

Loyola University Chicago
School of Education

CIEP 417 - Scientifically Based Research
Spring 2011
Tuesdays, 4:30-7:00 p.m., Cudahy 314 (Lake Shore Campus)

Instructor: Charles Bilodeau
Office: Cudahy Science 419 Lake Shore Campus
cbilode@luc.edu
773-508-8344 (office phone) 847-347-5628 (mobile)
Office Hours: By appointment

COURSE OVERVIEW, OBJECTIVES, AND STANDARDS*

This course prepares candidates for the career-long process of analyzing research literature in math and science education and synthesizing research findings with their classroom practices to enhance student learning. Specific focus will be given to the analysis of current best practices within the candidate's classroom. Candidates will also plan an implementation strategy for self reflection about their own practice in math and science education. This class promotes the integration of an Inquiry Based Instructional Model that aligns with state and national standards for science education. Students will address the issues of equity in education and integrate responsive strategies in the classroom so that understanding science is made accessible to all learners. Additionally, specific strategies are researched and demonstrated that deal with the complex issues of today's student. Candidates will gain a practical understanding of both collaborative and consultative models for evidence-based change in professional settings. The course will teach candidates to collect and analyze evidence about their own teaching performance in the classroom

Course Outcomes:
<ul style="list-style-type: none">➤ Explain in detail the concept and history of “educational reform” as it relates to the field of education. 27.140.I (1A-1C, 2A-2C), 27.140.J(1A-1B, 2A-2C).➤ Develop a working familiarity with commonly-cited sources of research literature including research synthesis efforts such as the “How People Learn.” 27.140. (2B).➤ Conduct a review of research literature on a topic relevant to secondary school math or science education. 27.140.I (2A-2C).➤ Explain features of commonly understood best practices in math and science education related to inquiry-based learning, use of classroom technology and teaching for social justice. 27.140.A (1A-1C), 27.140.B(1A-1B), 27.140.L(2B).➤ Develop lesson plans, citing current scientifically-based research that will support inquiry-based learning for students in a math or science classroom. 27.140.A(1A-1C, 2A-2D), 27.140.M(1A-1C, 2A-2D), 27.140.N(2B), 27.140.O(1B, 2B).

- Develop lesson plans, citing current scientifically-based research that will support the effective use of technology in a math or science classroom. 27.140.B(1A-1B, 2A-2C), 27.140.M(1A-1C, 2A-2D), 27.140.S(2G).
- Develop lesson plans, citing current scientifically-based research that will support teaching for social justice in a math or science classroom. 27.140.M(1A-1C, 2A-2D), 27.140.N(2C), 27.140.R(1A-1C, 2A-2E).
- Collaborate with a group of candidates about productive system-wide change in a middle school math or science curriculum. 27.140.L(1A-1C, 2A-2C)
- Develop an evaluation framework for collecting and analyzing information about the success of a particular teaching method in a math or science classroom. 27.140.N(2B-2C), 27.140.P(1A-1B, 2D-2E), 27.140.S(1C, 1H, 2I).
- Develop a plan for candidate's own future professional development and ongoing integration of scientifically-based research findings into classroom practice. 27.140.L(1A-1C, 2A-2C).

COURSE STANDARDS

This course is aligned to the following standards:

Loyola University of Chicago – School of Education – Conceptual Framework (CF) standards:

- a. CF 1: Candidates demonstrate an understanding of a current body of literature and are able to critically evaluate new practices and research in their field.
- b. CF4: Candidates demonstrate skills that will enable them to work effectively with diverse clients.
- c. CF 5: Candidates demonstrate technological knowledge and skills that enhance education.

CONCEPTUAL FRAMEWORK

- This course embodies the conceptual framework – *Professionalism in Service of Social Justice* – of the School of Education (SOE) at Loyola University Chicago. The four components of the SOE's conceptual framework are *service, skills, knowledge, and ethics*. As teachers we must instill behaviors within our classroom that exhibit a common concern for each other. Students need to realize that their classmates have individual needs and learn in a variety of styles. Each student has a right to a learning environment that is free from ridicule, prejudice, physical harm, vulgar language and sarcasm. It is within this framework that teaching and service go hand and hand. As a teacher I must address this compelling question: How does my action serve others? Teaching is an ethical act and science teaching is no exception. We will explore what it means to be an ethical teacher in the context of science and learning and teaching. These efforts will lay the framework for becoming a community of practitioners who are committed to serving our students, their families, and our communities.

COURSE TEXTS AND MATERIALS

1. National Research Council (2000). *How People Learn: Brain, Mind, Experience and School*. Committee on Developments in the Science of Learning and Committee on Learning Research and Educational Practice, J.D. Bransford et al., Editors. Division of Behavioral and Social Sciences in Education. Washington DC: The National Academies Press. ISBN 0-309-0036-8
2. National Science Teachers Association (2002). *Learning Science and the Science of Learning*. Science Educators' Essay Collection. Bybee R., Editor. Arlington, Virginia: NSTA Press ISBN 13:978-0-87355-208-0, ISBN 10:0-87355-208-3
3. Carr, Sexton, Lugunoff (2000). *Making Science Accessible to English Learners*. San Francisco, CA: WestEd ISBN 978-0-914409-40-3

Useful On-Line Resources

Banks, J.A., et al. (2007). *Learning in and out of school in diverse environments: Life-long, life-wide, life-deep*. Seattle, WA: The LIFE (Learning in Informal and Formal Environments) Center and the Center for Multicultural Education – University of Washington. You can download this report at: <http://education.washington.edu/cme/cenpub.htm#learning>

Download a copy of the Illinois Learning Standards for Science:
<http://www.isbe.state.il.us/ils/science/standards.htm>

NRC (2006). *America's lab report: Investigations in high school science*. Washington, DC: National Academies Press. Available online at:
http://books.nap.edu/catalog.php?record_id=11311#toc

AAAS (1993). *Benchmarks for science literacy*. New York: Oxford University Press. Can be viewed on line at:
<http://www.project2061.org/publications/bsl/online/index.php?home=true>

NRC (1996). *National Science Education Standards*. Washington, DC: National Academy Press. Available online at http://www.nap.edu/openbook.php?record_id=4962

Information on IL Science Assessment:
<http://www.isbe.state.il.us/ils/science/standards.htm>
<http://www.isbe.state.il.us/assessment/IAFIndex.htm>

NRC (2000). *Inquiry and the National Science Education Standards*. Washington, DC: National Academies Press. Available online at <http://www.nap.edu/openbook.php?isbn=0309064767>

COURSE POLICIES

COURSE EVALUATION

Grades are based on total points earned. “R” (revise) grades on any assignment can be resubmitted for another grading review. “R” grades do not imply a higher score. “I” (incomplete) grades require a one on one conference with the instructor to determine the next step in resolving the “I”.

<i>Point Range</i>	<i>Percentage</i>	<i>Grade Equivalent</i>
170-163	100-96	A
162-158	95-93	A-
157-155	92-91	B+
154-150	90-88	B
149-145	87-85	B-
144-141	84-83	C+
140-136	82-80	C
135-133	79-78	C-
132-129	77-76	D+
128-123	74-72	D
122-117	71-69	D-
116 and below		Not passing

EXPECTATIONS

Academic Honesty

Academic honesty is an expression of interpersonal justice, responsibility and care, applicable to Loyola University faculty, students, and staff, which demands that the pursuit of knowledge in the university community be carried out with sincerity and integrity. Academic dishonesty is one of several possible reasons why a student may be dismissed from the Graduate School of Education. For specific policies and procedures see:

http://www.luc.edu/education/pdfs/academics_policies_grad.pdf

The same standards apply to undergraduate education. For specific policies and procedures see:

http://www.luc.edu/academics/catalog/undergrad/reg_academicintegrity.shtml

Accessibility

Students who have disabilities which they believe entitle them to accommodations under the Americans with Disabilities Act should register with the Services for Students with Disabilities (SSWD) office. To request accommodations, students must schedule an appointment with an SSWD coordinator. Students should contact SSWD at least four weeks before their first semester or term at Loyola. Returning students should schedule an appointment within the first two weeks of the semester or term. The University policy on accommodations and participation in courses is available at: <http://www.luc.edu/sswd>

Harassment (Bias Reporting)

It is unacceptable and a violation of university policy to harass, discriminate against or abuse any person because of his or her race, color, national origin, gender, sexual orientation, disability, religion, age or any other characteristic protected by applicable law. Such behavior threatens to destroy the environment of tolerance and mutual respect that must prevail for this university to fulfill its educational and health care mission. For this reason, every incident of harassment, discrimination or abuse undermines the aspirations and attacks the ideals of our community. The university qualifies these incidents as incidents of bias.

In order to uphold our mission of being Chicago's Jesuit Catholic University-- a diverse community seeking God in all things and working to expand knowledge in the service of humanity through learning, justice and faith, any incident(s) of bias must be reported and appropriately addressed. Therefore, the Bias Response (BR) Team was created to assist members of the Loyola University Chicago community in bringing incidents of bias to the attention of the university. If you believe you are subject to such bias, you should notify the Bias Response Team at this link: <http://webapps.luc.edu/biasreporting/>

Diversity/Social Justice

It is my intention to facilitate this course in ways that acknowledge and respect all aspects of diversity. This includes respect for ideas and practices related to gender, sexuality, disability, religion, age, socio-economic status, race, ethnicity, and culture. Not only must we have respect for each other relative to diversity but we must also examine how issues of diversity interact with science learning and teaching in secondary science classrooms. We will continuously discuss what it means to teach science in culturally responsive ways.

Classroom Community

Our work together relies on honest, open, and respectful dialogue so that all participants feel free to express their views. During the first session our class will jointly develop a set of class norms that will serve as the first step in becoming a Professional Learning Community. Listed below are examples of issues that may be included in a norms statement:

- a. *There is no such thing as a stupid question.* Please ask any and all questions that you have and remember that by asking your questions, you are allowing us to learn as a community because you are helping to make ideas visible.
- b. *Be respectful of others' ideas and experiences* even if they are different from your own. We do not have to agree but we do owe it to each other to listen to and consider each other's points of view. On a related note, please *respect confidentiality* both in the class and outside of it.
- c. *Listen to others* by trying not to interrupt until whoever is talking finishes and by trying not to pass judgment until you have heard and considered what others have said. Do not assume that silences are unproductive. Give others time to think, consider, and formulate ideas.
- d. *Monitor your participation.* If you are outgoing and tend to dominate conversation, use this course to practice allowing others a space to participate. If you are less outgoing and tend to let others do the talking, use this course as an opportunity to practice speaking up. It is always helpful to ask others what they think in any given situation.

e. *Please either turn cell phones off or to vibrate* before each class session out of respect for our community. On a related note, *use laptops appropriately* (e.g., note taking, presentations) Please *turn off all MP3 players*.

Attendance, Participation, and Communication

Regular, on-time attendance and thoughtful participation during class discussions and other activities are essential not only to your individual performance but also to the success of the course. Absences will negatively impact your grade. A **7% deduction** will be assessed for each unexplained absence. By notifying me prior to any absence, most questions can be resolved regarding missed work. Timely communication is part of what it means to be a professional.

Late Work and Extension Requests

All assignments are due on the dates listed in the syllabus. Please talk with me in person or contact me via email or phone to discuss assignment extensions. All assignments due after an excused absence will follow the x+1 rule (number of authorized absences plus one additional session).

Format for Assignments

Unless otherwise noted, all assignments must be typed. Please use 12 point Times New Roman font. As with all assignments, spelling and grammar reflect upon the care and professionalism of the author. If referencing course or other textual materials, please follow American Psychological Association style guidelines (APA – 6th edition). You can access the APA style manual through Loyola University Chicago's libraries or online at <http://www.apastyle.org>.

Technology

It is important that we spend time thinking about how to integrate technology into science learning and teaching. Various forms of technology are crucial to many aspects of scientific work (e.g., instrumentation, analyses) and therefore, youth should have the opportunity to engage with appropriate technology, used for specific purposes, when learning science.

COURSE ASSIGNMENTS AND PROJECTS*

CIEP 417 Assessment Rationales

This course prepares candidates for the career-long process of analyzing research literature in science education and synthesizing research findings with their classroom practices to enhance student learning. By aligning the assessment bundle to reflect that end, multiple assessment categories will be created to provide the basis for teachers becoming more reflective about their instruction.

Theme I

Develop a working familiarity with commonly-cited sources of research literature including research synthesis efforts such as the “*How People Learn*”.

Theme II

Develop lesson plans, citing current scientifically-based research that supports inquiry-based learning, teaching for social justice and the integration of technology in science classroom.

Theme III

Establish a reflective practitioner journal that responds to analyzing lessons which have been modified by Themes I and II.

Theme IV

Develop a strategy for implementing a professional learning community within your content area that will focus on improving student achievement via cycles of analyzing student work and co-planning lessons to address student needs that surface. Propose this plan as a model for other curricular teams.

Activity Pool

Category 1

- **E** ~ Candidates will research the key findings from “*How People Learn*” and apply these understandings to a lesson that represents their “best practice”. A “before and after” draft of the lesson will be submitted along with a descriptive narrative explaining those changes.
- **C** ~ Candidates will research the use of common assessments as well as formative assessments that would align with their classroom instruction.
- **C** ~ Candidates will research methods for setting up and managing their classrooms for inquiry.
- **C** ~ Candidates will research strategies that promote scientific conversations arising from their students.
- **C** ~ Candidates will research how to use data from an assessment to improve upon their instruction for the next time this topic is taught.
- **C** ~ Candidates will research the use of scientific journals by their pupils. An implementation strategy and evaluation protocol will be included.

Essential (20pts) plus one other Choice (10pts)

Category 2

- **E** ~ Candidates will utilize the “after” draft lesson from Category 1 that reflects the influence of *HPL* and create a 50 minute inquiry lesson that follows the *Lesson Planning Heuristic*.
- **C** ~ Candidates will research the major factors that account for inequality of science education.
- **C** ~ Candidates will research the impact of systematic interventions that will address the needs of students.
- **C** ~ Candidates will research the importance of articulated collective commitments within effective schools.
- **C** ~ Candidates will research the overemphasis on science content that interests white males only.
- **C** ~ Candidates will research the disproportionate bias in calling on students.

Essential (30 pts) plus one other Choice (10pts)

The student choice format fits into 3 paragraphs, 1 page typed in 12 pt. font as outlined below:

- Paragraph 1 What is your current understanding of the research question? Why did you choose that topic?
- Paragraph 2 Who conducted the research and where did you find it? Discuss the research method. What conclusion does the research arrive at? Identify an additional question that you would pose to the author and explain your rationale for asking it.
- Paragraph 3 What implications does the research have on your teaching? Discuss an action plan in which you could incorporate these findings into your instruction

Category 3

- E ~ A challenge for practicing teachers is to analyze their own teaching and begin reconsidering the relationship between teaching and learning.
- E ~ Develop an action plan for implementing a professional learning community within your content area that will focus on improving student achievement. Propose this plan as a model for other curricular teams.

Product Descriptors for Category 3

Essential #1

50 points

How does my teaching affect my student's understanding?

This Category 3 Essential format fits into 5 paragraphs, 2 pages typed in 12 pt. font as outlined below:

Establish a reflective practitioner journal that will address the following beginning questions about your teaching.

Paragraph 1

What is real learning?
How do you recognize learning?
What does it take for real learning to occur?

Team up with a colleague and watch each other teach a lesson. As an alternative, set up a video recorder and record a lesson when you are teaching. During the lesson focus on what the students are doing or saying. After the lesson reflect on these questions:

Paragraph 2 and 3

Did you see any “real learning” in the lesson you observed?
What is your evidence that real learning took place?

Create a table with three columns. Put these questions at the top of the columns:

- What were the students doing physically in the lesson when you observed real learning?
- What were the students doing mentally when you observed real learning?
- What was the instructional leader (you, the teacher) doing?

Fill out the table based on the evidence of real learning reflected on above. Finally reflect and respond to these questions in your journal:

Paragraph 4 and 5

What patterns did you see in the table?

How would you revise your responses to your initial view of what is real learning?

Based on the evidence, what, if anything, would you like to change about your practice to improve the relationship between learning and teaching?

If you repeat this exercise multiple times, you will continue to learn more about your teaching and increase the opportunities for students to learn in your classroom.

Category 3

50 points

Essential #2

A Professional Learning Community must face this compelling question: How best can teachers in our grade level or content area embrace high levels of learning for all students?

What is a PLC?

...an ongoing process in which educators work collaboratively in recurring cycles of collective inquiry and action research to achieve better results for the students they serve.

Within the school culture that is their reality, the candidates will develop an understanding of the central pillars of the Professional Learning Community. This research can lay the frame work for a collaborative content team that is organized by the same course or grade level. The foundations of this team can be better understood by investigating the following guiding questions through a review of research. These questions can be used as a catalyst for reflecting on ways to improve student achievement through examining classroom instruction, creating content teams, improving teacher collaboration, establishing SMART goals and analyzing student work.

Three candidates will form a cadre that will design an implementation strategy for incorporating a PLC organized by grade level content. This strategy should serve as a model for other content teams.

Collaboration

Why is it so important to organize the staff into collaborative teams in which they work interdependently?

Why should teams focus on collaboration?

How can time be allocated for team collaboration?

Content Teams

Why should effective content teams develop norms?

Why is it vital to have a clear question that should drive our collaborative efforts?

Smart Goals

Why should the learning community (content team) focus on the current reality of their student's performance when creating SMART goals for the team?

Why do we need SMART Goals?

Analyzing Student Work

How can student work foster continuous improvement in instruction?

How can student work help effective teams respond to students experiencing difficulties?

This Category 3 Essential format fits into 5 paragraphs, 2 pages typed in 12pt. font as outlined below:

Paragraphs 1 and 2

These two paragraphs should reflect the research that corresponds with the compelling questions from above. The paragraphs are written as a descriptive narrative using imbedded references.

Paragraph 3 and 4

Summarize your findings into a rationale for supporting a possible change to the existing team concept at your school.

Paragraph 5

Identify the strengths, opportunities, weaknesses and obstacles to the implementation of a community of learners within your content team at your schools. Address those specific weaknesses and obstacles with suggestions developed by your team members.

Score Buffer Up to 9 points

How People Learn (HPL)

First 4 chapters (pps. 1-114)

Reflection and discussion questions for CIEP 417 candidates.

1. Pick one of the key research findings described in HPL. How is this finding relevant to your current work? How does it relate to something you do really well? How does it help you reflect on something you could improve upon in your work? 3pts.
2. In what areas of work or leisure are you an ‘artisan’ and what areas a ‘virtuoso’? In an area where you might want to move from artisan to virtuoso, describe how the ideas highlighted in HPL might help you think about how you would plot such an improvement? 3pts.
3. A major goal of CIEP 417 is that teachers transfer learning from our course into their classroom practice of teaching. How might you facilitate that transfer? Consider the ideas about transfer and learning described in HPL. Which describe some things you currently do and which ideas might you draw on in new ways to foster transfer of learning by teachers? 3pts.

COURSE SCHEDULE*

Week 1: January 18, 2011 ~ Reform History, Evidence Based Research, *How People Learn*, Pre-conceptions about science phenomena video, Best Practice, Lesson Analysis.

ASSIGNED READINGS TO BE COMPLETED BEFORE THIS CLASS

Prior to our first class meeting, please read Chapters 1 and 2 in the research text “How People Learn” Brain, Mind, Experience and School. This text was compiled by the National Research Council and published by National Academy Press. This is a resource text that I have used extensively in my work with teachers. The first two chapters of the text are on line. The web address is <http://www.nap.edu> and the ISBN is 0-309-07036-8.

ASSIGNMENTS **DUE** FOR WEEK 1

Please be prepared to discuss these readings during our first session.

Choose and bring to class a lesson that represents your “best practice”. This lesson will be taught second semester.

Week 2: January 25, 2011 ~ Lesson edits in light of *HPL* (Category 1 Essential), Commonly cited research sources, *Topics to consider for an assessment opportunity for your class.* Research session for Category 1 topics. Move to Mundelein 306. (5:45-7:45)

ASSIGNED READINGS TO BE COMPLETED BEFORE THIS CLASS

National Science Teachers Association (2002). *Learning Science and the Science of Learning. How Students Learn and How Teachers Teach*, Collins, A p.3-11

ASSIGNMENTS DUE FOR WEEK 2

Please be prepared to discuss these readings during our 2nd session.

Bring to class a draft of your best practice lesson that has been modified by the key findings of HPL. Place your draft in the archive binder

We will plan ahead to write a common assessment that will be jointly developed by content groups. Our target date is to have this assessment graded as part of class on **March 22.**

Week 3: February 1, 2011 ~ Inquiry Overview, Using a conceptual framework, the 5E model, Reviewing the *Wallace Article* to assess current level of inquiry use, Inquiry within your schools, *Lesson Planning Heuristic*

ASSIGNED READINGS TO BE COMPLETED BEFORE THIS CLASS

National Science Teachers Association (2002). *Learning Science and the Science of Learning. Scientific Inquiry, Student Learning, and the Science Curriculum*, Bybee, R.; pgs.25-35

Making Science Accessible to English Learner, WestEd: Chapter 1 Teaching Science pg.3-13

ASSIGNMENTS DUE FOR WEEK 3

Category 1 assignments (Essential and Choice) are due this session.

The readings will provide for a better understanding of how the integration of inquiry and the conceptual framework of the 5 E model might change the culture within our classrooms.

Review the logistics to carry out your classroom observation focusing on your instruction. This may take some coordination and planning on your part as well as a colleague. Category 3 Essential #1 is 6 sessions away on **March 22.**

Week 4: February 8, 2011 ~ Category 1 Feed forward, Applying the Lesson Planning Heuristic, Using a Lesson Plan Template (Category 2 Essential), Lesson Plan Samples. Content group work on developing the common assessment for March 22. Research session for Category 2 topics. Move to Mundelein 306. (5:45-7:45)

ASSIGNED READINGS TO BE COMPLETED BEFORE THIS CLASS

Readings replaced by Category 2 research choices.

ASSIGNMENTS FOR WEEK 4

Begin developing the HPL treated lesson from Session 3 into a 50 minute inquiry lesson using the *LPH*.

Reflect on the guiding questions for Category 3 Essential 1 self/peer evaluation.

Week 5: February 15, 2011 ~ Identifying the need for a Conceptual framework, Using the 5E model, Establishing a Science Writing framework, Content group work on developing the common assessment for March 22. Analysis of Instruction video.

ASSIGNED READINGS TO BE COMPLETED BEFORE THIS CLASS

National Science Teachers Association (2002). *Learning Science and the Science of Learning. Supporting the Science-Literacy Connection*, Century, Flynn et al; pg.37-47

Making Science Accessible to English Learner, WestEd: Chapter 2 Understanding Language Development pgs. 19-28, Chapter 3 Understanding Five Levels of English Language Development pgs. 29-36

ASSIGNMENTS TO BE WORKING ON:

Complete Category 2 assignments by Session 7. (Essential and Choice)

Week 6: February 22, 2011 ~ Applied Science Event Dr.Daubenmire

ASSIGNED READINGS TO BE COMPLETED BEFORE THIS CLASS

ASSIGNMENTS TO BE WORKING ON:

Complete Category 2 assignments by Session 7 (Essential and Choice). **March 1st.**

Week 7: March 1, 2011 ~ Considering the equity issues in science education, Asking questions in class, Responding to student's answers. Planning for Category 3 Essential Assignment #1 *Assessing My Teaching and Student Understanding*.

ASSIGNED READINGS TO BE COMPLETED BEFORE THIS CLASS

National Science Teachers Association (2002). *Learning Science and the Science of Learning*. Learner Centered Teaching; Weld, J. pgs. 77-83

Making Science Accessible to English Learner, WestEd: Chapter 4 Teaching the Language of Science, pgs.37-54

ASSIGNMENTS DUE THIS SESSION

Category 2 Essential and Choice are due.

Week 8: March 8, 2011 ~ LUC Spring Break. No Class. Self-guided Research Session

ASSIGNED READINGS TO BE COMPLETED BEFORE THIS CLASS

ASSIGNMENTS :

Are you considering using the **Score Buffer** assignment?

Week 9: March 15, 2011 ~ Applied Science Event Dr.Daubenmire

ASSIGNED READINGS TO BE COMPLETED BEFORE THIS CLASS

ASSIGNMENTS

Score Buffer will be due by Week 13, April 12, 2011

Week 10: March 22, 2011 ~ Using student work to inform my instruction.

Analyzing Student Work (AWS) protocol, Investigating College Readiness Skills activity.

Seven Practices for Effective Learning
McTighe and O'Connor Article in class

ASSIGNED READINGS TO BE COMPLETED BEFORE THIS CLASS

National Science Teachers Association (2002). *Learning Science and the Science of Learning*.
Using Assessment to Help Students Learn, Atkins J.M. pgs.97-103; Assessing Student Learning,
Cox-Peterson A, Olson J., pgs.105-118

Making Science Accessible to English Learner, WestEd: Chapter 6, Assessing English Learners
pgs.77-86

ASSIGNMENTS DUE THIS SESSION:

Category 3 Essential #1.

One class of the common assessment that has been graded.

Score Buffer will be due by Week 13, April 12, 2011

Week 11: March 29, 2011 ~ The Challenge of Change: Understanding *Professional Learning Communities*, Research Session for Category 3 Assignment #2.
Move to Mundelein 306. (5:45-7:45)

ASSIGNED READINGS TO BE COMPLETED BEFORE THIS CLASS

Excerpts from:

Professional Learning Communities at Work, (1998) DuFour R.,Eaker R.National Educational Service, Bloomington, IN; *Whatever It Takes, How Professional Learning Communities Respond When Kids Don't Learn*, (2004) Dufour,R., DuFour,R., Eaker,R., Karhanek,G., Bloomington IN, Solution Tree (formerly National Educational Service), *Learning By Doing A Handbook for Professional Learning Communities at Work 2nd Edition* (2010), Dufour,R., DuFour,R., Eaker,R.,Many T. Bloomington IN, Solution Tree (formerly National Educational Service)

ASSIGNMENTS:

Continue working on Essential Category 3 Assignment #2.

Score Buffer will be due by Week 13, April 12, 2011

Week 12: April 5, 2011~ Applied Science Event Dr.Daubenmire

ASSIGNED READINGS TO BE COMPLETED BEFORE THIS CLASS

CONTINUED WORK ON ASSIGNMENTS:

Essential Category 3 Assignment #2

Score Buffer will be due by Week 13, April 12, 2011

Week 13: April 12, 2011 ~ What are PLCs? Work session for PLC implementation. Research of 10 compelling questions. Move to Mundelein 306. (5:45-7:45)

ASSIGNED READINGS TO BE COMPLETED BEFORE THIS CLASS

Excerpts from:

Professional Learning Communities at Work, (1998) DuFour R.,Eaker R.National Educational Service, Bloomington, IN; *Whatever It Takes, How Professional Learning Communities Respond When Kids Don't Learn*, (2004) Dufour,R., DuFour,R., Eaker,R., Karhanek,G., Bloomington IN, Solution Tree (formerly National Educational Service), *Learning By Doing A Handbook for Professional Learning Communities at Work 2nd Edition* (2010), Dufour,R., DuFour,R., Eaker,R.,Many T. Bloomington IN, Solution Tree (formerly National Educational Service)

ASSIGNMENT DUE THIS SESSION:

Score Buffer Assignment due.

Continued work on Essential Category 3 Assignment #2 due April 26.

Week 14: April 18, 2011 ~ CPS Spring Break. No Class

ASSIGNED READINGS TO BE COMPLETED BEFORE THIS CLASS

ASSIGNMENTS:

Essential Category 3 Assignment #2 due April 26.

Week 15: April 26, 2011 ~ Submission of Category 3 assignment #3, Celebration and Appreciation event, preparing for Inquiry during the summer term: *Late One Evening Scenario*.