Differentiated Instructional Strategies MS

Differentiating Instruction means modifying instruction, i.e., content, process and/or product, to meet the differing needs of students in a classroom, based on students' readiness, interests, and/or learning profile.

TEACHERS CAN DIFFERENTIATE:

Content What students learn
Process
How students make sense of what they learn
Product
How students demonstrate what they have learned
INSTRUCTION SHOULD BE DIFFERENTIATED BASED ON A STUDENT'S:
Readiness
Math, Science, Social Studies, English/Language Arts, Visual/Performing Arts
Interests
Astronomy, Geology, Architecture, Dinosaurs
Learning Profile
Alone/Group, Quiet/Noisy, Still/In Motion, Light/Dark, Reading, Listening, Observing, Doing
STAFF DISCUSSION QUESTIONS

According to Kingore (2007), schools determined to meet the needs of their brightest students may find these questions a useful focus when assessing attitudes and determining most appropriate strategies.

- 1. What does the term "advanced" or "gifted" mean to you?
- 2. How do we identify advanced students or advanced potential in each content area?
- 3. What instructional needs do you think are unique to advanced children?
- 4. How do we challenge advanced children academically in this school?
- 5. Which social and emotional factors are crucial to consider when challenging advanced learners?
- 6. What are the classroom management implications?
- 7. What grouping considerations do we need to address?
- 8. What human and material resources can we draw upon?
- 9. What additional resources are needed to ease implementation?
- 10. How might we appropriately inform and involve parents of advanced or gifted students in this learning partnership?

GUIDING PRINCIPLES FOR DIFFERENTIATING INSTRUCTION

To meet the needs of students in a mixed-ability classroom, it is important for a teacher to

- Pre-assess students' readiness and plan instruction accordingly.
- * Know students' interests, abilities and needs and deliver instruction accordingly.
- Assess students often so that instruction may be modified to keep students challenged just beyond their level of comfort.
- ❖ Facilitate learning activities so that students may become independent learners.
- Engage students in meaningful, respectful tasks as they are learning.
- Allow students to explore their interests and to incorporate those interests into their learning activities.
- Teach students the skills they need to pursue independent investigations based on their interests.
- Extend and enrich curriculum based on students' learning styles, interests and abilities.
- ❖ Have a "toolbox" of instructional strategies so that the appropriate strategy can be used at the appropriate time with one student, a small group, or the whole class.

Based on the research and teaching of Carol Ann Tomlinson and Joseph S. Renzulli

DIFFERENTIATION STRATEGIES FOR...

Differentiating Instruction	Differentiating Assessment
Differentiating Instruction Flexible Grouping Adjusting Questions Extension Menus Interest Centers/Interest Groups Tiered Assignments Mentorships Curriculum compacting Independent Projects/Investigations Learning Contracts	Differentiating Assessment Observation Paper-pencil Quiz/Test Conferencing Performance Assessment Student Self-assessment Portfolio Interest Inventories KWL Chart/I Wonder chart Questioning
Learning Centers	■ "Most Difficult First"

GLOSSARY OF DIFFERENTIATION TERMS

- <u>Adjusting Questions</u> Teachers can use the level of thinking and the verbs that match those levels to advance the thinking of student response.
- Anchor Activities Students are expected to understand and know how to complete such activities with no teacher participation so that teacher can work with small groups or individuals. Teachers often spend time early in the school year describing such activities for independence throughout the year. An example of an anchor activity would be using a geoboard and following directions on an activity card.
- <u>Choice Activities</u> Many teachers build choice activities into their week to empower students. Students may be given product choices to demonstrate their learning process, choices to acquire information, or content choices where they determine a topic of study.
- <u>Creative Thinking</u>- Creative thinking includes fluency, flexibility, originality, and elaboration.
- <u>Critical Thinking</u> Critical thinking comes in various forms such as: logical reasoning, developing inferences, using inductive and deductive reasoning, posing questions, developing solutions, summarizing conclusions and evaluating results.
- <u>Curriculum Compacting</u> This is the process of compressing the required curriculum into a shorter time period so students who master the basic content faster than others can use the time to do alternative activities. When paired with pre-assessment, it allows the teacher to find out what students already know and not re-teach it to them; find out what students don't know, and make sure they learn it; and to use the time that is saved for interesting, creative, and challenging activities.
- <u>Cluster Grouping</u> A group of identified gifted students are placed in the classroom of a teacher who has received training in curriculum differentiation.
- <u>Differentiation</u> The process of adapting the curriculum according to the ability level of the student is called Differentiation. It is specifically geared to content, process, or product. Any changes in these areas constitute some type of adaptation or differentiation.
- **Flexible Grouping** Students are put in groups that do not remain the same and the composition of the group is determined by interest, skill, learning style, or compacting.
- **Graphic Organizers** A visual representation of organizing thinking and ideas such as a Venn diagram or a word web. Useful for all students and particularly for those who organize visually.
- <u>High Level Questioning</u> Classroom teachers ask specific questions which will train students to think on a higher level than basic knowledge or comprehension.
- <u>Interest Centers</u> Areas in a classroom set up with learning experiences directed to a specific interest.
- Interest Groups A learning group composed of those interested in a specific interest of learning.
- <u>Independent Study</u> Student chooses a topic of interest that h/she is curious about and wants to discover more. Their research is guided by questions developed by the student with input from the classroom or differentiation teacher. Research is culminated by a product that is shared with class.
- <u>Interest centers</u> Areas set up in the classroom with learning activities directed at a specific interest.

- <u>Jigsaw</u> Individual students or groups of students are asked to study one component of learning while other students or groups study another component. Sharing information gathered puts the pieces together and the students are required to learn from each other. Jigsaw can also have students create different components of an end product.
- <u>Literature Circles</u> Flexible grouping of students who engage in different studies of a piece of literature. Groups can be heterogeneous or homogeneous.
- Multiple Intelligences Options Students select activities or are assigned activities that are designed for learning specific areas of content through their strong intelligence (verbal-linguistic, interpersonal, musical, etc.).
- **Open-ended Questions** Open ended questions have multiple answers or lead to other questions. These types of questions require a higher level of thinking rather than single answer questions.
- <u>Pre-Assessment</u> Pre-assessment determines what a student knows about a given topic or content area. It may occur through the use of observation, conversation, interviews, or written work. Teachers use pre-assessment to determine the entry point for instruction.
- <u>Product Choices</u> After learning experiences are completed using the same content or process, the student may have a choice of products to show what has been learned. This differentiation creates possibilities for students who excel in one modality over another (verbal vs. visual).
- <u>Skills Mini-Lesson</u> A short, specific lesson with students who are ready to learn or practice a skill that is needed by all those in the group.
- <u>Stations</u> Areas in a classroom set up with learning experiences that are steps in a progression of learning an area of content or a skill. Beginning and ending points for students can vary for differentiation.
- <u>Think-Pair-Share</u> Students are working in pairs, asked to think about a question(s) for a specific amount of time, then asked to share their answers with each other.
- <u>Think-Tac-Toe</u> A choice board for students to complete learning experiences.
- <u>Tiered Lesson/Assignment/Product</u> The content is the same but the process and/or the products are varied according to level of skill attained.
- <u>Varied Rubrics</u> statements that describe levels of student response to an assignment or a product; the
 stated levels of response begin at the minimum and continue to an exceptional response. Can be used to
 determine grades or teacher assessment of student work. When rubrics are varied, an A response for one
 student might look different than an A response for another.

http://www.pkwy.k12mo.us/candd/CurriculumAreas/Gifted/Glossary

DIFFERENTIATION STRATEGIES MATCHED TO INSTRUCTIONAL NEEDS

Question: What is the worst thing to do to gifted students?

Answer: Make then learn at the pace and level of general education.

See figure 3.2 in the following resource:

Kingore, Bertie. "Differentiation 101: Grades K-12." 30th annual TAGT Conference.

Austin, TX: Professional Associates Publishing, 2007. Northside Independent School Distrit. Web.

http://www.nisd.net/departments/giftedandtalented/gtac_handouts/Differentiation101.pdf

INSTRUCTIONAL NEEDS OF ADVANCED AND GIFTED LEARNERS

PACE

- Accelerated instruction
- Minimum Repetition

LEVEL

- Advanced content
- A high degree of complexity and abstraction
- In-depth study

IMPLEMENTING DIFFERENTIATION

Rated 1

Simple to implement

- Flexible grouping
- Open-ended tasks
- Students as producers
- Thinking and inquiry

Rated 2

Middle range of implementation complexity is required

- Learning centers of stations
- Student-developed centers
- Pre-assessment
- Product options
- Research and independent study
- Students as producers
- > Students' self-assessments

Rated 3

Intensive, sophisticated implementation is required

- Curriculum compacting
- Tiered instruction

Kingore, Bertie. *Differentiation: Simplified, Realistic, and Effective.* Austin: Professional Associates Publishing, 2004. Print.

CURRICULUM COMPACTING						
Instructional pacing strategy						
If a student has mastered curriculum, curriculum compacting allows the student to discover content according to the readiness of the student.						
Pre-assessment Pre-assessment						
Review portfolios/products						
Use unit tests, generally given at the end of instruction, as a pretest						
 Observe student during various tasks and activities 						
 Observe independent reading of fiction/non-fiction 						
❖ Incorporate students' interests						
Replacement tasks versus redundant assignments						
Students may know up to 50% of the grade-level curriculum						

"Steps for Curriculum Compacting." *Gifted and Talented Differentiated Instruction.* Fredrick County Public Schools, 2009. Web.

http://gtdifferentiation.sites.fcps.org/sites/gtdifferentiation.sites.fcps.org/files/Steps%20for%20Curriculum%20Compacting.pdf

See "Steps for Curriculum Compacting" and Figure 2.2 Curriculum Compacting p. 17 in the following resource:

Kingore, Bertie. *Differentiation: Simple, Realistic, and Effective*. Austin: Professional Associates Publishing, 2004. Print.

	PRE-ASSESSMENT					
_ _ _ _	Review portfolios/products Use unit tests, generally given at the end of instruction, as a pretest Observe student during various tasks and activities Observe independent reading of fiction/nonfiction Incorporate students' interests					
<u>Defini</u>	tion of Pre-Assessments					
Pre-ass instruct	essments are tools or techniques used to measure which objectives students have mastered prior to tion.					
<u>Purpo</u>	ses of Pre-Assessments Purposes of Pre-Assessments					
	Differentiate instruction					
	Guide whole-group instruction					
	Plan learning activities that address varying levels of readiness					
	Determine which students have/have not achieved mastery of specific objectives					
	Identify problems that might cause students difficulty with mastery of an objective					
	Form flexible groups					
	Determine mastery level of individuals or small groups					
Advan	ntages of Using Pre-Assessment Data					
	Determine student mastery and/or learning gaps					
	Avoid teaching students what they already know					
	Guide instruction to challenge students appropriately					
	Use planning and instructional time effectively					

- ☐ Motivate students to be more involved in and attentive to instruction
- ☐ Plan more engaging, relevant and meaningful instruction
- ☐ Identify students who have extensive background knowledge in order to form expert groups

Pre-Assessments Menu

Formal Assessment Techniques:

Checklists of Skills (e.g. operations with decimals, using parts of speech)

- FCPS Curriculum Quarterly Assessments
- FCPS Curriculum Performance Tasks or CRES Tests
- Instructional Pre-tests (text-based or teacher made)
- **Portfolios**
- **Running Records**
- Standardized Tests (e.g. MSA, SAT 10)

Informal Pre-Assessment Techniques:

- **Every Pupil Response Techniques**
- **Choral Response**
- Clothesline
- Fist of Five
- **Four Corners**
- **Individual Response Boards**
- Signal Cards
- Speedometer
- Thumbs Up
- Windshield

Other Informal Pre-Assessment Techniques

- Entrance Card/Warm-up
- Exit Card
- Journal/Free Write
- KWL
- Matching
- Most Difficult First
- Observation
- Pre- or Post-test

Strategies to Address Varying Levels of Readiness

- ☐ Curriculum Compacting
- Extension Menus
- Learning Contracts
- ☐ Higher-Level Questioning
- Independent Investigations
- □ Tiered Assignments
- Learning Centers
- □ Flexible Grouping
- Literature Circles
- Anchor Activities

Descriptions of these pre-assessment techniques are available at the gifted and talented curriculum link at http://gtdifferentiation.sites.fcps.org.

Resources

Burns, Deborah, Sally Reis and Joseph Renzulli. *Curriculum Compacting: The Complete Guide to Modifying the Regular Curriculum for High Ability Students*. Mansfield Center, CT: Creative Learning Press, Inc., 1992. Print.

Gower, Robert and Jon Saphier. The Skillful Teacher. Acton, MA: Research for Better Teaching, Inc., 1997. Print.

Chapman, Carolyn. and Gayle H. Gregory. *Differentiated Instructional Strategies: One Size Doesn't Fit All*. Thousand Oaks, CA: Corwin Press, Inc., 2002. Print.

Kingore, Bertie. *Differentiation: Simplified, Realistic, and Effective*. Austin, TX: Professional Associates Publishing, 2004. Print.

Rutherford, Paula. Instruction for All Students. Alexandria, VA: Just ASK Publications, 2002. Print.

PRE-ASSESSMENT OPTIONS Informal Pre-Assessment Techniques Every Pupil Response Techniques

Technique	Description		
Choral Response	Students give a choral response to a whole class question. This allows the		
Choral Response	teacher to determine if most students understand a concept.		
Clothesline	Students move to a place in a human line that most closely matches their		
Ciotilesinie	level of understanding. The line is a continuum, with the beginning of the		
	line indicating no understanding of a concept and the opposite end of the		
	line indicating a high level of understanding.		
Fist of Five	Students respond to a whole class question by showing the number of		
rist of rive	fingers that corresponds to their level of understanding (one being the		
	lowest, five the highest).		
Four corners	Students move to a corner of the room that most closely matches their level		
roul comers	of understanding. Previously, the teacher must label each corner of the		
	room with a word or phrase that describes the learner's level of		
	understanding.		
Individual Response Boards	Students will use white boards or think pads to respond to a question posed		
marviduai nesponse boards	by the teacher. The students hold up their answers for the teacher to check		
	or the teacher can circulate the class to check individual responses.		
Signal Cards	Students use a card to indicate their level of understanding of a concept.		
Signal Caras	Cards may be labeled as follows:		
	Red, Yellow, and Green		
	Yes/No		
	Yes/NoTrue/False		
	True/FalseNegative/Positive		
	Stop, I'm lost/slow down, I'm getting confused/Full steam ahead		
	Happy Face, Straight Face, or Sad Face		
Speedometer	Students think of a speedometer going from 0 to 100 miles per hour. They		
Speedometer	then lay one arm on top of the other with hands touching elbows. Students		
	should raise the arm that is on top, stopping at a point between 0 and 100		
	mph to indicate their level of understanding, with 100 mph designating		
	complete understanding.		
Thumbs Up	Students respond to a whole class question by putting thumbs up if they		
Thumbs op	fully understand a concept, thumbs down if they do not understand, and		
	thumbs to the side to indicate some area of confusion.		
Windshield	Students should respond "muddy", "buggy", or "clear" when the teacher		
VVIIIdameid	asks them to describe their level of understanding. Previously, the teacher		
	explains that "muddy" means the windshield is plastered with mud and the		
	destination is not visible, and this indicates little or no understanding.		
	"Buggy" means that some debris is littering the windshield, and this		
	indicates partial understanding. A clear windshield indicates a high level of		
	understanding.		
	understanding.		

Other Informal Pre-Assessment Techniques

Technique	Description			
Entrance Card/Warm-Up	Prior to a lesson, students respond in writing to a question or set of			
	questions posed by the teacher.			
Exit Card	Students respond in writing to a prompt or question posed by the teacher at			
	the conclusion of a lesson.			
Journal/Free Write	Students write what they know about a given topic. The writing may be			
	timed.			
KWL Chart	Students complete a graphic organizer specifying what they already know			
	about a topic and what they want or expect to learn. After the lesson,			
	students record what they have learned.			
Matching	Students match vocabulary terms to the definitions.			
Most Difficult First	Students are given the option of completing the most difficult questions or			
	problems first to determine if additional practice is needed.			
Observation	Students complete a task as the teacher observes, takes notes, or records			
	progress using a checklist.			
Pre or Post-Test	Students complete an assessment to demonstrate background knowledge			
	on a topic.			
Word Sort	Students sort terms into groups using categories chosen by the teacher or			
	created by the students.			

Ex	camples of Types of Assessment
Tha	t Can Be Used As Pre-assessment
Checklists	Independent Reading Records/Logs
Interest Inventories	Running Records
Critical Observations	Student Self-Evaluation
"Most Difficult First"	Teacher-selected Reading samples
Performance Tasks	Reading Tests
Process Interviews	Writing Tests

Resources

Gower, Robert and Jon Saphier. The Skillful Teacher. Acton, MA: Research for Better Teaching, Inc., 1997. Print.

Chapman, Carolyn and Gayle H. Gregory. *Differentiated Instructional Strategies: One Size Doesn't Fit All.* Thousand Oaks, CA: Corwin Press, Inc., 2002. Print.

Kingore, Bertie. (2004). *Differentiation: Simplified, Realistic, and Effective*. Austin, TX: Professional Associates Publishing, 2004. Print.

Rutherford, Paula. *Instruction for All Students*. Alexandria, WA: Just ASK Publications, 2002.

Gifted and Talented Differentiated Instruction. Fredrick County Public Schools, 2009. Web. http://gtdifferentiation.sites.fcps.org

GIFTED STRATEGIES VS. DIFFERENTIATION STRATEGIES

"In order to experience continuous learning, gifted students require an accelerated pace of instruction using advanced content." - Bertie Kingore, Ph.D.

See KWRDL chart in the following resource:

All information gleaned from the following resources:

Kingore, Bertie. *Differentiation: Simplified, Realistic, and Effective*. Austin, TX: Professional Associates Publishing, 2004. Print.

- ---. Just What I need! Austin: Professional Associates Publishing, 2003. Print.
- ---. "KWRDL Chart." Web. http://www.bertiekingore.com/KWRDL.pdf
- ---. "Reading Instruction for the Primary Gifted Learner." Web.
- http://www.bertiekingore.com/readinginstruction.htm

FLEXIBLE GROUPING

- Short term grouping
- ☐ Keep group size small as it allows more students to be on task
- Responds to instructional objectives, demands of tasks, students' needs, classroom management
- ☐ Types of flexible grouping
 - Whole class instruction
 - Mixed readiness small groups
 - Similar readiness small groups
 - Individual work

CO-PLANNING TO DIFFERENTIATE INSTRUCTION THROUGH FLEXIBLE GROUPING

The first step to successful differentiation is effective planning. This form guides the thinking and decision making of the classroom teacher and specialist during the co-planning process.

Clas	ssroom Teacher:		Specialist:				
Con	ntent Area:	Grade:	Date of Lesson:	Periods:		Date	Time
					Plan		
Тор	oic/Theme/Unit:				Debrief		
Indi	icator(s):						
Gro	ouping Tool:	Pre-Assessment	Interest Inventory	Learning Profile,	/Multiple In	telligence	eS.
Group		i.e. high ability, low ability, rofile or multiple intelligence)	Learning Activities/Instructi	ional Strategies/At	Materia	ls & Reso	urces
А							
В							
С							
Tasks/Responsibilities to be completed before the lesson							
	Classroon	n Teacher	Specia	alist		Other	

DEBRIEFING/REFLECTION AFTER A DIFFERENTIATED LESSON

Soon after implementing a differentiated lesson, it is important for the classroom teacher and specialist to debrief/reflect. Consideration should be given to all of the following components as the guiding questions are discussed: □ Assessments (pre and post) □ Student engagement ■ Materials and Resources □ Classroom Management/Grouping ■ Mastery of Indicators/Objectives ■ Guiding Question What went well? What didn't work? What would you change if you were going to teach this lesson again? How will you apply what you learned from this process to future lesson planning/ implementation?

See FIGURE 5.3

FLEXIBLE GROUPING WITH ADVANCED LEARNERS IN MIXED ABILITY CLASSROOMS ADVANTAGES/DISADVANTAGES in the following resource:

Kingore, Bertie. (2004). Differentiation: Simplified, Realistic, and Effective. Austin: Professional Associates Publishing, 2004. Print

RESEARCH AND INDEPENDENT STUDY

Develops from students' interests and relevant to the student
Responds to unanswered questions of student
Product determined by student as an extension of the research
Student manages the process by setting the timeline for the research
Students determine questioning, investigating and product development
As students reach new conclusions, new knowledge is produced
Excellent replacement task for students who have mastered curriculum materials
Provides evidence of understanding

HOW TO CREATE AND USE LEARNING CONTRACTS

Definition of Learning Contracts

Learning Contracts are agreements between students and teachers that grant the student certain freedoms and choices about completing tasks yet require the student to meet certain specifications.

Purposes of Learning Contracts

	Enrich	٥r	extend	the	essential	curricu	lum
_	LIIIICII	UI.	extenu	uie	essential	curricu	ıuııı

- ☐ Challenge the abilities of highly able students
- □ Provide alternative activities that address the differing abilities, interests, or learning styles of students

Advantages of Learning Contracts

Can be written for any curriculum area
Provide rigorous and challenging learning activities for highly able students
Can be used to target specific learning activities for individuals or groups
Promote flexible grouping in the classroom
Accommodate students' needs by blending skill-based and content-based learning
Promote creative and critical thinking for students
Develop students' time-management, planning, and decision-making skills
Allow students to work at an appropriate pace
Recognize students' prior knowledge
Eliminate boredom by minimizing repetition for students
Increase students' independence, motivation and class participation

Varied Uses of Learning Contracts

- ☐ Long range independent learning activity or unit based on pre-assessment
- ☐ Alternate independent learning activity for part of a unit

Creating Learning Contracts

- ☐ Identify the essential curriculum standards and indicators for the unit of study
- Determine how students will be assessed (pre- and post-) and mastery expectations
- Collect or create enrichment resources/materials that will extend the curricular concepts
- □ Identify when specific student(s) will be required to participate in whole group instruction
- Identify opportunities to differentiate based on student readiness as well as interest and/or learning profile
- □ Determine timeline for introducing skills/concepts
- Create schedule of due dates and conferences
- Determine working conditions
- Use samples of template available at the gifted and talented curriculum link at <u>www.fcpsteach.org</u> to design a contract that includes:
 - Relevant text page numbers or concepts
 - Enrichment options which allow student choice
 - · Log to document due dates and progress
 - Expectations of final product and working conditions

Introducing Students to Learning Contracts

- ☐ Meet with student(s) or group(s) of students to explain contract procedures
- Discuss timeline and when student will be required to participate in whole class instruction
- Explain that student may choose from the alternate enrichment activities during instruction of skills previously mastered
- ☐ Demonstrate any new enrichment activities for the unit
- Share due dates with students and model how to keep track of completed work using the log
- Explain the working conditions and expectations of final product
- ☐ Explain how and when students should seek teacher assistance

Management Tips for Learning Contracts

- □ Notify parents of learning contract implementation and expectations
- Require parent, student, and teacher signature on contract
- Set dates to meet with individual(s) or group(s) of students to monitor and discuss progress
- ☐ Allow time to accommodate student questions and/or concerns

Options for Assessing and Evaluating Student Work on Learning Contracts

- Select specific tasks to be evaluated; it is not necessary to evaluate every task
- □ Provide a combination of teacher-selected tasks and student-selected tasks; see the "Product Idea" web available at the gifted and talented curriculum link at www.fcpsteach.org
- Use rubrics created by teachers or student that incorporate neatness, thoughtfulness, accuracy of information, originality (if appropriate)

Resources

- Starko, Alane J. It's About Time In-service Strategies for Curriculum Compacting. Mansfield Center, CT: Creative Learning Press, 1986.
- Tomlinson, Carol Ann. *How to Differentiate Instruction in Mixed- Ability Classrooms*. Alexandria, VA: Association for Supervision and Curriculum Development, 1995. Print.
- Tomlinson, Carol Ann. *Instructional Strategies for the Differentiated Classroom: Video and Facilitator's Guide for Learning Contracts.*Alexandria, VA: Association for Supervision and Curriculum Development, 2003. Print.
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- Winebrenner, Susan. Teaching Gifted Kids in the Regular Classroom. Minneapolis, MN: Free Spirit Publishing, 1992. Print.
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Name	Date	
On our math pretest you showed me that out of many of the skills we will be doing i giving you more challenging work. This yourself or in a small group while I do a less	n the next few days. My plan for you means you will have a lesson with n	is to maintain your skills while
Objectives for your assignment:		
1.		
2.		
3.		
4.		
Assignments that you must complete:		
1.		
2.		
3.		



Optional activities to extend your learning are attached.

Math Contract Example

Name	Date

On our math pretest you showed me that you already know a lot about fractions. You have **compacted out** of many of the skills we will be doing in the next few days. My plan for you is to maintain your skills while giving you more challenging work. This means you will have a lesson with me, and then you will work in a small group while I do a lesson with the rest of the class.

Objectives:

Locate points on a number line to represent proper fractions
Use a fraction to express probability
Compose and decompose fractions
Identify and determine equivalent forms of proper fractions and decimals
Add and subtract fractions and mixed numbers with like denominators
Your assignments:

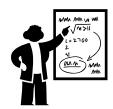
Textbook p. 335 odd

Textbook p. 336 even

Textbook p. 348 odd

Textbook p. 355 even

Textbook p. 356 odd



Challenge Pages are attached. Choose 2.

MWA MA W WA \[\sqrt{n\tau \cdot \text{II}} \] \[\lambda = 2760 \] 2		Student's Name:	·
MAN ANN	Grade Ma Term "	thematics Learning Contract:	

Due Dates:

<u>Indicators:</u> *List Essential Curriculum Indicators here*

Customize this contract by filling in the areas indicated in red.

Remove this box

Expectations:

> Student Work:

		Participate in whole group instruction when indicate	d by pre-assessment.
		Complete alternative learning activities when previous	us mastery has been demonstrated.
		Show work (or setup of work) for each problem.	
		Use a calculator only when indicated in the direction	
		Answer all written responses in complete sentences	· ·
		Seek assistance from teacher, as needed, when direct	t instruction is not being provided.
>		udent Behavior: Remain on task at all times. Use 6" voices at all times.	
<u>Lea</u>		ng Activities:	
		See the chart on the back of this contract for the req demonstrated "mastery."	uired learning activities based on the section(s) where you have
		Select one of the alternative activities from the approactivities.	oved list below the chart after you complete the required learning
		ment:	
		·	rnative learning activities will replace the grades for class work and/o
hor	new	vork.	
I, _ Te	 rm _	, have , "" Unit Learning Contract. I a	read and understand the <i>Contract Guidelines</i> for the agree to the
		expectations of my work and behavior	
		requirements of the alternative learning	g activities and due dates
La	ccer	pt the responsibilities of working on the enri	chment activities as outlined in the contract.
		pt the responsibilities of tronking on the emi-	
	Stu	udent Signature:	Date:
Pa	rent	t Signature:	Teacher Signature:
Re	turn	n Signed Contract By:	

Required by the Teachere you have onstrated mastery on:	As an alternative activity instead of participating in whole group instruction, you should complete the following by the end of the period today: Choose any #. "Check off" the activities you complete.		
Name of Section tion <u>#</u>)	Enrichment Worksheet (pg) Calculator Activity (pg) Career Activity (pg)	For each section, insert the page numbers of enrichment	
Name of Section ction <u>#</u>)	Choose any #. "Check off" the activities you complete. Practice: Word Problems (pg) Enrichment Worksheet (pg) Calculator Activity (pg) Career Activity (pg)	activities available for that section. Delete activities that are not available for that section.	
<i>Name of Section</i> ction <u>#</u>)	Choose any #. "Check off" the activities you complete. Practice: Word Problems (pg) Enrichment Worksheet (pg) Calculator Activity (pg) Career Activity (pg)	Remove this box before saving.	
Name of Section ction <u>#</u>)	Choose any #. "Check off" the activities you complete. Practice: Word Problems (pg) Enrichment Worksheet (pg) Calculator Activity (pg) Career Activity (pg)		
When you have completed the rebelow. Remember, you should continue through the requirements of the	equired alternative activities, select one of the enrichment investigation omplete your enrichment investigation by After you re two projects, "check off" to indicate your choice.		
	e you have onstrated mastery on: Name of Section ction #) Selected by the Student: When you have completed the rebelow. Remember, you should cthrough the requirements of the	As an alternative activity instead of participating in whole group instruction, you should complete the following by the end of the period today: Choose any #. "Check off" the activities you complete.	

Resources

Chapter Projects: "

"Directions and Tools." *Gifted and Talented Differentiated Instruction*. Fredrick County Public Schools, 2009. Web. http://gtdifferentiation.sites.fcps.org/DirectionsandTools

HOW TO USE INDEPENDENT INVESTIGATIONS

<u>Definition of Independent Investigations</u>

Independent Projects or Investigations are individual or small group studies of a topic of interest to the student(s), including the development of a product for sharing information learned with an appropriate audience.

Purposes of Independent Investigations

- □ Provide alternative activities that address the differing abilities, interests, or learning styles of compacted students
- ☐ Enrich or extend the essential curriculum
- ☐ Challenge the abilities of highly able students

Advantages of Independent Investigations

- Can be used in any curriculum area
- Expand upon interest of student
- Promote advanced planning, research, and technology skills
- Encourage critical, creative, and higher-level thinking
- ☐ Enable students to work with complex and abstract ideas
- ☐ Allow long-term and in-depth work on topics of interest
- Allow student choice
- Satisfy intellectual curiosity
- ☐ Increase student motivation and independence

"Think Abouts" in Planning for Independent Investigations

- Student interest and learning profile
- □ Student level of independence
- ☐ Criteria to be used in assessing and evaluating student work
- Connections to essential curriculum standard(s) and indicator(s)
- Resources available
- Dates to meet with individual(s) or group(s) of students to monitor and discuss progress
- Ways to address student questions and/or concerns
- Working conditions for students
- ☐ Mentors and experts to consult with students as needed
- ☐ Time for students to work in the media center or computer lab as necessary
- Presentation of the final product to the teacher before sharing it with a larger audience
- □ Student planning and management tools available under the gifted and talented curriculum link at www.fcpsteach.org
 - Question Web
 - Independent Investigation Product Planner
 - Independent Investigation Timeline
 - Daily Independent Investigation Log
 - Independent Investigation Resource Log
 - Product Idea web
 - Independent Investigation Reflection Form

Planning and Implementation of Independent Investigations

- Administer an interest inventory to compacted students to determine possible topics/products
- Guide students in the development of essential questions and research questions
- Collaborate with the student(s) to refine their question(s) and/or generate a hypothesis

Set goals, including the design, evaluation, and presentation of the final product
Create a scoring tool that will be used to evaluate student work
Discuss final product, working conditions, resources, time lines, scoring tool, and due dates
Establish a firm time line and due dates
Model use of planning and management tools available at the gifted and talented link at
www.fcpsteach.org
Facilitate investigation by locating and recommending resources
Explain how and when students should seek teacher assistance
Teach students bibliography, data gathering/research, note-taking, and/or outlining skills as needed
Monitor progress and offer assistance as needed
Have student(s) complete the Independent Investigation Reflection Form available at the gifted and
talented link at www.fcpsteach.org

Student Options for Sharing Independent Investigations

Students may share the information learned during the independent investigation in a variety of ways. Written products, oral presentations, artistic creations, visual displays, multimedia productions, or a combination of these are appropriate. See the "Product Idea" web under the gifted and talented link at www.fcpsteach.org for specific ideas.

Resources

Graham, Leland and Isabelle McCoy. *Social Studies Fair Projects and Research Activities*. Nashville, TN: Incentive Publications, Inc., 2001. Print.

Karnes, Frances A. and Kristin R. Stephens. *The Ultimate Guide for Student Product Development and Evaluation*. Waco, TX: Prufrock Press, Inc., 2000. Print.

Kingore, Bertie. *Differentiation: Simplified, Realistic, and Effective*. Austin, TX: Professional Associates Publishing, 2004. Print.

Schack, Gina D. And Alane J. Starko. *Looking for Data in All the Right Places*. Mansfield Center, CT: Creative Learning Press, Inc., 1992.

Tomlinson, Carol Ann. *How to Differentiate Instruction in Mixed-Ability Classrooms*. Alexandria, VA: Association for Supervision and Curriculum Development, 1995. Print.

"Independent Investigations." *Gifted and Talented Differentiated Instruction.* Fredrick County Public Schools, 2009. Web. http://gtdifferentiation.sites.fcps.org/IndependentInvestigations>

INVESTIGATIONS VERSUS REPORTS

What's the difference?



Investigations	Reports
Use information gathered through independent research to answer an essential question and make an analysis	Use information gathered through research to relate information about a topic
Result in the creation of an original written, visual, oral, artistic, or multimedia product	Require a written product
Involve analysis, complex application, synthesis, and evaluation	Involve acquisition of knowledge, simple application, and demonstration of comprehension
Inspire new ideas, methodologies and perspectives	Make plagiarism tempting
Satisfy intellectual curiosity	Satisfy requirements
Generate findings to be shared with a specific, authentic audience	Generate information to be shared with the teacher



DAILY INDEPENDENT INVESTIGATION LOG

Student Name:	 Date:	
Question(s):		

Date	What I accomplished today	My plan for the next work session	Questions or concerns for the teacher

Hints for using the Daily Independent Investigation Log

- Student should complete a row on the form each day that he/she works on the independent investigation.
- Teacher may duplicate the *Daily Independent Investigation* Log as front/back.
- "Questions or concerns for the Teacher" may pertain to timelines, finding resources, focus of the topic/questions, etc.
- Teacher may choose to collect the *Daily Independent Investigation Log* once a week in order to track progress and arrange meetings with the student(s) to discuss questions and concerns.



INDEPENDENT INVESTIGATION PRODUCT PLANNER

Date:_____

Student Name: _____

Essential Quest	stion:	
Think About	Ideas	
What specific research question(s) will help to answer my essential question?		
What resources might I need to answer my questions?		

Where can I find the resources I need?	
How and with whom could I share the information learned during my investigation?	
What materials might I need to create a final product?	
What items will I submit to the teacher at the end of my investigation?	



INDEPENDENT INVESTIGATION TIMELINE

Student Name:	Date	:
Task	Deadline	Date Completed
Select topic, essential question and research questions		
Complete "Independent Investigation Product Planner"		
Locate and record resources using "Independent Investigation Resource Log"		
Record information from resources		
Organize information from resources		
Create product and bibliography		
Share information learned and final product		
Complete "Independent Investigation Reflection Form"		

Good time management is essential to completing an Independent Investigation.

Failure to adhere to assigned due dates may result in the production of inferior work, a reduced score, and/or a Resources:

"Independent Investigations." Gifted and Talented Differentiated Instruction. Fredrick County Public Schools, 2009. Web. http://gtdifferentiation.sites.fcps.org/IndependentInvestigations>

Notes to teacher:

The Independent Investigation Timeline is to be completed by the student with teacher guidance, as follows:

- 1. Instruct student(s) to read each of the tasks in the left column.
- 2. Instruct student(s) to record the projected deadline date for each task in the middle column.
- 3. Inform student(s) of the preferred method to:
 - a. record information from resources (journal, log, notecards, etc.)
 - b. organize notes (web, outline, note-cards, two-column chart, etc.)
 - c. create a bibliography (submit the "Independent Investigation Resource Log" as the bibliography or compose a formal bibliography).
- 4. Provide instruction as needed.

INDEPENDENT INVESTIGATION RESOURCE LOG

Directions: Use this log to record bibliographic information from each source you use during your investigation. Use as many copies of the log as needed to record information about each of
your sources. For example, if you use more than four books, record information about those extra books on another log. This log, even when complete, is not a bibliography, but it prepares you
to write a bibliography. You will need to record the information from each table and alphabetize all entries to complete a formal bibliography.

Name:	 		

Books

Author's Last Name	,	Author's First Name	•	Title of Book	•	City of Publication :	Name of Publisher	,	Year	

^{*}See your teacher for assistance recording bibliographical information from books with multiple authors and editors.

Periodicals (Articles from Magazines and Newspapers)

Author's Last Name	,	Author's First Name	•	"Title of Article." .	Title of Periodical)	Date of the Periodical	:	Page numbers of the article	

Magazine or	Newspaper	Articles from	i an Electronic	Database
-------------	-----------	---------------	-----------------	----------

"Title of Article."	<u>Title of Magazine (or Newspaper)</u>	•	Original Date of the magazine or newspaper	•	Original Page numbers	•	Name of Database	•	Date you found info.	•	<url></url>	•

Internet sites

Author's Last Name	,	Author's First Name	Name of Site	Date site created (last update or ©)	Site sponsor (if available)	•	Date you found site	•	<url> .</url>

^{*}If the Internet site(s) you visit do not have authors listed, begin your citation with the name of the site.

Interviews

Last name of printerviewe	,	First name of person interviewed	Type of Interview (Personal, telephone, etc.)	•	Date of Interview	•

Films/Videos

Title	•	(Medium-DVD or Videocassette)	Distributor	Year of Release	•

Reference Books or	Encyclopedias	(Print)
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Author's Last Name	,	Author's First Name	•	"Title of Article or Chapter."	<u>Title of Encyclopedia or</u> <u>Reference Book</u>	. Year of Edition ed .

^{*} If the encyclopedia or reference book(s) you use do not have authors listed, begin your citation with the title of the chapter or article.

Reference Books or Encyclopedias (Electronic Database)

Author's Last Name	,	Author's First Name	•	"Title of Article." .	<u>Title of</u> <u>Encyclopedia</u>	•	Copyright date	•	Name of Database . <u< th=""><th>JRL></th><th>•</th><th>Date you found info</th><th>•</th></u<>	JRL>	•	Date you found info	•

^{*} If the encyclopedia or reference book(s) you use do not have authors listed, begin your citation with the title of the chapter or article.

Museum or Art Exhibits

Site	•	Location (City, State)	•	Attending Group	•	Date (Month, Day, and Year)	•

Brochures or Pamphlets

Author's Last Name	,	Author's First Name .	Title of Book	•	City of Publication :	:	Name of Publisher	,	Year	•

^{*}See your teacher for assistance recording bibliographical information from brochures or pamphlets with multiple authors and editors.

Television or Radio Broadcasts

"Title of episode or segment."	Performer, narrator, director, or author.	Title of Program	•	Network	•	Call letters	,	City ,	,	Date	•

Resources

"Independent Investigations." Gifted and Talented Differentiated Instruction. Fredrick County Public Schools, 2009. Web. < http://gtdifferentiation.sites.fcps.org/IndependentInvestigations>

INDEPENDENT INVESTIGATION REFLECTION FORM

Directions: Answer each of the questions below in complete, detailed sentences.
<u>Describe</u> or <u>illustrate</u> the final product you created. <u>Explain</u> how you shared the product.
<u>Rate</u> your final product on a scale from one to five (1 = lowest, 5 = highest). <u>Give reasons</u> why you feel your product deserves this rating.
<u>List</u> the three most interesting or important things you learned while completing this investigation.
<u>Describe</u> the most enjoyable part of this investigation.
<u>Tell</u> what you would change or improve about your process, product, or presentation if you had the opportunity to continue this investigation.
Resources: "Independent Investigations." Gifted and Talented Differentiated Instruction. Fredrick County Public Schools, 2009. Web. http://gtdifferentiation.sites.fcps.org/IndependentInvestigations >

STUDENTS AS PRODUCERS

 Produce their own ideas, relationships, and products Students assume parameters of the task rather than follow a teacher-designed plan Students create concept based questions that demonstrate understanding and pose these questions to the class Students produce an original example that extends the skills beyond the original lesson
See Question-Answer Relationships in the following resource:
"Question-Answer Relationships." Staff Development for Educators: Turning Theory into Practice. Staff Development for Educators, Inc., 2011. Web. http://www.sde.com/downloads/teacherresources/di_text/question_answer_relationships.pdf
"Quick, Quality, Question Cards." Temecula, CA: J. Taylor Education, 2011. Print.
THINKING AND INQUIRY
 Engages in strategies that converge thinking into reasoning and problem solving. Requires student to understand and apply information rather than only memorize and repeat it. Student relates to content rather than only "knowing" the content. Thinking skills prompt high level responses.

HOW TO CREATE AND USE SOCRATIC SEMINARS

Definition of Socratic Seminars

A Socratic Seminar is a scholarly discussion of an essential question in which student opinions are shared, proven, refuted, and refined through dialogue with other students. In classes of more than fifteen students, the fishbowl format for Socratic seminars should be used. In this format, the teacher or seminar leader facilitates the discussion. Only half the class, seated in an inner circle, participates in the discussion at one time. The other half of the class, seated in an outer circle, consists of the students who act as observers and coaches. Every student's participation is graded.

Purpose of Socratic Seminars

In a Socratic Seminar, participants seek to answer an essential question and gain deeper understanding of laws, ideas, issues, values, and/or principles presented in a text or texts through rigorous and thoughtful dialogue.

Advantages of Socratic Seminars

Provides opportunities for critical readings of texts
Teaches respect for diverse ideas, people, and practices
Enhances students' knowledge and research base
Creates a community of inquiry
Develops critical thinking, problem solving, speaking, and listening skills
Clarifies one's ideas, ethics and values
Maximizes student participation
Encourages divergent thinking

Steps for Socratic Seminars

1. Pro

rep	aration:
	Prior to the discussion, the teacher will select an appropriate text. The text must be complex and rich in ideas that promote thinking and discussion. Readings in literature, history, science, math, health, and philosophy or works of art or music may be used.
	All students will read the text prior to the discussion.
	The teacher will develop the essential or opening question for the discussion. An effective opening question arises from genuine curiosity on the part of the teacher and/or the participants, has no single "right" answer, is framed to generate dialogue leading to greater understanding of the ideas in the text, and can best be answered by reference to the text.
	The teacher may share all possible discussion questions with students before the seminar or the teacher may share only one question before the seminar starts, depending on the length of the text, complexity of the discussion question(s) and ideas presented in the text, and the time allotted for the discussion.
-	Prior to the discussion, the teacher must provide adequate time for all students to record the essential question, develop their answer, and identify support for the answer.
o_(`	onference:

2. Pre-Conference:

- Prior to the seminar, the teacher will determine which students will be inner circle participants and will assign each participant a coach from the outer circle. The teacher should consider students' thinking, listening, speaking, and reading skills when pairing students.
- ☐ Just before the seminar each participant and his or her coach will meet for a pre-conference to discuss the participant's goals for the discussion. The teacher may allow a few minutes of informal discussion between participants and their coaches in order to build some confidence in the participant's ideas before the seminar.

3.	Semir	nar:			
		Students sit in one of two circles (inner circle for participants, outer circle for coaches).			
		Teacher poses the essential or opening question.			
		The teacher may need to ask follow up questions to lead the participants to greater understanding of the text.			
		Students respond to the question orally or in writing.			
	_	Teacher facilitates the seminar discussion by guiding students to a deeper and clarified consideration of the ideas of the text, a respect for varying points of view, and adherence to and respect for the seminar process.			
		Students cite evidence from the text, ask questions, speak, listen, make connections, and add insight or new knowledge to discuss their points of view in regards to the opening question.			
		Teacher takes notes for evaluative purposes but provides no verbal or nonverbal feedback that either affirms or challenges what the students say. The teacher may ask follow-up questions; however, teacher questions are used sparingly and deliberately.			
	When satisfied that the opening question has been thoroughly explored, the teacher asks one or mor additional questions to examine central points of the text.				
		Students may pose new questions when the discussion is exhausted. New questions posed must relate to students' ideas and contributions in response to the initial essential question.			
		Once the text has been explored thoroughly the teacher may ask a closing question, which is derived from the text but which seeks to have students apply the topic to their own lives or the world.			
		The teacher will thank students for their participation and summarize the main ideas and concepts examined during the discussion.			
4.	Post-0	Conference:			
		After the discussion, the coaches provide feedback to the participants to acknowledge their strengths and identify their weaknesses in a post-conference.			
		The teacher will grade each coach based on his or her written and oral feedback to the participant.			
		RULES AND ROLES FOR SOCRATIC SEMINARS			
The Par	ticipant	ts:			
		Must support their opinions with evidence from the text			
		May speak at any time during the seminar with respect for the other participants			
		May whisper with their coaches if the teacher allows it			
		May refer to other works the class has read if the teacher allows it			
		May write notes to themselves during the discussion if the teacher allows it			
		May ask relevant questions of other participants			
The Coa	ches:				
		Must evaluate the participant's performance during the seminar			
		Must provide oral and written feedback to the participant after the seminar			
		May not speak to their participants during the seminar unless the teacher allows it			
		May not speak to other participants or coaches at any time			
The Tea	cher/L	eader:			
		Must provide adequate "think time" for students to respond appropriately			
		Can only ask questions; cannot state his or her opinions or interpretations			
		Must require participants to support their opinions with evidence from the text			
		Must encourage participants to agree and disagree for substantial reasons			
		May record the number and quality of participant responses			

Must determine when to conclude the seminar

Management Tips for Socratic Seminars

- Allow no more than 30 minutes for the first seminar; after students have become familiar with the seminar format, 45-50 minutes may be allotted for discussion, particularly when examining more complex texts
- Select students for inner and outer circles carefully to prevent off-task behaviors
- □ Share rules, expectations, and grading practices with students prior to the seminar.
- Distribute an equal number of tokens or "talking chips" to all participants; require participants to use all their tokens or chips prior to the end of the discussion
- Stop discussion to interject commentary, commend participants, or end negative behavior during the first seminar; as students become familiar with the seminar format, the teacher should not need to provide any feedback
- □ Eliminate the outer circle when using Socratic Seminars in classes of fifteen students or less

Options for Assessing and Evaluating Student Work in Socratic Seminars

Student participation and understanding may be assessed and evaluated using the following methods:

- Rubric to assess student conduct, speaking, reasoning, listening, and/or preparation
- ☐ Checklist of positive and negative behaviors
- Student self-evaluation
- Peer evaluation

Resources

Ball, Wanda and Pam Brewer. Socratic Seminars in the Block. Larchmont, NY: Eye on Education, 2000. Print.

- Copeland, Matt. (2005). Socratic circles: Fostering Critical and Creative Thinking in Middle and High School. Portland, ME: Stenhouse Publishers. 2005. Print.
- Moeller, Victor and Marc Moeller. Socratic Seminars and Literature Circles for Middle and High School English. Larchmont, NY: Eye on Education, 2002. Print.
- Polite, Vernon and Arlin Adams. "Improving critical thinking through Socratic seminars." *Spotlight on Student Success* 110: 1-2 (1996). Print.
- Polite, Vernon and Arlin Adams. (1997). "Critical Thinking and Values Clarification through Socratic Seminars." *Urban Education* 32(2):23 (1997). Print.
- Strong, Michael. The Habit of Thought: From Socratic Seminars to Socratic Practice. Chapel Hill, NC: New View Publications, 1996.
- Tredway, Lynda. "Socratic Seminars: Engaging Students in Intellectual Discourse." *Educational Leadership* 53.1:26-9 (1995).
- "Directions and Tools." *Gifted and Talented Differentiated Instruction.* Fredrick County Public Schools, 2009. Web. http://gtdifferentiation.sites.fcps.org/Directions%2526Tools

SOCRATIC SEMINAR RECORD SHEET

<u>Directions</u>: Use the tally sheet below to record the number of contributions made by each participant. Record more detailed notes in the space provided when students

	connect	different	students'	' ideas,
--	---------	-----------	-----------	----------

- □ relate to bigger ideas or previous texts and discussions,
- ask questions that cause students to think more deeply about their theories, and/or
- □ make irrelevant or inappropriate comments.

Name	Tallies for Contributions	TOTAL

- 1		_		_	_	
	N	$\boldsymbol{}$	•	_	•	

SOCRATIC SEMINAR LESSON PLAN

Text(s):			
Indicator(s):			
Objective(s):			

Time Required:	Pre-Seminar Activities:	Essential or Opening Question:
Materials:	Participants and coaches will meet for a	
For the teacher:	pre-conference to discuss the participant's goals for the discussion.	
Socratic Seminar Record Sheet		
For each student:		
Copy of selected text(s)		
Rules for a Good Fishbowl Discussion		
Fishbowl Discussion: Overview		
For each participant:		
Teacher's Evaluation of Participant's Performance		
For each coach:		
Coach's Evaluation of Participant's Performance		
Additional Questions:	Post Seminar Activities: The teacher will	Assessment Options: The teacher
	thank students for their participation and	will evaluate participants and
	summarize the main ideas and concepts	coaches using rubric provided.
	examined during the discussion.	If time permits, students may
	Coaches provide feedback during a post-	write a paragraph or complete an
	conference to acknowledge strengths and	exit ticket to explain what they
	identify weaknesses.	learned from the seminar.

FISHBOWL DISCUSSION: OVERVIEW

<u>What is it?</u> A Fishbowl Discussion is a scholarly discussion of an essential question in which student opinions are shared, proven, refuted, and refined through dialogue with other students.

<u>What does it look like</u>? The outer circle consists of the students who act as observers and coaches. The inner circle is for the panel that is conducting the discussion.

<u>What is its purpose</u>? The purpose of a fishbowl discussion is to improve student critical thinking, reading, listening, and speaking skills.

<u>Preparation</u>: Prior to the discussion, all students will be given the text and the question(s) that the discussion will be based on. The teacher may share all possible discussion questions with students before the seminar or the teacher may share only one question before the discussion begins. There is no single, "right" answer to this question; the question is designed to generate dialogue. Prior to the discussion, the teacher must provide adequate time for all students to record the question, develop their answer, and identify support for the answer.

<u>Pre-Conference</u>: Just before the discussion each participant and their coach will meet for a preconference to discuss the participant's goals for the discussion. The teacher may allow a few minutes of informal discussion between participants and their coaches in order to build some confidence in the participant's ideas before the seminar.

<u>Post-Conference</u>: After the discussion, the coaches provide feedback to the participants to acknowledge their strengths and identify their weaknesses in a post-conference. The teacher will grade each coach based on his or her written and oral feedback to the participant.

RULES AND ROLES

The Participants:

- May only participate in the discussion if they have read the selection
- Must support their opinions with evidence from the text
- May speak at any time during the seminar with respect for the other participants
- May whisper with their coaches if the teacher allows it
- May refer to other works the class has read if the teacher allows it
- May write notes to themselves during the discussion if the teacher allows it
- May ask relevant questions of other participants

The Coaches:

- Must evaluate the participant's performance during the seminar
- Must provide oral and written feedback to the participant after the seminar
- May not speak to their participants during the seminar unless the teacher allows it
- May not speak to other participants or coaches at any time

The Teacher/Leader:

- Must provide adequate "think time" for students to respond appropriately
- Can only ask questions; cannot state his or her opinions or interpretations
- Must require participants to support their opinions with evidence from the text
- Must encourage participants to agree and disagree for substantial reasons
- May record the number and quality of participant responses
- Must determine when to conclude the seminar



RULES FOR A GOOD FISHBOWL DISCUSSION

- 1. Only one person speaks at a time.
- 2. Participants must use cues such as body language and eye contact to determine when it is appropriate to speak.
- 3. If two people start to speak at the same time, one must yield.
- 4. <u>All</u> participants look at the person speaking.
- 5. Questions can be asked of other participants in the inner circle to motivate them to join in.
- 6. Disagree politely.
- 7. State your ideas and support them with evidence.
- 8. Respond to the comments of other participants by agreeing or disagreeing and offering additional evidence.
- 9. Record notes, quotations from the text(s), statistics, etc., that support your ideas and opinions.
- 10. The teacher or seminar leader does not participate in the discussion except to provide a new question or to terminate an irrelevant or inappropriate line of discussion.

FISHBOWL DISCUSSION:

TEACHER'S EVALUATION OF PARTICIPANT'S PERFORMANCE

Participant's Name:
Reading Selection:
Discussion Question:
<u>Awesome</u>
The student demonstrates a deep understanding of the text, showing evidence of thoughtful listening and critical thinking in his or her interpretations. The student supports his or her opinions by quoting the text, citing page/paragraph numbers, summarizing, and paraphrasing. The student includes others in the discussion by respecting each participant as an individual, addressing the entire group, inviting others to speak, listening, asking for clarification, challenging faulty reasoning, making eye contact, and supporting a good answer.
<u>Admirable</u>
The student demonstrates a clear understanding of the text, showing evidence of having listened to others and thought about his or her response. The student supports his or her opinions by quoting the text, summarizing, and paraphrasing. The student includes others in the discussion by respecting each participant as an individual, listening, questioning other student's responses, and supporting a good answer.
<u>Acceptable</u>
The student demonstrates an understanding of the text, showing evidence of some listening and thought. The student supports his or her opinions by summarizing and paraphrasing. The student includes others in the discussion by respecting each participant as an individual, listening, and supporting a good answer.
<u>Amateur</u>
The student demonstrates a vague understanding of the text, states, but does not support, his or her opinions adequately, and does not include others in the discussion.
Teacher Comments:
Student Reflection: I can improve my participation in the discussion by

COMMUNICATIONS AND PUBLIC SPEAKING: INTRODUCTION TO DEBATE

FOUR-CORNERS: PRE AND POST DEBATE STRATEGY

Grade Level: 6-8 (Appropriate for multi-age group)

Duration: Four 45-minute sessions

- Ask students to individually list some topics that they have recently discussed with their parents, friends, etc. that caused disagreement. Select a topic that is mentioned by a number of students and in which students would have interest. Write a statement about the topic with which students will either agree or disagree. [Examples: 1) The United States Electoral College should be replaced by the direct election of the President and Vice-President, and 2) All middle school students should have cell phones.]
- 2. Make 4 signs (Strongly Agree, Strongly Disagree, Agree and Disagree) and post them in different corners of the room. Ask students to move to the corner that best describes their opinion on the chosen debate resolution. Students are now in 4 groups based on their opinions. Have each group select a recorder and one or two speakers.
- 3. Allow about 5 minutes for groups to briefly discuss and list on chart paper their reasons for feeling as they do about the topic. Have the designated speaker(s) for each group share their list of reasons with the entire class. Note that some students may begin raising their hands to ask other groups questions and to comment on what had been shared. As students question their own thinking, the debate process has begun.
- 4. Distribute short articles (1-2 pages in length) on the debate topic to each group. Have each student read one article, highlighting the pros and cons using different colors. Have each group compile their findings into one list of pros and cons and create a 2-minute persuasive speech to convince others to join them. Provide a simple blueprint for the speech for each group to make the process easier for them. (If students ask if they can switch groups, tell them that may be an option later, but to stay and support their original thinking at this time.) Have each group select 1-3 team members who will deliver the persuasive speech.
- 5. Have students present their persuasive speeches informally during the next class. Direct students to write a BCR after listening to all persuasive speeches, addressing how they feel about the topic and why their opinion changed or remained the same.
- 6. Repeat the 4- Corner activity after the persuasive speeches, explaining that each student should choose a corner based on what was learned from the debates.

DEBATE LESSON PLAN – GRADE 8, LANGUAGE ARTS

Resolution: Literary works attributed to Shakespeare should be presented as works most likely written by one or more other authors.

Indicator(s): LA.800.20.04a Reliability of information, including credentials of the author, currency of the information, evidence of equal treatment of opposing points of view (i.e. fairness), verification of information across multiple sources, and contribution of the text as a source of information and as a fair representation of a particular topic.

Objective(s): The student will apply steps in the research process to be able to debate whether literary works attributed to Shakespeare should continue to be presented as such, or should be presented as works most likely written by one or more other authors.

Time Required:

Research: Approx. 4 thirty-minute sessions

Debate: Approx. 3 thirty-minute sessions

Pre- & Post- Debate Activities: 15 min. each

Materials:

Policy Debate Format

Debate Scoring Sheet

Debate Evaluation and Reflection (for Student Observers)

Four Corners Pre- and Post- Debate Activity

Pre-Debate Activities:

Students will write a short synopsis of their opinion regarding the question or resolution and then participate in Four Corners activity.



Recommended Resources for Research:

Pre-debate (topic overview) resources:

http://www.shakespeareidentity.c
o.uk/shakespearecontroversy.htm
http://www.kn.pacbell.com/wi
red/fil/pages/webshakespera.h
tml

http://www.princeton.edu/~rbivens/shakespeare/

Additional resources:

http://shakespeareauthorship.com/

http://absoluteshakespeare.com/t rivia/authorship/authorship.ht m

Questions for Research/Consideration: 1. Did William Shakespeare have enough education and knowledge to have written the literary works that bear his name? 2. What evidence supports the theory that William Shakespeare from Stratford- upon-Avon authored these works? 3. What evidence supports the theory that Sir Francis Bacon authored these works? Christopher Marlowe? Edward De Vere? Post Debate Activities: The teacher will thank students for their participation and summarize the main ideas and concepts examined during the debate. Students will participate in Four Corners culminating activity. If time permits, students may write a brief constructed response or complete an exit ticket to explain what they learned from the debate, including a short synopsis about if and/or how their opinion about the resolution has changed.			http://newsvote.bbc.co.uk/mpapp s/pagetools/print/news.bbc.co. uk/2/hi/entertainment/698591 7.stm http://www.ellisparkerbutler.info/ epb/biblio.asp?print=y&id=235 8 http://www.doubtaboutwill.org/ http://www.bardweb.net/debates .html
education and knowledge to have written the literary works that bear his name? 2. What evidence supports the theory that William Shakespeare from Stratford- upon-Avon authored these works? 3. What evidence supports the theory that Sir Francis Bacon authored these works? Christopher Marlowe? Edward De Vere? Date of the participation and summarize the main ideas and concepts examined during the debate. Students will participate in Four Corners culminating activity. If time permits, students may write a brief constructed response or complete an exit ticket to explain what they learned from the debate, including a short synopsis about if and/or how their opinion about the resolution has changed.	Questions for Research/Consideration:	Post Debate Activities:	Assessment Options:
William Shakespeare from Stratford- upon- Avon authored these works? 3. What evidence supports the theory that Sir Francis Bacon authored these works? Christopher Marlowe? Edward De Vere? Students will participate in Four Corners culminating activity. If time permits, students may write a brief constructed response or complete an exit ticket to explain what they learned from the debate, including a short synopsis about if and/or how their opinion about the resolution has changed.	education and knowledge to have written the	participation and summarize the main ideas	evaluate participants using the Debate Scoring
3. What evidence supports the theory that Sir Francis Bacon authored these works? Christopher Marlowe? Edward De Vere? Teacher and student observers will provide feedback to the participants to acknowledge to explain what they learned from the debate, including a short synopsis about if and/or how their opinion about the resolution has changed.	William Shakespeare from Stratford- upon-	····	• • •
feedback to the participants to acknowledge	• • • • • • • • • • • • • • • • • • • •	cuminating activity.	to explain what they learned from the debate,
	Christopher Marlowe? Edward De Vere?	•	

DEBATE LESSON PLAN – GRADE 8, AMERICAN STUDIES I

Resolution: The United States Electoral College should be replaced by the direct election of the President and Vice-President.

Indicator(s): SS.ASI.30.04 Explain the Articles of the Constitution; the powers designated to each branch of the federal government; the qualifications for office for each of the branches; the electoral college; check and balances; and the amending process.

Objective(s): Students will apply steps in the research process to be able to debate whether the current electoral system should be maintained or eliminated in favor of the direct election of the President and Vice-President.

Time Required:

Materials:

Policy Debate Format

Debate Scoring Sheet

Debate Evaluation and Reflection (for Student Observers)

Four Corners Pre- and Post- Debate Activity

Pre-Debate Activities:

Students will write a short synopsis of their opinion regarding the question or resolution and then participate in Four Corners activity.



Recommended Resources for Research:

- Article II, Section 1 and Amendment XII of the United States Constitution
- National Archives and Records
 Administration: Electoral College
 (http://www.archives.gov/federal-register/electoral-college/)
- Project Vote Smart (http://www. votesmart.org)
- The Federalist Papers No. 68
- The Center for Voting and Democracy (http://www.fairvote.org)

Questions	for	Research	/Considerati	on:
Ouestions	IUI	nescaluli	CUIISIUEI ALI	VII.

- 1. What was the original purpose of the Electoral College? Are those purposes still met?
- 2. How does the Electoral College help or hurt representative democracy? Is there a more "democratic" alternative?
- 3. How does the Electoral College affect Presidential campaign strategies? If the Electoral College were abolished, how would these strategies change?
- 4. What role do third parties play in the current system? If the President and Vice-President were chosen by direct election, what role would third parties play?

Post Debate Activities:

The teacher will thank students for their participation and summarize the main ideas and concepts examined during the debate.

Students will participate in Four Corners culminating activity.

Teacher and student observers will provide feedback to the participants to acknowledge strengths and identify weaknesses.

Assessment Options:

The teacher (and student-observers) will evaluate participants using the Debate Scoring Sheet provided.

If time permits, students may write a brief constructed response or complete an exit ticket to explain what they learned from the debate, including a short synopsis if and/or how their opinion about the resolution has changed.

Title of Unit	•	Social Studies	s R.A.F.T. Chart
Role	Audience	Format	Topic
your understanding from a variety of pe Scan each column a	of what you have learned erspectives.	ou do so, consider which ite	you see topics/ issues/ event

Once you have made your selections, be sure to "show what you know" in your final product. You may develop your own idea to pursue. If so, present your idea to your teacher for approval.

TIERED INSTRUCTION

Denotes that all children are able to learn the same essential skills in different ways
Aligns curriculum to the different readiness levels of students
Differentiates by content, process, and/or product
Varies the time required to complete tiered assignments
Plan instruction that stretches students slightly beyond their comfort zones

TIERED ASSIGNMENTS ADD DEPTH. WHAT MIGHT IT LOOK LIKE?

The class is looking at websites about the War of 1812 for History and Media Literacy. The teacher creates three Tiers of expectations.

Tier One Assignment (for students working below grade level)

The teacher provides several websites to the students. They use a prepared worksheet and analyze each site based on the given criteria.

<u>Tier Two Assignment</u> (for students working at grade level)

Students work in groups and find three websites on the same topic to compare. Students then work individually to analyze the sites, and then compare their results within the group.

<u>Tier Three Assignment</u> (for students who need extensions)

Josh and Greg work together to create a 4-point rubric for evaluating websites using five or more features. The students work together to find one website that exemplifies each level, justifying their decisions.

"Differentiating Instruction for Gifted Learners." Slideshare.net, 2011. Web.

http://www.slideshare.net/drummosh/differentiating-instruction-for-gifted-learners

Differentiation With Technology (Carol Almarez, ITRT, Misha Stewart)

- Aronson, Elliot. "The Jigsaw Classroom." Social Psychology Network, 2011. Web. http://www.jigsaw.org/overview.htm
- Bosch, Nancy."A Differentiated Classroom." *A Different Place.* Nancy Bosch, 2009. Web. http://adifferentplace.org/classroom.htm
- Differentiated Instruction Strategies. "Differentiated Instruction: Difficult Strategies." *Griswold Community Schools*. Griswold Community Schools, 2011. Web. http://www.griswold.k12.ia.us/gmweb%5CDifficult %20DI%20Strategies.htm>
- Bosch, Nancy. "Differentiation Flowchart." A Different Place. Nancy Bosch, 2009. Web. http://adifferentplace.org/classroom.htm#Differentiation%20of%20Instruction
- "Curriculum, Instruction, and Assessment." *Area Education Agency 267.* 2007. Web. http://www.aea267.k12.ia.us/aboutus/index.php?page=about copyright>
- "Differentiated Instruction using Technology." *Calcasieu Parish Public Schools.* Calcasieu Parish Public Schools, 2011. Web.http://www.cpsb.org/resources/cbt/CBT_06-07/station%20activites/Anchoring/description.htm
- Hatch, Brandie and Kevin McColgan. *Technology and Differentiation: Strategies for Everyday Integration*. National Differentiated Instruction Conference, 2005. Print.
- Monjan, Matt. How to Reach the 21st Century Mind: Using Multimedia in the Classroom to Impact Instruction. Silver Spring, MD: Discovery Educator Network, 2011. Print.
- Rowan, Kelly Jo. "Glossary of Instructional Strategies." 2010. Web. http://www.beesburg.com/edtools/glossary.html
- Smith, Grace E. and Stephanie Throne. *Differentiating Instruction with Technology in K-5 Classrooms*. International Society for Technology in Education, 2007. Print.
- ---. Everything DI. 2010. Web. http://www.everythingdi.net/di/interest.htm
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- ---. "Why Add Technology to DI?" Everything DI. 2010. Web. http://www.everythingdi.net/di/addtech.htm
- "Strategies for Differentiating Instruction Chart." The Access Center: Improving Outcomes for All Students. WordPress Entries, 2008. Web.

 http://www.k8accesscenter.org/training_resources/documents/15HourDifferentiationModule/Handouts/HO1DiffStrategiesChart.doc
- "Ten Tips for Differentiation." Eduscapes.com. 1998. Web. http://eduscapes.com/sessions/needs/elementary2.html
- Theroux, Priscilla. "Enhance Learning with Technology: Differentiating Instruction." 2004. Web. http://members.shaw.ca/priscillatheroux/differentiating.html
- "Using Technology to Support Diverse Learners." WestEd, 2011. Web. http://www.wested.org/cs/tdl/print/docs/tdl/home.htm
- Differentiation of Instruction in the Elementary Grades. Tomlison, CA:2000. Web. http://www.ldonline.org/ld_indepth/teaching_techniques/differentiation.html

"Mapping a Route Towards Differentiated Instruction." Educational Leadership. Tomlison, CA: (1999). ASCD. Web. http://www.ascd.org/publications/educational-leadership/sept99/vol57/num01/Mapping-a-Route- Toward-Differentiated-Instruction.aspx>

http://www.ascd.org/pdi/demo/diffinstr/tomlinson2.html

http://www.teachertube.com/view_video.php?viewkey=a80da5ba3b374911d10c

Using Technology to Differentiate Instruction (course by Baltimore County Public Schools 1/4/08)

PowerPoints

Barton, Betsey. "Role of Technology in Differentiated Instruction in Elementary Social Studies." PowerPoint presentation. DOE, n.d. Web.
Includes all resources, including tech-based, available from DOE website.

Davis, Holly Hertberg, PhD and Catherine Brighton, PhD. "Do As I Do: Modeling Differentiation in Staff Development." PowerPoint for the University of Virginia, n.d.

"Supporting Learning Styles with Technology." PowerPoint presentation for the Office of Instructional Technology, Baltimore County Public Schools, 2004.

Anchoring

"Anchor Activities." *Best Practices: Instructional Strategies and Techniques.* SaskSchools.net, 2003. Web. http://wblrd.sk.ca/~bestpractice/anchor/index.html

"Anchoring Activities: Various Subjects." Leon County Schools, 2011. Web. http://www.tandl.leon.k12.fl.us/lang/Elementary/Anchorideas.html

Anchor Activities: http://www.eht.k12.nj.us/~jonesj/Differentiated%20Instruction/Anchor%20Activities.htm

Using Anchoring Activities (PowerPoint):

http://www.montgomeryschoolsmd.org/curriculum/enriched/giftedprograms/docs/anchor.ppt#261,1

"Vocabulary Development." Leon County Schools, 2011. Web. http://www.tandl.leon.k12.fl.us/lang/Elementary/Anchorvoc.html

Assessment (online)

"Hot Potatoes Quiz Builder Download." 2011. Web. http://hotpot.uvic.ca/#downloads

Quia quizzes (shared activities): http://www.quia.com/shared/search

Create quizzes at Quiz Center: http://school.discoveryeducation.com/quizcenter/info/setup.html

Classroom Management

"Implementing Differentiated Instruction in Your Classroom." The Access Center: Improving Outcomes for All Students. WordPress Entries, 2008. Web.

http://www.k8accesscenter.org/training resources/documents/DifferentiationModule1.5hours.ppt#268,22>

Needleman, Mathew. *Creating Lifelong Learners*. WordPress, 2010. Web. http://www.needleworkspictures.com/ocr/blog/?cat=8

Cubing-Think Dots

"Lesson 2-- It Begins with Good Instruction." ASCD Professional http://pdonline.ascd.org/pd_html/di2lesson3.html 2nd Grade Social Studies cubing lesson

Development. 2011. Web.

Paper PhotoCube 1.1 free download: http://www.trivista.com/products/downloads.htm

Cubing ideas: http://www.eht.k12.nj.us/~jonesj/Differentiated%20Instruction/Cubing.htm

Perimeter cube: http://www.cdeducation.org/ocea/handouts/71%20-%20Differentiation%20Strategy%20101-%20Cubing%20a%20Lesson/Perimeter%20cube.doc

Cubing Chrysanthemum: http://www.cdeducation.org/ocea/handouts/71%20-%20Differentiation%20Strategy%20101-%20Cubing%20a%20Lesson/cubing-Chrysanthemum2.doc

Differentiation Strategy 101: Cubing a lesson: http://www.cdeducation.org/ocea/handouts/71%20-%20Differentiation%20Strategy%20101-%20Cubing%20a%20Lesson/

Curriculum Compacting

"Curriculum Compacting Grades 3-5." Leon County Schools, 2011. Web. http://www.tandl.leon.k12.fl.us/lang/Elementary/Elmathcompact.html

Implementing Curriculum Compacting and Type III Studies to Reverse Underachievement. Neag Center for Gifted Education and Talent Development, 2010. Web.

http://www.gifted.uconn.edu/siegle/CurriculumCompacting/section0.html

Siegle, Del. "Curriculum Compacting: A Necessity for Academic Achievement." NRC-GT Newsletters Fall 1999.Neag Center for Gifted Education and Talent Development, 2010. Web.

http://www.gifted.uconn.edu/nrcgt/newsletter/fall99/fall996.html

Graphic Organizers

"Bubbl.us: Brainstorming Made Simple." n.p., n.d. Web. http://www.bubbl.us/ Create free concept maps.

"Graphic Organizers." EnchantedLearning.com, 2010. Web. http://www.enchantedlearning.com/graphicorganizers/

"Graphic Organizers." GoToScience.com. n.p., n.d. Web. http://gotoscience.com/Graphic_Organizers.html Large selection of printable graphic organizers

"Tools for Reading, Writing, and Thinking." Greece Central School

District, 2011. Web. http://www.greece.k12.ny.us/district.cfm?subpage=478

I-Search

"Definition of 'I-Search." *K-12 Teaching and Learning.* UNC School of Education, n.d. Web. http://www.learnnc.org/reference/l-search

"It's Ok to use 'I': The I-Search Process." *Hickory Elementary: the I-Search Process.* SchoolFusion.com, 2011. Web. http://avon-hickory.schoolfusion.us/modules/cms/pages.phtml?
pageid=18577&sessionid=0fb84214f37401c2132d46cee6f65f07>

"The I-Search Unit." *Make It Happen!* Education Development Center, 2000. Web. http://www2.edc.org/FSC/MIH/i-search.html

Examples of I-Search

Mrs. Turnbull: Best I-Searches of 2003

Web Inquiry Product Examples

Children of the Past and Present

An I-Search Project

Interest Centers

Differentiated Instruction: Interest centers:

http://www.eht.k12.nj.us/~jonesj/Differentiated%20Instruction/Learning%20Centers.htm

Bosch, Nancy. "A Differentiated Classroom." *A Different Place*. 2008. Web. http://adifferentplace.org/classroom.htm

Learning Contracts

"Differentiation Instruction Webinar Handouts. The Access Center, n.d. Web.

Elementary & Secondary learning contracts">http://www.k8accesscenter.org/online_community_area/DifferentiatedInstructionHandouts.asp>Elementary & Secondary learning contracts.

Differentiated Instruction: learning contracts

http://www.eht.k12.nj.us/~jonesj/Differentiated%20Instruction/Learning%20Contracts.htm

Working Conditions for learning contracts:

http://www.eht.k12.nj.us/~jonesj/Differentiated%20Instruction/Working%20Conditions.htm

Lesson Plans

- Online Differentiation lesson template: "Lesson Template." Leon County Schools, 2011. Web. http://www.tandl.leon.k12.fl.us/lang/Lessontemplate.html
- "Reading Lesson Plan: Biography." *T/TAC Online*. Virginia Department of Education, 2004. Web. http://www.ttaconline.org/d/sol/English/EnglishE_RLN31.doc
- "Science Standards and Learning: Enhanced Scope & Sequence for Biology." Virginia Department of Education, 2006. Web. http://www.pen.k12.va.us/VDOE/EnhancedSandS/
- "SOL Enhanced Scope and Sequence." *T/TAC Online.* T/TAC, n.d. Web. http://www.ttaconline.org/> Click on "SOL Enhanced to access the Scope and Sequence.
- Technology-based integration activities: "Curriculum-Based Technology Integration Activities." Baltimore County Public Schools, 2011. http://www.bcps.org/apps/CBTIA/

Multiple Intelligences

McAleer, Franny. "Differentiating Instruction." *Learners Link. n.p., 2011. Web.* http://www.learnerslink.com/curriculum.htm Link on Gardiner's Multiple Intelligences.

Smith, Grace and Stephanie Throne. "The Nine Intelligences." Everything DI. 2010. Web. http://www.everythingdi.net/mitech/nine.htm

Smith, Grace and Stephanie Throne. "Tech Connections with M.I." *Everything DI.* 2010. Web. http://www.everythingdi.net/mitech/techconnect.htm

Project-based Learning

Independent Study projects:

http://www.eht.k12.nj.us/~jonesj/Differentiated%20Instruction/Independent%20Projects.htm

Internet Project Registries and Collaborative Learning

- "Collaborative Projects." *The Center for Innovation in Engineering and Science Education.* Stevens Institute of Technology, 2008. Web. http://www.k12science.org/collabprojs.html
- Flat Stanley (literacy & communications:): The Original Flat Stanley Project. Flatter World Inc., 2011. Web. http://www.flatstanley.com/about.php
- "Global Grocery List." n.p., n.d. Web. http://landmark-project.com/ggl/index.html
- Global SchoolNet project registry: "Internet Projects Registry." Global School Net, 2011. Web. http://www.globalschoolnet.org/gsh/pr/
- "Harnassing the Power of the Web: a Tutorial for Collaborative Project-Based Learning." Global School Net, 2000. Web. http://www.gsn.org/web/
- James, Donald. "Welcome to NASA Quest." NASA, n.d. Web. http://quest.arc.nasa.gov/about/index.html
- "Journey North: A Global Study of Wildlife Migration and Seasonal Change." *Annenberg Learner*. Journey North, 2011. Web. http://www.learner.org/jnorth/>
- "Kidlink Project Center." *Kid Link*. Kidlink Systeam, 2011. Web. http://www.kidlink.org/english/general/snapshot.html
- "List of Internet Project Registries." Milwaukee Telecommunications Project. n.p., n.d. Web. http://www.uwm.edu/~caberg/Project%20Support%20Index/potprorg.html
- Monster Exchange:"Project Summary." *Monster Exchange*. Monster Exchange.org, 2011. Web. http://www.monsterexchange.org/about/about_msdescription.htm
- Mrs. Silverman's Webfolio: Instructional Technology Web Consultant. n.p., n.d., Web. http://www.kids-learn.org/
- "NationalMathTrail.org." n.p., n.d. Web. http://www.nationalmathtrail.org/
- Oracle Think Quest. Think Quest, 2011. Web. http://www.think.com/en_us/
- "Open Your Classroom to the World." *One World Classrooms*. One World Classrooms, Inc., 2010. Web. http://www.ccproject.org/schools.html
- "United Nations Global Learning and Teaching Project: CyberSchoolbus." *United Nations.* United Nations, 2011. Web. http://www.un.org/Pubs/CyberSchoolBus/

R.A.F.T.

- "R.A.F.T." Differentiated Instruction using Technology. Calcasieu Parish Technology Training Center, n.d. Web. http://www.cpsb.org/resources/cbt/CBT 06-07/station%20activites/RAFT high/description.htm>
- "R.A.F.T." *Instructional Strategies for Engaging Learners.* Guilford County Schools TF, 2002. Web. http://its.gcsnc.com/act/strategies/raft.htm
- "R.A.F.T.: Role, Audience, Format Topic." *Reading Strategies.* Greece Central School District, n.d. Web. http://www.greece.k12.ny.us/district.cfm?subpage=1247
- Rowan, Kelly Jo. "Glossary of Instructional Strategies." 2010. Web. http://www.beesburg.com/edtools/glossary.html

Come Aboard a R.A.F.T.

Examples of R.A.F.T.

R.A.F.T. Writing Strategy (middle and high school)

- "Desert Unit RAFT Choices." *Strategic Reading*. Somers Central School District, 2000. Web. http://www.somers.k12.ny.us/intranet/reading/desertassign.html
- "Examples of RAFT Assignments." Instructional Strategies for Engaging Learners. Guilford County Schools TF, 2002. http://its.gcsnc.com/act/strategies/RAFT.doc

http://www.writingfix.com/WAC?Writing Across Curriculum RAFTS Math.htm

- Kennedy, Thomasine. "What a Difference a Year Makes: Billy's Letter." *Beacon Lesson Plan Library.* Citrus County Schools. Beacon Learning Center, 2005. Web. http://www.beaconlearningcenter.com/Lessons/2267.htm For Grades 6-8.
- Vandervanter, Nancy. "Strategies for Reading Comprehension: RAFT Papers." Reading Quest Strategies. Raymond C. Jones and ReadingQuest.org, 2011. Web. http://www.readingquest.org/strat/raft.html

Resource List

Almarez, Carol. "Resource List for Differentiation with Technology." *Gardner Newman Middle School.* n. p., n.d. Web. <gnms.troup.k12.ga.us/Resource%20List%20for%20DWT.doc>

Scaffolding

http://www.eht.k12.nj.us/~jonesj/Differentiated%20Instruction/Scaffolding.htm

Student Products

Bosch, Nancy. "Products." A Different Place. Nancy Bosch, 2009. Web. http://adifferentplace.org/products.htm

Student product scoring guide: http://goal.learningpt.org/spsg/GetProd.asp

Product Choices chart:

http://www.ccs.bia.edu/ccs/High%20School/Horizons%20Web%20Page%20(no%20syllabary)/productchoices.htm

Tic-Tac-Toe/Choice boards/Menus

- "Choice Boards, Tic Tac Toe, Menu Boards." Central Bucks School District, 2011. Web.

 http://www1.cbsd.org/sites/teachers/middle/csikora/DI%20Handouts/Choice%20Boards%20Packet.pdf
- "Differentiated Instruction Webinar Handouts." *The Access Center.* WordPress, n.d. Web.

 http://www.k8accesscenter.org/online_community_area/DifferentiatedInstructionHandouts.asp

 Download "Think-Tac-Toe" or "Diner Menu."

Tic-Tac-Toe/Menu: http://www.eht.k12.nj.us/~jonesj/Differentiated%20Instruction/Tic-Tac-Toe.htm

Tiered Lessons

"Differentiated Instruction Webinar Handouts." *The Access Center.* WordPress, n.d. Web.

"> Click on "Tiered Activity" for 4th-6th grade persuasive essay.

McAleer, Franny. "Differentiating Instruction." *Learner's Link.* n.p., 2011. http://www.learnerslink.com/curriculum.htm
Tiering using multiple intelligences and Bloom's matrix (non fiction and fiction).

Nunley, Kathie. "Sample Layered Curriculum Units." Dr. Kathie Nunley's Website for Eductors. Kathie F. Nunley, 2005. Web. http://www.help4teachers.com/samples2.htm

Tiered lesson plan (Causes of the civil War): http://www.bsu.edu/web/jfmarron/tlpcauses.html

"Tiered Curriculum Project." *Indiana Department of Education.* n. p., n.d. Web. http://www.doe.state.in.us/exceptional/gt/tiered_curriculum/welcome.html

"Tiered Lesson Plan: Maps-- 1st Grade." Web. http://tinyurl.com/2n5bj7

"Tiered Lesson Plan: Matter--5th Grade." *Department of Curriculum and Instruction.* Antioch School District, n.d. Web. http://staff.antioch34.com/BAnderson/Differentiation/Grade%205/Tiered%20Matter %20Lesson.doc>

Webquests/Web D.I.G.s

All About Explorers WebQuest. AllAboutExplorers.com, 2011. Web. http://www.allaboutexplorers.com/index.html

Dodge, Bernie. "A WebQuest About WebQuests for Elementary Teachers." Internet4Classrooms, 2009. Web. http://www.internet4classrooms.com/wq_wq.htm

- ---. Webquests.org. Bernie Dodge, PhD., 2007. Web. http://webquest.org/index.php>
- Web D.I.G.s: Standards-Based Internet Project. Seaford School District, 2004. Web. http://www.seaford.k12.de.us/webdigs/
- "WebQuest." Internet4Classrooms, 1999. Web. http://www.internet4classrooms.com/lesson-template.htm Lesson template for Web Quest assignment.

Simple Machines Webquest: http://www.rockwood.k12.mo.us/crestview/Hatch/simpleMachinesWebQ.htm