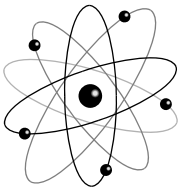
Education 364Z: Curriculum and Instruction In Science
Moravian College
Fall, 2012



Instructor: Steven Weiss **Cell:** 610-751-7985

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(Select High School Option)

Office Hours: By appointment; before or after class
Course Meeting Time: Thursdays – 6-9pm in PPHAC 235
Course Objectives: Each student will …

- Synthesize a personal rationale and philosophy for teaching science.
- Infuse inquiry and constructivist practices in their teaching.
- Demonstrate mastery and application of the Pennsylvania Department of Education Academic Standards for Science & Technology and Environment & Ecology,
  to prepare students for upcoming state assessments.
  - Become familiar with National Science Standards, PA Standard Aligned System and Common Core Standards.
- Make instructional modifications for students with learning disabilities and English language learners in planning and practice. (Unit plan and all lesson plans)
- Create an instructional environment that promotes success for diverse learners.
  - Practice the activities of teaching: unit design, lesson planning, instruction, questioning, evaluating texts, assessing student learning, and reflection.
  - Utilize, practice, and demonstrate varied, effective, teaching methods in both the college classroom and field experience settings.
  - Reflect on one's effectiveness and success after delivering a lesson.
  - Incorporate technology into planning and in classroom instruction.
  - Observe and evaluate actual classroom practices and interact professionally with secondary students and fellow educators.
  - Analyze and become familiar with resources (professional organizations and professional journals) for secondary science teachers.

- Demonstrate the essentials of laboratory safety and classroom management.
- Discuss and analyze current trends in science education.
- Research and employ science area-specific pedagogy.
- Prepare for the interview process.
- Prepare for student teaching and the professional of science education.

Required Texts:

Designing Effective Instruction: What Works In Science Classrooms by Anne Tweed

Science as Inquiry in the Secondary Setting by Julie Luft. Randy L Bell, & Julie Gess-Newsome

Investigating Safely: A Guide for High School Teachers by Juliana Texley, Terry Kwan, and John Summers

*** Other readings will be required from other sources.**

Web Sites:

National Science Teachers Association: www.nsta.org

National Association of Biology Teachers: www.nabt.org

American Association of Physics Teachers: www.aapt.org

American Chemical Society: www.acs.org

Journal of Chemical Education: http://jchemed.chem.wisc.edu/

Pennsylvania Science Teachers Association: www.pascience.org

PA Department of Education: www.pde.state.pa.us (PA Standards)

PA Standard Aligned Systems: http://www.pdesas.org/ (SAS)

Benchmarks for Scientific Literacy/Project 2061: www.project2061.org

National Science Education Standards:

http://search.nap.edu/readingroom/books/intronses/

Journal of Research in Science Education:

http://onlinelibrary.wiley.com/journal/10.1002/%28ISSN%291098-2736

National Association of Special Education Teachers: http://www.naset.org/

National Association for Bilingual Education: http://www.nabe.org/

Journal of Teacher Education: http://jte.sagepub.com/

American Educational Research Journal: http://www.aera.net/

Attendance: The success of this class relies heavily on the full participation of all its members. A large part of this class depends greatly on your class discussions and presentations. Of course, illness and emergencies arise and are unavoidable. If you cannot attend class for a valid reason, please call me. You are responsible for finding out what you missed from the other class members. It is your responsibility to consult the course schedule for the due dates of assignments. Since class participation is dependent on your attendance, your grade may be affected by absences. More than two absences may jeopardize the passing of the course. The instructor reserves the right to determine the conditions upon which late work may be submitted and graded.

Academic Honesty Policy: Please refer to the Student Handbook for this college policy.

Behavior: It is expected that you be a respectful, mature, and cooperative student at all times. Cell phones need to be silenced. Please do not check or send text messages in class.

Grading: Your final grade is calculated as follows:

- Lessons & Assignments: 35%
- Unit Plan: 25%

- Field Experience & Field Journal: 25%
- Participation, Portfolio, Miscellaneous Assessments: 15%

* Please note: It is within the instructor's purview to apply qualitative judgment in determining grades for an assignment or for a course *

Students with Disabilities: If you need accommodations in this class, please contact the Learning Services Office as soon as possible to enhance the likelihood that such accommodations are implemented in a timely fashion.

Work Requirement: Students should expect to work 3 or more hours per week outside of class and 150 hours in a field experience.

Disclaimer: This syllabus is subject to change

Lesson Plans: All of your lessons, presented in class, in your field experience, and your unit plan must follow the design set forth by the Education Department at Moravian College. It is explained in its entirety in your Pre-Student Teaching Handbook. A brief outline is below. Take notice that I have added "Materials" to the plan. This will be required in your student teaching lesson plans. In this course, you will be creating at least 25 lesson plans, including the ones in the unit plan.

A. Unit
B. Students
C. Essential Questions
D. Objectives
E. PA State Content Standards & PA Special Education Standards (ELPS)
F. Language Ojectives for ELL Students (which will apply to all students)
G. Instructional Procedures
    a. Materials
    b. Steps in your lesson
H. Strategies for Diverse Learners
I. Evaluation Procedures (Methods of Assessment)

Students With Special Needs: Many students have difficulties when it comes to the modification section of their lesson plans. I have scoured various sources

and made two documents that simply list modifications for English Language Learners (ELL) and Students with Special Needs to assist you.

LESSONS

Lessons will not be presented without a lesson plan!
You will receive a zero for the assignment!

- **1 Micro-Lesson:** Present a lesson that takes about twenty minutes. Lesson plan follows Moravian College format; turn in before you deliver the lesson. Self-critique due by the next class.

- **1 Laboratory-Driven Lesson:** 40 minutes long. Lesson plan follows Moravian College format; turn in before you deliver the lesson. Self-critique due by the next class.

- **1 Classroom Activity-Driven Lesson:** 40 minutes long. Lesson plan follows Moravian College format; turn in before you deliver the lesson. Self-critique due by the next class.

- **1 Internet-Assisted Lesson:** 40 minutes long. Lesson plan follows Moravian College format; turn in before you deliver the lesson. Self-critique due by the next class.

- **1 Current Event-Driven Lesson:** 40 minutes long. Lesson plan follows Moravian College format; turn in before you deliver the lesson. Self-critique due by the next class.

- **1 Videotaped Lesson From Field Experience:** 30 minutes long. The class will view it. Self-critique due by the next class.

** The class will decide whether peer critiques will be shared after a lesson.

ASSIGNMENTS

- Textbook/Reading Activities: Simple, reflective tasks from our required books which are discussed in groups and by the entire class when we meet.

- Personal Mission Statement & Philosophy: In a previous course, you may have written a general philosophy statement on teaching. For this activity, you will concentrate specifically on science teaching and your specific discipline. Kids, invariably will ask you "Why is this stuff important?" Well, you will need to answer their question quickly and convincingly! So, prepare yourself now! Address questions like: What is your personal definition of science? Why do you want to teach science? Why is it important? Why is your discipline important? What are your goals in science teaching? Why do kids need to be scientifically literate? What will kids get out of your class? How will kids master the PA Standards? How will you help LD and ELL students in your classroom? One page will be sufficed.

- 5 Journal Article Critiques: After reading an article, write a brief summary and reaction in which you address the following:

    - Why did you choose this article?
    - Why was the article written? For whom?
    - What information was valuable to you?
    - What will the students learn? (If applicable)
    - Why is this article important?
    - Are the strategies appropriate and effective?
    - What would you change? (If applicable)

  **Attach a copy of the article to the critique and be prepared to discuss it with the class that evening.

  The five critiques will be from the following:

    - *The Science Teacher* – Classroom Activity

- *The Science Teacher* – **Science Pedagogy**
- *The Science Teacher* – **Teaching science to students with special needs.**
- **Content specific journal – Science Pedagogy**
- **Educational Journal - Any**

- **1 Cookbook Conversion Lab Activity:** Find a "cookbook" lab exercise and (as Emeril would say) "Kick it up a notch." Transform this mundane lab into an exercise that models the constructivist model of learning. Or, some call it a discovery lab. Change those lame, low level questions to those that require kids to think at a higher level. "Bam," now you've got a great lab!

- **3 Web Site Reviews:** Zip around the web looking for websites for teachers or students. Pick three that knock your socks off and write a brief two paragraph review of them. If applicable, indicate if the site may help students master one or more PA Standards. **Attach your review to a printout of the website's "home" page (screen).** Be prepared to discuss at class.

- **Textbook Review:** Use the rubric provided and concludes with a 2-4-paragraph report written to a school district book selection committee describing the strengths and weaknesses of this text. Support your position. Make sure to address whether the PA Standards are covered in the textbook.

UNIT PLAN

Teacher planning was explained to me (long ago) using a vacation analogy. A course's curriculum describes the content and skills that your students are expected to master. If you were planning a month-long vacation, this would be a long list of every place you want to see and every activity that you want to do on your vacation. A unit plan takes the course curriculum and breaks it into manageable "teaching units." The unit plan provides you with a "map" of a portion of the curriculum. It still has the same objective, providing goals and direction – but it is in smaller teachable units. The unit plan assists the teacher in pacing the content and skills of the entire course. For your imaginary vacation, this would be your entire trip itinerary. The unit plan then is broken into daily lesson plans. This is a description of your daily goals and "game plan" to achieve these goals in a very short teachable unit – usually a single class period! Returning to your vacation one last time, this would be a schedule for one day's events. (A more specific itinerary.) There is one important caveat. Plans, like itineraries, are subject to change. Change is good!

- Your ten-day unit plan should include the following:
  - Name of the Unit
  - Title of Course
  - Description of Students
  - Unit Rationale
  - Objectives
  - Content Outline
  - Correlation to PA Standards/Anchors
  - Materials Required
  - Specific Modifications and Teaching Strategies for SSN and ELL students
  - Methods of Formative Assessments Methods (Learning Strategies)

- Daily Lesson Plans- must follow Moravian College format.
- Unit Exam

Field Experience Journal

1-2 Weekly Entries: These are numbered and e-mailed to me weekly during your field experience at weisss@nwlehighsd.org.
SUBJECT: EDUC 364Z JOURNAL

- I'm interested in your observations and reflective thoughts throughout your nine weeks. Remember, you are not critiquing your coop. Nor am I asking for a narrative on the week's activities. (Unless they were significant to you.) Below are some observations that I would like you to address? It not an inclusive list.

    - How does the teacher teach the class? Is there a certain daily structure?
    - What unique strategies do you see?
    - Can you make any connections to prior (or current) education courses.
    - Does the instructor use technology? How?
    - How are the textbooks utilized?
    - How is the class managed – procedures and discipline?
    - How does the teacher plan for the year? Unit? Semester?
    - How are Standards addressed?
    - How does the class prepare students for state assessments?
    - Closely observe students in the classroom.
    - Reflect on your lessons. **You must teach at least ten**.
        - Remember, you must present a lesson plan to your cooperating teacher prior to the lesson!
    - Observe other science teachers (with their approval.)
    - Describe the classroom of students. Talk to your coop about the diverse nature of the their class. Ask about cultural diversity. Ask about linguistic diversity and students with special needs.

- Discuss how students with special needs are accommodated in the classroom.
- Observe (discreetly) a Special Needs Student: Observe and share your reflections throughout the field experience. Meet and interview the student's Special Education or ESL teacher/case manager. Read, review, and reflect on the students IEP (particularly accommodations and/or language goals) and reflect on how it is used in the classroom. Please remember that an IEP is a confidential document!
- Attend at least one IEP meeting related to a student in your class. Discuss all aspects of the meeting:
    - Those in attendance
    - Meeting process & Decision making
    - Describe the plan including recommended modifications.
- Feel free to pick another student that interests you and observe them throughout your experience as well.

* **Some of your narratives may begin to sound like case studies. In fact, you will pick one <u>significant</u> event and write a case study. (See below)**

- **<u>1 Case Study:</u>** Case studies have been used as a teaching/learning tool in medicine and law for decades. They have found there way into teaching as a way of prompting discussion regarding a classroom "event." Teachers in training as well as seasoned teachers use them to examine another teacher's significant classroom experience/event. I will provide examples.

    - Write a case study in your journal use it. You will be making copies for class members. We will be discussing them on a class night towards the end of the experience unless you would like to share it soon after writing it! (Fresh case studies are the best!) Following are some questions to help guide you through commenting on significant classroom events:

Case Study Prompts:

- What is the context of the event?
- What actions were taken first?
- Who took the action?
- Why was it taken?
- What is the class atmosphere like?
- How did the action make you feel?
- What question(s) have arisen?
- What would you do? Why?

***Please be discreet and use pseudonyms.**

➢ Journal Conclusion

- Finally, conclude with a 2-3-paragraph description of what you learned about teaching and students from your experience.

PORTFOLIO

A good portfolio shows personal achievement and growth. Ideally, your portfolio should begin with your first field experience through your student teaching. This project is for you! When you want to land a job, you must sell yourself! Show and be proud of your hard work done at Moravian! Share it with those who are interviewing you for a position! Why not give them a videotape of your teaching talents! With this in mind, make this project your own creation. This should be a loose-leaf binder, which contains materials assigned throughout this semester (and from other courses, if you wish) that reflect your knowledge base, teaching skills & experience, personal philosophies,

accomplishments, and reflections. Examples of student work are also encouraged. If you want to include any activities from the textbook, simply Xerox the page(s). Include any other additional items you think would indicate your competence as a teacher. After student teaching, you can add and modify your portfolio to reflect your new achievements. Then, carry this baby with you as you hunt for a job!

Education 364Z: Curriculum and Instruction In Science
Calendar

Please note: topics may change with advanced notice.

* We will make a concerted effort to discuss readings each class. Please be ready to converse about the topics covered in the text.

8/29 – Course Overview & Introduction

- **Meeting at 6:30 w/ Mrs. Modjadidi and Dr. Mayer in 202**
- **Class Overview**

9/5 - Science Teaching Introduction Pt 1

- **Why Teach?**
- **Our Philosophy and Goals**
- **The 5-E Model**

9/12- Science Teaching Introduction Pt 2 & A Little History

DESI: Chapters 3 and 4

Due:

- ✓ **Personal Mission Statement & Philosophy**
- ✓ **Lesson: Classroom Activity Driven with MoCo Lesson Plan**
- ✓ **Critique of lesson emailed by Sunday.**

9/19 - Goals & Objectives

DESI: Chapter 1 and 2

Due:

- ✓ **Lesson: Current Event Driven (MoCo Lesson Plan)**
- ✓ **Critique of lesson emailed by Sunday**

9/26 – FIELD EXPERIENCE BEGINS!

9/26- Curricula – Meeting in Computer Lab -TBA

SAI: Chapters 1 and 2

Due:

- ✓ **Lesson: Internet Assisted Driven (MoCo Lesson Plan)**
- ✓ **Critique of lesson emailed by Sunday**

10/3 - Inquiry & Questioning

SAI: Chapters 6 and 8

Due:

- **Lesson: Laboratory Driven (MoCo Lesson Plan)**
- **Critique of lesson emailed by Sunday**
- **Field Journal Entry emailed by Sunday**

10/10 - Safety & Management

No Readings This Week!

Due:

- **3 Web Site Reviews –be ready to discuss.**
- **Field Journal Entry emailed by Sunday**

10/17 - Planning

No Readings This Week!

Due:

- **Unit Plan**
- **Field Journal Entry emailed by Sunday**

10/24 - The Kids We Teach

SAE: Chapters 9 and 11

|**Due:**

- **3 Journal Critiques – be ready to discuss.**
- **Field Journal Entry emailed by Sunday**

10/31 - Strategies and Rationale

Reading: TBA

Due:

- **2 Journal Critiques – be ready to discuss.**
- ✓ **Cookbook Conversion Lab**
- ✓ **Field Journal Entry emailed by Sunday**

11/7 - Professional Development I

Readings: TBA

Due:

- **Case Study and Discussion**
- **Field Journal Entry emailed by Sunday**

11/14 - Assessment

Readings: TBA

Due:

- **Textbook Review**
- **Field Journal Entry emailed by Sunday**

11/21 NO CLASS: Happy Thanksgiving!

11/28- Our Special Needs Students: Guest speaker tonight!

Readings:

1. "Providing New Access to the General Curriculum: Universal Design for Learning" by Chuck Hitchcock, Anne Meyer, David Rose, and Richard Jackson, *Teaching Exceptional Children,* Nov-Dec, 2002.

2. "Accommodations and Modifications: What Parents Need To Know" by Marty Beech, Learning Systems Institute/Florida State University, Bureau Of Instructional Support Services, Florida Department of Education, and Florida Developmental Disabilities Council, 2003.

3. "Supporting Special Students: Including Special Needs Students in the Science Classroom by by Kathleen Conn, *The Science Teacher,* March 2001.

4. "Science as a Second Language" by Carmen Simich-Dudgeon and Joy Egbert, *The Science Teacher,* March 2000.

5. "Teaching Skills to Support English Language Learners" by Deborah Short and Jane Echevaria, Educational Leadership, Dec 2004/Jan 2005.

Due:

- **Field Journal Entry emailed by Sunday**

12/5 - Professional Development II and Closure

Readings: TBA

Due:

- **Videotaped lessons from field experience (MoCo Lesson Plan)**
- **Portfolio**

Have a wonderful winter break! Happy Holidays!

Pennsylvania Standards For ELL and Special Education Students

ELL STANDARDS

IB)5. Demonstrate cross-cultural competence in interactions with colleagues, administrators, school and community specialists, students and their families. (FE)

6. Observe culturally and/or linguistically diverse instructional settings. (FE)

IIA) 1. Apply research, concepts and theories of language acquisition to instruction. (FE)

2. Implement appropriate research-based instructional strategies to make content comprehensible for all ELLs. (FE)

3. Demonstrate effective instructional planning and assessment integrating the PA Language Proficiency Standards for English Language Learners PreK-12 (ELPS) (UP, LP)

IIB) 1. Use PA ELPS to design content assessment. (UP, LP)

2. Identify issues related to standards-based formative and summative assessment for *all* ELLs. (Class discussion)

3. .Use assessment data to differentiate and modify instruction for optimal student learning. (UPC/LP)

1. 2. Demonstrate collaborative, co-teaching models for serving ELLs. (FE)
2. 3. Define common terms associated with English Language Learners. (Class)

SPECIAL EDUCATION STANDARDS

IA) 1.Demonstrate an understanding of and ability to plan for: type, identification and characteristics of different types of disabilities, as well as effective, evidenced-based instructional practices and adaptations. (FE, UP, LP)

IB) 2. Physical: Recognize patterns of normal physical developmental milestones and how patterns of students with disabilities may be different, and plan effectively for possible accommodations and/or modifications which may be necessary to implement effective instructional practices. (LP, UP)

3. Social: Initiate, maintain and manage positive social relationships with a range of people in a range of contexts. (FE)

a.Recognize areas of development for students with disabilities and plan effectively for: interpersonal processes, forming and maintaining relationships (including parent-child, caregiving, peer, friend, sibling), and attachment models and their effects on learning. (FE, LP,UP, UPC)

b. Apply principles in social competence, social withdrawal, social role formation and maintenance, and prosocial behaviors, and aggression as they affect learning.

4.Behavioral – Recognize patterns of normal behavioral milestones and how patterns of students with disabilities may be different, and plan effectively for positive teaching of appropriate behaviors that facilitate learning.Apply principles in social competence, social withdrawal, social role formation and maintenance, and prosocial behaviors, and aggression as they affect learning. (FE)

IC).1. Demonstrate the use of formal and informal assessment data for instructional, behavioral and possible eligibility decisions based on the type of assessment, level of the students being assessed, and the point and quality of instruction.(LP, UP, UPC)

2. Demonstrate an understanding of the types of assessments used (e.g., screening, diagnostic, formative, summative) and the purpose of each assessment in a data-based decision making process. (FE, UPC)

4.Demonstrate an understanding of the multi-disciplinary evaluation process and an ability to articulate the findings presented in an evaluation report including grade-level equivalents, percentile rank, standard scores, and stanines.

6. Create an instructional plan using assessment information related to individual student achievement. (LP, UP, UPC)

7. Analyze and interpret formative assessment (e.g., curriculum based assessment, CBA).

8. Demonstrate an understanding of the purpose and intent of standardized assessments and progress monitoring as one of multiple indicators used in overall student evaluation. (FE, UPC, UP)

9. Systematically monitor student performance to best identify areas of need. (FE, LP, UPC)

10. Use evaluative data on an individual, class and district level to implement instructional and/or programmatic revisions for quality improvement.

ID) 6. Create an optimal learning environment by utilizing, evaluating, modifying and adapting the classroom setting, curricula, teaching strategies, materials, and equipment. (FE, LP, UPC)

IE) 1. Identify effective co-planning and co-teaching strategies. (FE, UP, UPC)

2. Identify collaborative consultative skills and models (i.e., understanding role on the IEP team; teaming; parallel teaching). (FE, UP, UPC)

3. Identify instructional level of students through collaboration with members of the IEP team. (FE, UP, UPC)

4. Understand the role of the general educator as part of the team for transition planning across transition points (i.e., preschool to school entry, grade level to grade level, school to school, to post school outcomes). (UPC)

5. Demonstrate an understanding of the meaningful roles that parents and students play in the development of the student's education program. (UPC)

6. Demonstrate sensitivity multicultural and economic perspectives in order to encourage parent participation. (UPC)

7. Demonstrate an understanding of how to support student and family communication and meaningful participation into the student's educational program. (UPC)

8. Work collaboratively with all members of the student's instructional team including parents and non-educational agency personnel. (FE, UPC)

II. 1.Demonstrate an ability to match instructional research-validated literacy interventions to identified student needs. (LP, UP, UPC)

2. Demonstrate a conceptual understanding of the components of reading and describe how these areas pose challenges for students with disabilities:

Phonological Awareness & Phonics

Fluency

Vocabulary

Comprehension

Language

Word Study (Phonological Awareness & Phonics)

3. Demonstrate a conceptual understanding of the components of writing and describe how these areas pose challenges for students with disabilities:

text production

spelling

composition for different types of writing [Though this was identified as a standard to be met in EDUC36-, it is truly best met in 244 since the emphasis is on the conceptual.]

4. Clearly articulate and model the use of explicit and systematic instruction in the teaching of literacy (reading and writing) for students with disabilities across all reading levels. (LP, UP, UPC)

5. Utilize assessment tools with appropriate accommodations in the area of literacy to identify effectiveness of the standards based curriculum (core literacy program for students with disabilities). (FE, UP, UPC, LP)

6. Establish and maintain progress monitoring practices aligned with the identified needs of each student to adjust instruction and provide rigor in the area of literacy for students with disabilities. (LP, UPC)

8. Identify evidence-based instructional practices to be used with students with disabilities in the area of literacy. (LP, UP, UPC)

9. Demonstrate instructional strategies to enhance comprehension of material. (LP, UPC)

11. Demonstrate an understanding of the challenges that students with specific disabilities face in content area literacy. (UP, UPC)

12. Establish and maintain progress monitoring practices within the content area aligned with the identified needs of each student to adjust instruction and provide rigor in the area of literacy for all students with disabilities. (LP, UPC)

13. Clearly articulate and model the use of explicit and systematic instruction in the teaching of content area literacy for all students with disabilities. (LP, UP, UPC)

15. Demonstrate the ability to adapt content area material to the student's instructional level. (LP, UP, UPC)

III. 1.Identify effective instructional strategies to address areas of need. (LP, UP, UPC)

2. Scaffold instruction to maximize instructional access to all students. (LP, FEE)

3. Monitor student progress to provide mediated scaffolding and increase academic rigor when appropriate. (LP, FEE)

4. Provide feedback to students at all levels to increase awareness in areas of strength, as well as areas of concern. (FEE, CE)

5. Strategically align standard based curriculum with effective instructional practices. (UP, LP)

6. Identify and implement instructional adaptations based on evidence-based practices (demonstrated to be effective with students with disabilities) to provide curriculum content using a variety of methods without compromising curriculum intent. (LP, UP, UPC)

7. Analyze performance of all learners and make appropriate modifications. (FEE, LP, UPC, FEE, CE)

8. Design and implement programs that reflect knowledge, awareness and responsiveness to diverse needs of students with disabilities. (UP, UPC)

9. Use research supported methods for academic and non-academic instruction for students with disabilities. (LP, UP, UPC)

10. Develop and implement universally designed instruction. (LP, UP, UPC)

11. Demonstrate an understanding of the range and the appropriate use of assistive technology (i.e., no tech, low tech, high tech). (UPC, FEE, CE)

Modifications For Students With Special Needs

Instructional Accommodations

Presentation Accommodations

- **Alphabet strip on student's desk**
- **Audio amplification system (FM system)**
- **Braille**
- **Checklists**
- **Computers**
- **Cooperative groups**
- **Flash cards**
- **Games**
- **Graphic organizers**
- **Hands-on activities**
- **Highlighting – main ideas or specific words**
- **Large print or type to facilitate reading**
- **Magnification devices**
- **Manipulatives**
- **Models**
- **Multisensory teaching approach**
- **Number lines**
- **Oral administration of tests**
- **Oral instruction accompanied by print copy**
- **Outlines**
- **Paired reading**
- **Peer tutors**
- **Pre-teach key concepts**
- **Pre-teach vocabulary**
- **Provide examples**
- **Read assignment to student**
- **Read directions to student**
- **Reduce reading level**
- **Reduce visual distractions**
- **Screen reader**
- **Shorten assignments**
- **Shorten homework**
- **Shorten tests**
- **Sign language**
- **Smaller amounts**
- **Study guides**
- **Tactile graphics and models**

- **Taped assignments**
- **Taped books and Taped Tests**
- **Three-dimensional ruler**
- **Vocabulary lists**
- **Video**
- **Visual cues**
- **Visuals**
- **Worksheets – emphasize key concepts**
- **Worksheets – reduce reading level**
- **Worksheets – shorten**
- **Written copy of board or overhead presentations**
- **Written copy of instructions**
- **Written copy of notes**

Response Accommodations

- **Alphabet strip on student's desk**
- **Alternative books with similar concepts at a lower reading level**
- **Assignment notebooks to organized homework**
- **Braille**
- **Break up long-range assignments and projects into smaller segments**
- **Calculators**
- **Computers**
- **Cooperative groups**
- **Cues**
- **Dictate work / assignment to another student or teacher**
- **Graphic organizers**
- **Journal writing – draw pictures, dictate**
- **Large print or type to facilitate reading**
- **Manipulatives**
- **Models**
- **Number lines**
- **Notebooks**
- **Oral reports instead of written reports**
- **Paired reading**
- **Peer reader**
- **Reduce visual distractions**
- **Shorten assignments**
- **Shorten homework**
- **Shorten tests**
- **Smaller amounts**
- **Spellers**
- **Summaries and/or outlines of chapters**
- **Tape response**
- **Taped assignments**
- **Taped books**
- **Taped tests**
- **Test format – provide word box**
- **Test format – reduce written responses**
- **Three-dimensional ruler**
- **Use a word processor**
- **Verbal responses instead of written responses**
- **Vocabulary lists**
- **Visual organizers**
- **Visuals**
- **Worksheets – emphasize key concepts**

- **Worksheets – reduce reading level**
- **Worksheets – shorten**

Timing / Scheduling Accommodations

- **Alert students to upcoming transitions**
- **Assistance during transitions**
- **Break up long-range assignments and projects into smaller segments Change order of subtests**
- **Change class schedule**
- **Extended time – for tests, projects, assignments, homework, and/or transitions**
- **Frequent breaks**
- **Multiple breaks**

Setting Accommodations

- **Adequate space between desks and tables**
- **Alphabet strip on student's desk**
- **Clutter-free work area**
- **Preferential seating**
- **Quiet space**
- **Quiet work area**
- **Reduce visual distractions**
- **Slant board**
- **Special furniture**
- **Study carrel**

Assessment Accommodations

Material Accommodations

- **Braille version of test**
- **Large-print version of test**

Seating Accommodations

- **Preferential seating – front of room**
- **Preferential seating – near examiner or proctor**
- **Preferential seating – special furniture**

Scheduling Accommodations

- **Extended time**
- **Frequent breaks**

Setting Accommodations

- **At home or in a hospital**

- **Small group**
- **Small group in a separate room**
- **Special education classroom**
- **Individually in a separate room**
- **Special lighting**
- **Special furniture (desks, trays, carrels, etc)**
- **Use study carrels**

Test Administration Accommodations

- **Use an examiner who is familiar with the student**
- **Use an examiner fluent in sign language**
- **Read directions to student**
- **Repeat, clarify or reword directions**
- **Provide written copy of directions**
- **Read test questions to student**
- **Read test questions and answer choices to student**
- **Amplification (hearing aid and/or FM system)**
- **Use a sign language or cued speech interpreter for directions and/or test questions**
- **Use tactile and/or visual cues to indicate time to begin, time remaining, and time to stop**
- **Mask a portion of the test booklet and/or answer sheet to reduce visual distractions**
- **Monitor placement of student responses on answer sheet**
- **Transcribe student's answers to another test booklet or answer document**
- **Allow use of a Braille ruler**
- **Allow use of a calculator or talking calculator**
- **Allow use of colored overlays**
- **Allow use of graph paper for math section**
- **Allow use of reading windows**
- **Allow use of manipulatives for math test items**
- **Allow use of marker**

Response Accommodations

- **Precode student information on test booklet**
- **Allow student to dictate responses to a scribe (student must indicate all punctuation and spell key words)**
- **Allow use of a Braille writer**
- **Allow student to sign responses to interpreter who acts as scribe**
- **Allow use of a word processor (spell/grammar check disabled)**
- **Allow use a talking calculator**
- **Allow use of an augmentative communication device**
- **Allow use a larger diameter or modified special grip #2 pencil**
- **Allow student to mark answers in the test booklet, examiner will transfer answer to answer sheet**

Other Accommodations

- **Appropriate room lighting**
- **Appropriate room environment (heat, air, noise level, etc.)**
- **Equipment is working properly (hearing aids, FM system, augmentative communication devices, word processors, etc.)**
- **Eyeglasses used if needed**
- **Low vision aids**
- **Medication as prescribed by physician**

Instructional Modifications

Curriculum Modifications

- **Standards – completes part of a grade-level standard**
- **Standards – increase time for completion**
- **Standards – select a limited number of standards for completion**
- **Standards – use a lower grad**

Assessment Modifications

Test Modifications

- **Alternate assessment**
- **Test – reduce answer choices**
- **Test – lower grade level**

Modifications For ELL Students

Classroom Arrangement Modification

- Seat ELLs near the front of the classroom to assure she or he can see and hear well. Provide them with maximum access to the instructional and linguistic input that you are providing;(Enright, 1992) however, do not place them right on the front row. Put them slightly to the side and one or two rows back, so that they can see what the other students are doing in response to your instruction and will be able to model their behavior.
- Involve them in some manner in all classroom activities (Enright, 1992).
- Include a variety of ways of participating in your instruction, e.g. in cooperative groups. Encourage all students to work with and help ESL students (Enright, 1992).
- It is advantageous to seat ELLs next to a responsible student who knows the ELL's native-language, is proficient or advanced academically, and is willing to be a mentor or buddy for the ELL's comprehension of instruction.
- Place weekly content vocabulary/word banks in large letters/font on a poster or wall for easy visibility. This allows for more familiarity of important unit vocabulary for the ELL.
- Where possible, allow ELL to independently and freely use a reference area of your classroom containing English dictionaries and a dictionary of their native-language.

Teacher Speech Modifications

- Use clear, normal speech in communicating with ESL students. Moderate your speed if you are a fast talker. It may be necessary to repeat yourself or rephrase what you said. Help to shape what the student wants to say (Enright, 1992).
- Correct the content of what they say, if necessary. Avoid direct correction of grammar or pronunciation of what they say. This may lead to decreased participation and learning (Enright, 1992).
- Try to maintain a calm, moderate-tone. American normal decibels of speaking are higher than the Hispanic. When we speak in a higher tone, some ELL students may perceive our decibel-tone as one of disapproval or reprimand.
- Use simple sentences (Subject, Verb, Object).
- Use the active voice when speaking. (Jim hit Suzy. NOT- Suzy was hit by Jim.)
- Pause slightly after phrases and sentences. Allow the students time to understand what you have said before you go on, but do not do it so frequently that it distorts the natural rhythm of speaking.
- Speak to the student one-on-one instead of requiring them to have to answer in front of the whole class. This is stressful and embarrassing to an English Learner.
- Don't increase your volume; Louder volume does not help comprehension, nor does short, choppy speech.
- Write down what you say. Have your students copy your oral instructions.
- Use gestures and facial expressions to enhance the meaning of your words.

Lesson-Planning Modification

Dr. Josefina Villamil Tinajero, from the University of Texas, El Paso, recommends 10 helpful strategies for content area teachers of Limited English Proficient (L.E.P.) students. http://educationalquestions.com/qa11.htm
These strategies are:

- Analyze textbook material from the L.E.P. student viewpoint. I interpret this recommendation to mean that teachers IN PLANNING THEIR LESSONS, BEFORE THEY ACTUALLY TEACH ANY LESSON--must find within the textbook material, in the new content area lesson they plan to teach, experiences with which L.E.P. students are familiar, and information that L.E.P. students already possess (prior knowledge). If this is not the case, and most of the time it is NOT the case, then teachers must:
- Provide background experiences. This is a crucial step in the PLANNING AND IMPLEMENTATION of any successful lesson. If students are to gain full understanding of the new concepts presented by the textbook material, in the lesson the teacher plans to teach, then teachers must provide for students real experiences that allow students to perceive, observe, recognize, and identify these new concepts. Through these experiences, demonstrations, displays, actions, simulations, a variety of visual aids, manipulatives, regalia, concrete objects, models, tangible definitions of the new concepts students become part of the lesson, the experiences become their own experiences, and the teachers has succeeded in personalizing the lesson.
- Identify and teach the essential vocabulary. This is another crucial step in the PLANNING AND IMPLEMENTATION of any successful lesson. Teachers need to read the textbook material and make reasonable, educated guesses: Which words in the reading material students already know? Which ones students do not know? The answer to this second question is very important. The teacher, while planning the lesson, needs to begin grouping the new, unknown words into meaningful categories. For example, to teach a History lesson about Marco Polo's travels through China, teachers may find many new words in the textbook material in reference to the following meaningful categories: People, places, geographical locations, professions and occupations, means of transportation, types of clothing, foods, dwellings, animals and their use, family units, social organization, values, beliefs, etc. Teachers need to list all new words into their respective meaningful categories, and include into these categories other words known by the students. Now the teacher is ready to begin teaching.
- Present the lesson orally, AND
- Use lots of visuals. Teachers could begin by introducing the meaningful categories through which students will learn the key vocabulary in the lesson. Orally, and using lots of visuals, the teacher could ask students to recognize the types of people they see in a painting of China at the time of Marco Polo's travels. On the board or on chart paper, the teacher could begin to write the words known by the students and the new vocabulary terms. In this manner, orally and visually --using visual aids and by writing the new and known words on the board in meaningful categories--, the teacher has provided the needed background experiences and identified and taught the essential vocabulary.
- Use manipulative materials and hands-on activities. Teachers could now provide students with opportunities to use the new words and apply the new concepts learned in the lesson through active learning strategies. For example, the teacher could pretend to be Marco Polo, back from his travels through China, and students could formulate questions, as in an interview, and ask in greater detail about the peoples, places, professions, occupations, etc., Marco Polo saw in China.
- Reinforce language learning while teaching content. Throughout the active learning part of the lesson, teachers and students need to make an effort to use the key vocabulary that the teacher has introduced orally and visually, and that students will read in the textbook materials.
- Simplify grammatical structures and paraphrase. While introducing the new vocabulary and the new concepts, teachers may have to simplify the grammatical structures of their utterances, especially at the beginning of the lesson. Teachers may have to paraphrase and rephrase the sentences in the reading material during their oral presentation of key vocabulary, thus facilitating understanding of the reading material by the students.
- Teach study skills and use of textbook aids. The teacher may read aloud-key portions of the textbook material. In so doing, the teacher can point out, and help students use, chapter headings, summaries, questions, guide words, etc. In preparation for written assignments, students can practice taking notes, doing follow-up research, etc.
- Monitor students' progress continually. Through constant questioning at all levels of critical thinking skills, from "Knowledge" to "Evaluation," teachers can effectively monitor students' progress in understanding and mastering the key concepts and the key vocabulary presented in the lesson.

General Classroom Modification Guidelines

- Use mixed-level groups or partners
- Use same-language partner for beginning students
- Emphasize oral language development
- Use picture cues, video support, real objects (make concepts concrete)
- Simplify oral or written language
- Provide highlighted text, use questions which correlate to highlighted material
- Use text in instruction
- When activating prior knowledge, use realia and visuals from the beginning
- Use pictures, transparencies and overheads
- Provide additional instruction
- Provide advanced organizers-webbing, outlining, graphing
- Teach in small groups
- Provide repeated reviews and drills
- Vary teaching strategies
- Allow for peer teaching
- Provide manipulatives
- Help students build a card file of vocabulary words
- Read to students
- Encourage students to underline key words or facts
- Allow students the opportunity to express key concepts in their own words
- Use consistent format on notes
- Always write in print, never write in cursive unless you are teaching cursive
- Use the same words on exams and assignments as you use during instruction
- Have an ESL vocabulary board- students should always know where this is and what they are responsible for
- Allow for background knowledge to be reviewed and given in students native language
- Write EVERYTHING down, never hold ELL students responsible for material that was only given orally
- Give students a copy of all notes before class, expect students to be familiar with notes before lecture or class
- Place a grade on a paper only if it is a C or better. If it is less than a C, just write comments.
- Do not correct every error in ESL writing. Choose one or two consistent errors and work on the others at another time.
- Check for understanding and remember "Do you understand?" is not enough

Science Modifications

- Simplify the language of instruction, not the concept being taught. Use simple sentence structure and high frequency words. Avoid complex sentences.
- Concentrate on teaching key aspects of a topic. Eliminate nonessential information.
- Use graphic organizers such as charts, Venn diagrams, webs, story maps, etc. to make language more accessible to second language learners.
- Present Science vocabulary and concepts using real objects, pictures, and hands-on activities.
- Provide both written and oral messages. Make instructions easy and visual. Make an outline on the board or overhead. Write homework assignments on the board. Write legibly and use colors often.
- Use ESL "buddies" or peer tutors during Science class to convey main concepts. The "buddy" can talk to his or her partner about the pictures in the chapter and point out key vocabulary.
- Provide models of what is expected.
- Allow students to show comprehension through alternative means (i.e. draw instead of write).
- If reading level is too complex, have students look at visuals in the text and think about the pictures. Students can write about what they see in the pictures using English or their native language. A bilingual dictionary can be used to help students write words for the things they see in the pictures.
- Provide students with a list of key vocabulary words from a chapter. They can find the words in their bilingual dictionaries.
- Check content comprehension by asking "yes/no" questions to the ELL student.

Modifying and Adapting Content Texts

Textbooks cause a considerable problem for ELL students. Not only is it in a language that they are struggling to learn, but it is filled with hard vocabulary, complex sentence structures and lengthy passages. If you use course textbooks or any other material it is important to adapt them for ELL students, so that they can have the opportunity of attaining the same information that the other students obtain from these texts. Here are several suggestions that you can use to adapt your class texts. Find one that fits the subject area and use of text in your classes. If you will test students on information in your text it is extremely important to adapt them so that you can legitimately test the ELL student on this information.

- **Graphic Organizers** You can use graphic organizers in three ways:
  - Given before reading and already filled out so that the ELL is a visual "reinforcer "on what they are reading
  - Given to the student to fill out during reading
  - Given to the student after reading and discussion to reinforce ideas
- **Pre-prepared outlines** The teacher provides a fill-in-the blank outline with parts filled in to guide the student on what goes in the blanks and also to emphasize the information that the teacher finds important.
- **Leveled study guides**
  - Guides for the students who can easily read the material: Enriches the material and includes challenging tasks and questions
  - Guides for the ones who can read but have difficulty comprehending: Give definitions and hints to deciphering meaning with less challenging questions and tasks
  - Guides for students struggling very much with English: Brief summaries of the text they are reading and with easy questions and tasks
  - These can all be on one sheet marked with markers to let students know which they are responsible for with a symbol table, and of course, they can always attempt those that they are not responsible for.
- **Highlighted text**
  - Choose a few textbooks to be set-aside for ELL students. Take a highlighter and highlight foundational ideas, key concepts and vocabulary and summaries and anything else determined by the teacher to be of importance. Time saving tip: Highlight one text and have a student or aid copy them in to the other textbooks
  - Annotated text like the above choose or add this to books set aside for ESL. Write in the column hints at what is important to know on the page, background information that would be necessary for understanding, what it relates to in other parts of the text, clarifying questions, etc.
  - Adapted text Rewriting very important text in an easy to understand format with simple vocabulary and simple sentence structures make the information contained in it more accessible to ELL students. This one takes much time, but once you do it once, you are set.
  - Taped text For students who speak better than they read or write, taping you reading the text aloud may be helpful for them.
  - Jigsaw Reading Exercises Jigsaw reading is not only beneficial to ELL students, but to mainstream students as well. Students are placed into groups and each group is responsible for reading a particular section of the material. When they finish reading, they discuss amongst their group members what are the important points of their passage. Then you have two options, the group can present to the whole class what is important in their sections, or they rearrange groupings so that there is a person from every group in the new group, and the group member from the specific groups tell the members in their mixed groups, what was important in the section they read.

Adaptations taken from Making Content Comprehensible for English Language Learners: The SIOP Model Echevarria,Vogt, and Short. 2000.

Assignment Modifications

- Use group assignments
- Create assignments where they can be successful.
- Allow beginning students to complete assignments with same language partners
- Emphasize language development through assignments
- Allow extra time for completion
- Provide additional instructions

- Allow students to retell or write instructions to monitor understanding of assignment
- Shorten assignments
- Allow students to work on some assignments in their native language
- Reduce paper/pencil task
- Assignments should be given in the same format and same place everyday
- Use an assignment sheet
- Do not count grammar and use of the language when grading assignments unless you are specifically teaching this.
- Allow students to take breaks when working: their brains tire quickly!

Assessment Modifications

The ELL (English Language Learner) student, direct or indirect, should not be assigned failing grades in the content area subjects. In assigning grades for content subjects, teachers should place more weight on participation and the determination of the student to learn English (how hard the child tries). Efforts must be made to assess the student's achievement in content areas: not his/her English language ability. It is the responsibility of the classroom teacher to incorporate ESL strategies and techniques into the regular classroom instruction. Modifications must be decided upon and determined by the regular classroom teacher and other appropriate ESL personnel. All grades for the ELL students in modified mainstream classes should be designated as an "ESL adjusted grade" by adding "ESL" behind such grades. Example; B/ESL or 85/ESL. It is not sufficient to only write ESL. ESL students' grades should be determined by evaluating students in these areas: participation in class, completion of the modified class work assignments, and the progress in academic content. Here are some alternative ways to assess your ESL students in class:

- On a test, ask the same question, three or four different times throughout the test at varying levels of complexity. If an ESL student gets the easier one right, consider that they have mastered the objective the question is covering.
- Make questions for ESL students: no/yes, true/false, agree/disagree, etc. Have them circle the response to either visual or auditory cues.
- Have them test in stations where pictures and books opened to the correct page are ready and open. Have them concentrate on one question at a time.
- Put pictures or examples in order.
- Match pictures with vocabulary or verbal information.
- Matching sentences with pictures of the topic.
- Group projects where the less fluent students do more of the less verbal tasks.
- Reading information with some correct and incorrect information. Have students flag you when you say something wrong or have a student that is fluent get up and correct what you said and have the students agree or disagree.

Standardized Testing Modifications
Special Provisions for Standardized Testing of ESL Students

- Students who have attended school in the United States for at least three consecutive years must be tested in reading and language arts in the English language. Although individual case by case waivers could be allowed for such students for up to two consecutive years after the initial three years. The LPAC should make the decision of whether or not a student should be tested. Written permission for exemption is required and must be done in the students' home language. (This excludes the Benchmark and the End of Course)
- An ELL students' standardized test score is exempted from the class average for three years. After three years in an American School the scores must be counted in the class average, although he or she may still be an ELL student.
- Achievement tests may be given to students once they have reached a higher level of English proficiency. However, achievement test scores must not be used as criteria for promotion and retention of ELL students at any grade level.
- Modifications can be given for ELL students on the Standford 9, Benchmark and End of Course exams. See your building testing coordinator, ESL teacher or the Director of Federal Programs to learn about specific modifications.

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