that disability. Student responsibility primarily rests with informing faculty at the beginning of the semester and in providing authorized documentation through designated administrative channels.
3. **Student Support Services Available:** The University of Texas at Arlington provides a variety of resources and programs designed to help students develop academic skills, deal with personal situations, and better understand concepts and information related to their courses. These resources include tutoring, major-based learning centers, developmental education, advising and mentoring, personal counseling, and federally funded programs. For individualized referrals to resources for any reason, students may contact the Maverick Resource Hotline at 817-272-6107 or visit [www.uta.edu/resources](http://www.uta.edu/resources) for more information.
4. **Grade Grievance:** The student has one calendar year from the date the grade is assigned to initiate the grievance. The normal channels are course professor, department chair, academic dean, and the Provost.
5. **Maintaining eligibility for Internship and Residency:** Students who earn a “D” or an “F” in any education (EDML/EDUC) class must retake the course in order to be certified.
6. **Class Location Unavailable:** Should our class meeting site become unavailable for any reason, another location will be provided in order to take exams or make presentations that might have been interrupted.
7. **Criminal Record Check:** When UTA students begin work in a school for any reason, he/she will need to complete a Criminal Record Check (CRC) form. The CRC form should be completed during the first week of classes. These forms will be returned to the Field Experience Office and routed to the personnel office for the school districts. The school district will process the CRC and then notify students of any that do not clear. In the case that a student is notified by the school district that his/her CRC does not clear, he/she must report immediately to the Field Experience Office and withdraw from internship, residency, and any class requiring field work components. Because of the possibility that CRCs do not clear and may not be reported by students until after the census date, students bear the responsibility of any loss of fees due to subsequent withdrawal from the teacher education program.
8. University of Texas at Arlington supports a variety of student success programs to help you connect with the university and achieve academic success. These programs include learning assistance, developmental education, advising and mentoring, admission and transition, and federally funded programs. Students requiring assistance, academically, personally, or socially should contact the Office of Student Success Programs at 817 272 6107 for more information and appropriate referrals.

### **Email Communication:**

UTA e-mail will be considered the official means of communication between the university and students, effective August 22, 2005. Utilize your UTA e-mail for all communications except those as specified by your professor (e.g., Black Board discussion postings, announcements, etc.). You are responsible if you do not receive information because you do not regularly check your UTA email and Black Board.

## KNOWING AND LEARNING LATE WORK AND ATTENDANCE POLICY





All assignments turned in late will lose at least 25% of the possible points for each class day after the assignment is due. No exceptions. Late means... via email after 11:59pm on the due date. Late work must be turned in or an incomplete will be given for the course.

Attendance to this course is compulsory. Students are expected to be in class on time and to stay the full length of the class. There will be two allowed absences. After the second absence, the course grade will be reduced one letter grade for each unexcused absence. After the third absence, the course grade will be a B at best. After the fourth absence, the course grade will be a C at best. Beginning with the fifth absence, the course grade will be an F.

### Dispositions of Teacher Candidates:

Each candidate in the College of Education and Health Professions of UT Arlington will be evaluated on Professional Dispositions by faculty and staff. These dispositions have been identified as essential for a highly-qualified professional. Instructors and program directors will work with candidates rated as “unacceptable” in one or more stated criteria. The candidate will have an opportunity to develop a plan to remediate any digressions.

**Tk20:** The College of Education and Health Professions has implemented Tk20, a comprehensive data management system that provides powerful tools to manage growth and streamline processes to meet your needs more efficiently and effectively. The set of tools that is required as a course text is called *TK20 HigherEd*. The following is a partial listing of what the Tk20 system will enable you to do:

-  Create your key assessments and performance artifacts online, which you will be able to access and use beyond graduation. This will enable you to present documented performance data and information to prospective employers, who are increasingly interested in data-supported evidence of an individual's current and potential performance.
-  Submit forms online, including applications for field-based experiences such as student teaching, practicum, internships, or other clinical practice required for teacher or administrator certification, and receive timely notification of placement details sent directly to your Tk20 account.
-  Create multimedia portfolios for documenting your work for presentation to faculty and prospective employers that can be exported to CDs or other media.
-  Monitor your progress throughout the program and have access to a fully documented record of your program performance, creating a vested partnership between you and faculty in your progress through your academic program.

On-line tutorials and training materials will orient you to the Tk20 system and its use. For additional information, go to <http://www.uta.edu/coehp/tk20>. We appreciate your hard work and dedication toward completing your education in the College of Education and Health Professions at the University of Texas at Arlington!

All electronically submitted MSWord documents must follow the following format:  
(your last name and first initial)\_(name of the assignment).doc

For example,

Whitek\_clinicalinterview \_1.doc

## Tentative Semester Overview

HPL = How People Learn: Brain, Mind, Experience, and School

SFT = Schools For Thought: A Science of Learning in the Classroom

HSL = How Students Learn: History, Mathematics and Science in the Classroom

Class/Dates	Topic*	Activities
1 <b>August 23</b>	<i>Course Orientation Theories of Learning Overview</i>	<ul style="list-style-type: none"> <li>• Review syllabus and course objectives</li> <li>• Activities</li> </ul>
2, 3 <b>August 28 &amp; 30</b>	<i>Theories of Learning Behaviorist Cognitive/Constructivist</i>	<ul style="list-style-type: none"> <li>• Topic discussion and activities</li> <li>• Clickers</li> </ul>
4, 5, 6 <b>September 4, 6, &amp; 11</b>	<i>Cognitive Constructivist Theory - Piaget</i>	<ul style="list-style-type: none"> <li>• Mental Functioning Model Activities</li> <li>• Stages – Video</li> </ul>
7, 8, 9 <b>September 13, 18, &amp; 20</b>	<i>Cognitive Constructivist Theory – Piaget (continued)</i>	<ul style="list-style-type: none"> <li>• Concrete and Formal/Hypothetical-Deductive Reasoning</li> <li>• Activities</li> </ul>
10, 11 <b>September 25 &amp; 27</b>	<i>Social Constructivist Theory - Vygotsky</i>	<ul style="list-style-type: none"> <li>• Activities</li> <li>• Clinical Interview Instructions #1 (Hobbit and Orcs)</li> </ul>
12, 13, 14 <b>October 2, 4, &amp; 9</b>	<i>Social Constructivist Theory (continued) Meaningful Learning Theory</i>	<ul style="list-style-type: none"> <li>• Piaget vs. Vygotsky</li> <li>• Concept maps</li> <li>• Anchored Instruction</li> <li>• <b>Due Oct. 9 Clinical Interview #1 Paper (Assignment 2)</b></li> </ul>
15, 16 <b>October 11 &amp; 16</b>	<i>Expert/Novice Studies of Learning</i>	<ul style="list-style-type: none"> <li>• Dino video</li> <li>• Clinical Interview Instructions #2 (Eratosthenes)</li> </ul>
17 <b>October 18</b>	<i>Learning and Transfer Multiple Intelligences</i>	<ul style="list-style-type: none"> <li>• Survey</li> <li>• Activities</li> <li>• Review for Exam 1</li> <li>• <b>Due Oct. 23 Exam 1 (Assignment 3)</b></li> </ul>
18, 19 <b>October 23 &amp; 25</b>	<i>The Design of Learning Environments Lab</i>	<ul style="list-style-type: none"> <li>• Lab Assignment</li> </ul>
20 <b>October 30</b>	<i>How Students Learn: Mathematics Instruction</i>	<ul style="list-style-type: none"> <li>• Activity</li> <li>• Functions</li> </ul>

Class/Dates	Topic*	Activities
21, 22 <b>November 1 &amp; 6</b>	<i>How Students Learn: Science Instruction</i>	<ul style="list-style-type: none"> <li>• Model building activity</li> <li>• Video: Pendulum Problem</li> <li>• Final Exam Project Instructions</li> <li>• Due Nov. 6 Clinical Interview #2 (Assignment 2)</li> </ul>
23 <b>November 8</b>	<i>Conceptual Change CLIS Model Generative Learning Model</i>	<ul style="list-style-type: none"> <li>• Activities</li> <li>• Annenberg Videos</li> </ul>
24, 25 <b>November 13 &amp; 15</b>	<i>Teacher Learning Rethinking the Foundations of Assessment</i>	<ul style="list-style-type: none"> <li>• Science as a Way of Knowing</li> <li>• Assessment and Teacher Cognition</li> </ul>
26, 27 <b>November 20 &amp; 27</b>	<i>Technology to Support Learning</i>	<ul style="list-style-type: none"> <li>• Technology Activities</li> </ul>
28, 29 <b>November 29 &amp; December 4</b>	<i>Exam 2 Presentations Course De-Brief</i>	<ul style="list-style-type: none"> <li>• Due Exam 2 (Assignment 3)</li> </ul>

Assignment 1 Reading and Quizzes to be completed throughout the course.

\*Course topics are subject to modification.

\*\*Additional Readings to be announced.

#### **Assignments/Grading Policy**

Activities	Percent
<b>TBL/Readings (Assignment 1)</b>	30%
<b>Responses to Additional Readings (Assignment 1B)</b>	5%
<b>Clinical Interviews (Assignment 2)</b>	30%
<b>Exams (Assignment 3)</b>	25%
<b>Participation (Assignment 4)</b>	10%
<b>TOTAL</b>	<b>100%</b>

#### **Grade Calculation:**

The points earned will be transformed to percentage of course grade as described on page seven. The grading system as per UTA policy is as follows.

A = 90 – 100

B = 80 – 89

C = 70 – 79

D = 60 – 69

F = Below 59

### Course Assignments:

An outline of the course assignments appears below. Detailed guidelines and scoring rubrics for all assignments will be discussed in class and posted on the course Blackboard site.

#### **1. Readings:**

Specific information of articles and other readings will be announced in class and posted in Blackboard.

A. Team Based Learning: We will use a team-based learning approach in this class. See page 10.

- i. Permanent team learning groups will be established at the start of the course. Students will answer questions, Readiness Assurance Test (RAT), on their own then team learning groups will answer the SAME questions (RAT). Team learning groups will submit group consensus answers to the RAT. Research examining team learning assignments show that the group score is HIGHER than individual scores and that students understand concepts much better as a result of discussing questions and course material in groups (e.g., Michaelsen, Knight & Fink, 2004). We will use the team learning approach on in-class RAT's and team learning assignments as described below.
- ii. In-class team learning assignments:  
Students will come to class having read the assigned portion of the book(s) or reading(s). Each in-class team learning RAT is worth 75 points. Your individual answers to these questions count for 33% of your score (25 points) on the RAT. The other 67% of the score (50 points) for each in-class team RAT will be based on your group's answers to the questions. You are not permitted to use the text about the readings for either portion of the assignment. However, you can use your composition book for the team portion of the RAT. After the group portion of the exam is completed, you may use the book(s) or reading(s) to better understand the answers to the questions or to appeal questions.
- iii. Appeals:  
Students may use only notes in their composition books during the group portions of in-class team learning assignments. However, once the assignment has been completed, students may use any resource if they wish to appeal any question for which the group feels the answer is incorrect or the question or answer choices are unclear. All appeals must be in writing, must fully explain why the group feels there is a problem with the question and must be agreed to by the entire group. If the group's appeal is granted, the scores of all group members will be adjusted. See page 12.
- iv. Team Maintenance:  
Students will provide feedback to all the members of their group. The scores on these evaluations will be based on the contribution group members make to team learning assignments. Any group member receiving a score of 4 or less from two or more group members on the peer evaluation for group work completed after the second half of the course, will have his/her team learning RAT scores for group work reduced. The way these group scores will be reduced is that a zero will be assigned for the grade for that person's group portion of the 9<sup>th</sup> and 10<sup>th</sup> team learning assignments. Any student who does not turn in a complete evaluation of group members with ALL group member names on the evaluation will be assigned a zero for the grade for the group portion of the 9<sup>th</sup> and 10<sup>th</sup> team learning assignments. See page 11 for the Team Maintenance sheet. Note: we will not be using this sheet for feedback. Instead, a Google Form will be used for this purpose. Students will receive an invitation through their UTA email account to use the Team Maintenance form. There will be a form for each half of the course and it should be finished by midnight that day. Feedback to

your fellow students is anonymous.

- v. Absences: You **MUST** be present in class to receive points for the group portion of the team learning assignments. The only exceptions are medical appointments, religious observances and University sponsored events. In the case that you have a scheduled medical appointment, religious observance or University sponsored event that prevents you from attending lecture, please let me know at least two weeks in **advance** of lecture. Should you not be able to attend lecture due to a medical emergency, please let me know about the situation as soon as possible.

**Total: 30 %**

- B. Responses to Readings: In addition, to the TBL's you will be occasionally asked to respond to additional readings posted on Blackboard.

**Total: 5 %**

**2. Clinical Interviews:**

- A. Students are expected to satisfactorily complete two mini clinical interviews on a topic. The clinical interview is an extensive process of formally interviewing a subject engaged in a problem solving activity. You will record the interview, transcribe and analyze the problem solving activity. A report will then be submitted and graded with feedback.

**Total: 30 %**

**3. Summative Assessments:**

Further information will be provided in class.

**Total: 25 %**

- 4. **Participation/Disposition:** Students will be assessed individually on class participation, which includes contributions to class discussions, activities and projects, working as a productive group member on above indicated *group assignments*, as well as, regular class attendance, on-time arrival to class and remaining in class until completion, timely submission of assignments, and other affective variables (e.g., enthusiasm) related to the course. The instructor will evaluate student participation and disposition throughout the course.

**Total: 10 %**

**TOTAL FOR ALL ASSIGNMENTS: 100 %**

# The Least You Need To Know About Team-Based Learning:

Michael Sweet, Ph.D. – msweet@austin.utexas.edu

**Team-Based Learning:** a form of collaborative learning that consists of (A) Strategically-formed, permanent teams, (B) Readiness assurance, (C) Application activities, and (D) Peer evaluations. TBL has been implemented in every discipline and scaled to classes of 350. See video of TBL in real classrooms in this 12 minute video:  
<http://magenta.cit.utexas.edu/largeclasses/#tbl>

**A) Strategically-formed, permanent teams:** teams of 5-7 students in which student characteristics that make the course easier or more difficult are spread as evenly as possible across teams that last the entire term.

**B) Readiness assurance:** a four-step process that takes place at the beginning of each course module:

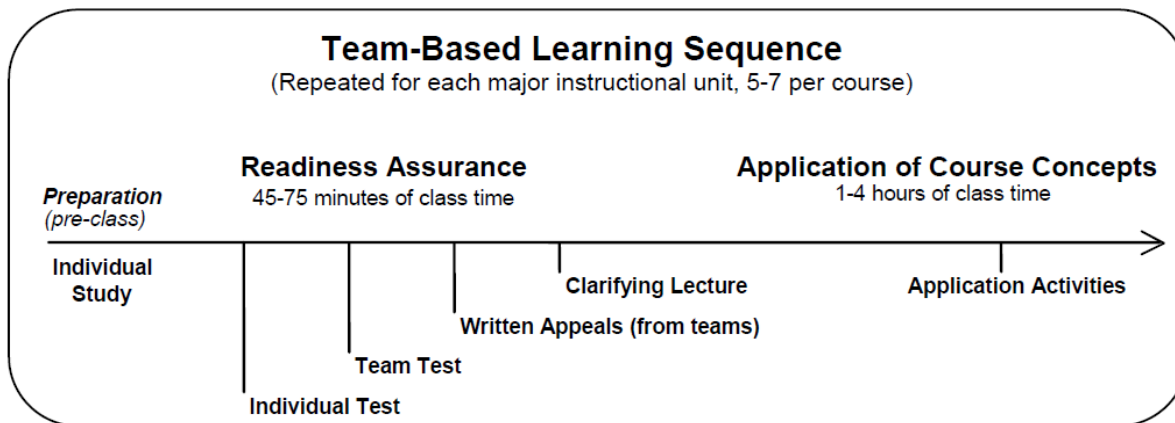
1. Pre-reading by students outside of class – increasingly includes podcasts and other forms of media
2. Individual readiness assessment test (iRAT) – short, basic, multiple-choice test over the preparation materials
3. Team readiness assessment test (tRAT) – once they turn in their individual tests, students then take the exact same test again, and must come to consensus on their team answers. IMPORTANT: teams must get immediate feedback on their performance, currently best achieved using "scratch off" forms called IF-ATs.
4. Appeals – When teams feel they can still make a case for their answers which were marked as incorrect, they can pull out their course materials and generate written appeals, which must consist of (a) a clear statement of argument, and (b) evidence cited from the preparation materials.

**The Readiness assurance process is followed by a clarifying lecture**, in which the teacher can target information that the tRAT scores show the students do not yet understand (e.g. "All the teams got questions 1-5 correct, so that material can be considered 'covered' but questions 6-10 were hit and miss, so let me explain that material a bit more.")

**C) Application activities:** carefully-designed activities also called "4 S" activities because they require teams to:

1. address a Significant problem that demonstrates a concepts usefulness
2. make a Specific choice among clear alternatives (e.g., Which of these is the best example of X? What is the most important piece of evidence in support of Y? Which statement would the author most agree with?)
3. work on the Same problem as other teams, so each team will care about the conclusions and rationales of other teams
4. report their decisions Simultaneously, so differences among teams can be explored for the most instructional effect.  
Can be accomplished by holding up notecards, having team representatives write on the board, using "clickers," etc..

Application activities can be graded or ungraded, and need not have a "correct" answer. Likewise, the TBL structure can be hung as an exoskeleton around individually-completed mid-terms, finals, paper assignments, and so on.



**If you remember nothing else from this page:** group papers and presentations are among the worst tasks one can give a group! The nature of these tasks makes the most rational approach to segment and distribute pieces of the work. The too-often demoralizing result is that each student has a different—and inevitably unequal—experience. The best task you can ask of a group is similar to that of a courtroom jury: given a tremendous amount of complex information, they must produce choice, and perhaps a very short rationale.

**D) Peer evaluation:** both mid-course and end-of-course team-mate feedback which is processed through the instructor and returned to the students with names removed. In many cases, this takes the form of students listing for each of their team-mates one thing they **Appreciate** about that team-mate and one thing they **Request**. Must contribute to student grade.

For more, see the TBL clearinghouse site at: [www.teambasedlearning.org](http://www.teambasedlearning.org)

**Team Maintenance and Feedback**      Team# \_\_\_\_\_      Name \_\_\_\_\_

**To help your team become more effective, give your team-mates some anonymous feedback.**

Consider such things as:

- *Preparation*: were they prepared when they came to class?
- *Contribution*: did they contribute to the team discussion and work?
- *Gatekeeping*: did they help others contribute?
- *Flexibility*: did they listen when disagreements occurred?

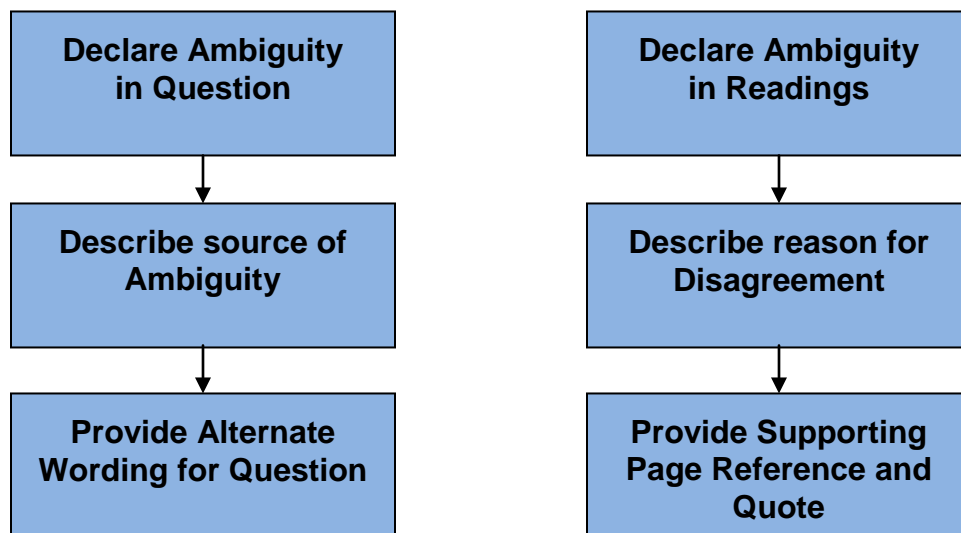
**You have 25 “points” to distribute among your team-mates. These are anonymous, so be honest.**

<b>1. Team Member Name:</b> <i>Things I appreciate about this team member:</i>  <i>Things I would like to request of this team member:</i>	<b>Points</b>
<b>2. Team Member Name:</b> <i>Things I appreciate about this team member:</i>  <i>Things I would like to request of this team member:</i>	<b>Points</b>
<b>3. Team Member Name:</b> <i>Things I appreciate about this team member:</i>  <i>Things I would like to request of this team member:</i>	<b>Points</b>
<b>4. Team Member Name:</b> <i>Things I appreciate about this team member:</i>  <i>Things I would like to request of this team member:</i>	<b>Points</b>
<b>5. Team Member Name:</b> <i>Things I appreciate about this team member:</i>  <i>Things I would like to request of this team member:</i>	<b>Points</b>

## Preparing a Successful Appeal

If your team feels strongly about the correctness of one of your answers that was counted wrong, your team may submit a written appeal to the instructor via email. This appeal process must occur immediately following a team quiz. Only teams, not individuals, may write appeals. Only teams that write successful appeals get points for that appeal, even if another team missed the same question(s).

Appeals are not simply an opportunity to dig for more points. Rather, they are an opportunity for teams to make written scholarly arguments for their collective position. All arguments must be supported by evidence from the text or lecture notes. If the appeal is based on an allegedly ambiguously phrased question, the team must suggest wording that is less ambiguous. The decision to grant or refuse an appeal will be made by the instructor after class. The decision is final.



## Example of Successful Appeal

**Argument:** “We feel that A, rather than B, should be the correct answer to question 3.”

**Evidence:** “According to Table B.6, the critical  $r$  for 10 degrees of freedom, two-tailed test, and an alpha of .05 is .576, which is larger than the calculated  $r$  of .570. This would lead us to conclude that there is no relationship between shoe size and intelligence.”