

Through a range of instructional and management strategies, such as:

Multiple Intelligences	Tiered Lessons	4-MAT
"Jigsaw" Activities	Tiered Centers	Varied Questioning
Taped Material	Tiered Products	Strategies
Anchor Activities	Learning Contracts	Interest Centers
Varying Organizers	Small Group Instruction	Interest Groups
Varied Texts	Group Investigation Orbitals	Varied Homework
Varied Supplemental Materials	Independent Study	Compacting
Literature Circles	,	Varied Journal Prompts
		Complex Instruction

Source: Tomlinson, C. A. (1995). *How to differentiate instruction in mixed-ability classrooms*. Alexandria, VA: Association for Supervision and Curriculum Development.

Ways to Differentiate Content

- Reading partners/Reading buddles
 - o Read/summarize
 - Read/question/answer
 - o Visual organizer/summarizer
 - Parallel reading with teacher prompt
- Choral reading/Antiphonal reading
- Flipbooks
- New American lecture
- Split Journals (double-entry/triple-entry)
- · Books on tape
- · Highlights on tape
- Digests/"Cliff Notes"
- Note taking organizers
- Varied texts
- · Varied supplementary materials
- Highlighted texts
- Think-Pair-Share/Preview-Midview-Postview

Source: Tomlinson, C. A. (2000, September). Reconcilable differences: Standards-based teaching and differentiation. *Educational Leadership*, *58*(1), 6-11.

A Few Roads to a Differentiated Classroom

Readiness	Interest	Learning Profile	
Varied texts	Exploratory studies Vary teacher presentat		
Varied supplementary	Concepts/principles through	 Auditory 	
materials	lens of interest	 Visual 	
Varied scaffolding	Entry points	 Kinesthetic 	
 Reading 	Open student choice	 Whole-to-part 	
 Writing 	Independent study	 Part-to-whole 	
 Research 	Orbitals	Vary student mode of	
 Technology 	Design-a-day	expression	
Tiered tasks	I-searches	 Gardner's 8+ 	
Tiered products	Mentorships	 Sternberg's 3 	
Flexible time use	Group investigation	Working choice arrangements	
Small group instruction	Interest groups	4-MAT	
Homework options	Interest centers	Flexible environment	
Tiered or scaffolded	Negotiated criteria	Complex instruction	
assessment	Selecting audiences	Multiple modes of assessment	
Compacting		Organizers	
Mentorships		Varied approaches to	
Negotiated criteria		organizing ideas and	
Varied organizers		information	

Keep adding . . .

Source: Tomlinson, C. A. (1999). *The differentiated classroom: Responding to the needs of all learners*. Alexandria, VA: Association for Supervision and Curriculum Development.

The Teacher Attends to Student Differences

In differentiated classrooms, the teacher is well aware that human beings share the same basic needs for nourishment, shelter, safety, belonging, achievement, contribution, and fulfillment. She also knows that human beings find those things in different fields of endeavor and according to different timetables. By attending to human differences she can best help individuals address their common needs. Our experiences, culture, gender, genetic codes, and neurological wiring all affect how and what we learn. In a differentiated classroom, the teacher unconditionally accepts students as they are and she expects them to become all they can be.

Source: Tomlinson, C. A. (1999). *The differentiated classroom: Responding to the needs of all learners*. Alexandria, VA: Association for Supervision and Curriculum Development.

Principles That Govern Effective Differentiation

- > A differentiated classroom is flexible.
- Differentiation of instruction stems from effective and ongoing assessment of learner needs.
- Flexible grouping helps ensure student access to a wide variety of learning opportunities and working arrangements.
- All students consistently work with "respectful" activities and learning arrangements.
- Students and teachers are collaborators in learning.

Source: Tomlinson, C. A. & Allan, S. (2000). *Leadership for differentiating schools and classrooms*. Alexandria, VA: Association for Supervision and Curriculum Development.

Beliefs About Teaching and Learning

- Human beings share common feelings and needs, and schools should help us understand and respect those commonalities.
- Individuals also differ significantly as learners; these differences matter in the classroom, and schools should help us to understand and respect the differences.
- > Intelligence is dynamic rather than static, plural rather than singular.
- Human capacity is malleable, and the art of teaching is the art of maximizing human capacity; a central goal of schools ought to be maximizing the capacity of each learner.
- We probably underestimate the capacity of every child as a learner.
- Students should be at the center of the learning process, actively involved in making sense of the world around them through the lenses we call "the disciplines."

- All learners require respectful, powerful, and engaging schoolwork to develop their individual capacities so that they become fulfilled and productive members of society.
- A major emphasis in learner development is self-competition for growth and progress.
- > Teachers and other adults need to help learners accept responsibility for their own growth and progress.
- Individuals and society benefit when schools and classrooms are genuine communities of respect and learning.
- Effective heterogeneous classrooms are essential to building community in our schools.
- Effective heterogeneous classrooms are powerful venues because most students spend most of their school time in such classrooms.
- ➤ All effective heterogeneous classrooms recognize the similarities and differences in learners and robustly attend to them.
- Excellent differentiated classrooms are excellent first and differentiated second.

Source: Tomlinson, C. A. & Allan, S. (2000). *Leadership for differentiating schools and classrooms*. Alexandria, VA: Association for Supervision and Curriculum Development.

Guidelines for Planning Differentiated Instruction

(Use portions applicable to your teaching/learning needs.)

- 1. Are you clear on what you want the student to
 - Know (facts, information).
 - Understand (principles, generalizations, ideas), and
 - > Be able to do as a result of this/these learning experience(s)?
- 2. In deciding on content, have you thought about and selected
 - > Alternate sources/resources,
 - Varied support systems (reading buddies, tape recordings, digests, direct instruction groups, organizers, extenders), and
 - Varied pacing plans?
- 3. Have you made plans to pre-assess student readiness so you can make appropriate content or activity assignments? Does the pre-assessment give a picture of understanding and skill versus facts only? Does the pre-assessment focus squarely on items in number one above?
- 4. As you assign students to groups or tasks, have you made certain that
 - > All of them call for high level thinking?
 - > All of them appear to be of about equal interest to your learners?
 - > If readiness-based, they vary along the continua of the equalizer?
 - If interest based, students have choices to make about how to apply skills and understandings or how to express them?

- There are opportunities for varied modes of learning to accommodate varied learning profiles?
- Each activity focuses squarely on one (or a very few) key concepts and generalizations?
- Each activity requires all students to make sense of (own) the key concept(s)/generalization(s)?
- Student choice is maximized within teacher-generated parameters needed for focus and growth?
- > Appropriate skills have been integrated into the activity requirements?
- > Expectations for high-quality task completion are clearly delineated for students?
- > You have a plan for gathering ongoing assessment data from the activity?
- You have a plan/mechanism for bringing closure and clarity to the tasks?
- 5. When creating assignments for differentiated products, have you made certain that
 - > They vary along the continua of the equalizer-based student readiness?
 - They require all students to use the key concepts, generalizations, ideas, and skills to solve problems, extend understandings, and create meaningful products?
 - They maximize student choice options within parameters necessary to demonstrate essential understandings and skills?
 - They include a core of clearly delineated and appropriately challenging expectations for the content of the product (what understandings and skills it must demonstrate, what sorts of resources must be used, etc.), processes involved in production (planning, goal setting, time line use, use of a process log, self-evaluation, drafts/stages, etc.), and production requirements for the product (what will constitute an effective video or speech or proposal or photo essay, etc.)?
 - > They provide for additional criteria for success to be added by the student, and by the teacher for individual students?
 - > There are plans for formative evaluation and modification of the product?
 - There are plans for summative evaluation by the teacher, student, peers, and others (e.g., parents, real audience) based on the product criteria?
 - You have involved or informed parents as appropriate?
- 6. Have you also thought about
 - Use of instructional strategies such as contracts, centers, interest groups, compacting, etc., which might help you vary learning options?
 - Use of small groups for direct instruction (re-teaching, extension)?
 - Sampling students to assess understanding, group processes, and production needs?
 - Meaningful tasks for reinforcement, extension, and exploration when students complete required work?

Source: Tomlinson, C. A. (1995). *How to differentiate instruction in mixed-ability classrooms.* Alexandria, VA: Association for Supervision and Curriculum Development.

WHAT DIFFERENTIATION IS

- PRODUCTIVE THINKING
- APPLYING AND ASSOCIATING LEARNING TO TOHER AREAS
- LEARNING CONCEPTS AND MAKING GENERALIZATIONS
- COMPLEX THINKING
- STUDENT-DETERMINED READINESS
- EXTENDING OR REPLACING TRADTIONAL LEARNING EXPERIENCES
- INTERRELATING INFORMATION THAT HAS ALREADY BEEN LEARNED
- CRITICALLY EVALUATING DATA
- STIMULATING AND ENCOURAGING TALENT DEVELOPMENT
- PROBLEM SEEKING

WHAT DIFFERENTIATION IS NOT

- REPRODUCTIVE THINKING
- ACCUMULATING AND REGURGITATING INFORMATION IN ONE AREA
- LEARNING FACTS
- HARDER WORK
- GRADE OR AGE LEVEL EXPECTATIONS
- SIMPLE INCREASING THE WORK LOAD
- SEPARATE ENTITY LEARNING
- ACCEPTING ALL DATA
- IGNORING TALENT DEVELOPMENT BY NOT PROVIDING AVENUES FOR IT
- ANSWERING QUESTIONS

Differentiated Classrooms

Comparing Classrooms				
Traditional Classroom	Differentiated Classroom			
Student differences are masked or acted upon when problematic.	Student differences are studied as a basis for planning.			
2. Assessment is most common at the end of learning to see "who got it."	 Assessment is ongoing and diagnostic to understand how to make instruction more responsive to learner need. 			
3. A relatively narrow sense of intelligence prevails.	 Focus on multiple forms of intelligences is evident. 			
4. A single definition of excellent exists.	 Excellence is defined in large measure by individual growth from a starting point. 			
5. Student interest in infrequently tapped.	 Students are frequently guided in making interest-based learning choice 			
6. Relatively few learning profile options are taken into account.	Many learning profile options are provided for.			
7. Whole-class instruction dominates.	7. Many instructional arrangements are used.			
8. Coverage of texts and curriculum guides drives instruction.	 Student readiness, interest, and learning profile shape instruction. 			
Mastery of facts and skills out-of- content are focus of learning.	 Use of essential skills to make sense of understand key concepts and principle is the focus of learning. 			
10. Single option assignments are the norm.	10. Multi-option assignments are frequently used.			
11. Time is relatively inflexible.	 Time is used flexibly in accordance with student need. 			
12. A single text prevails.	12. Multiple materials are provided.			
13. Single interpretations of ideas and events may be sought.	Multiple perspectives on ideas and events are routinely sought.			
14. The teacher directs student behavior.	14. The teacher facilitates students' skills becoming more self-reliant learners.			
15. The teacher solves problems.	15. Students help other students and the teacher to solve problems.			
16. The teacher provides whole-class standards for grading.	16. Students work with the teacher to establish both whole-class and individual learning goals.			
17. A single form of assessment is often used.	17. Students are assessed in multiple ways			

Source: The Differentiated Classroom: Responding to the Needs of All Learners, page 16.

STRATEGIES FOR MANAGING A DIFFERENTIATED CLASSROOM

- Being differentiating at a pace that is comfortable for the teacher.
- Have a strong rationale for differentiating instruction based on student readiness and interest.
- Time differentiated activities for student success.
- Use an "anchor activity" to free the teacher to focus attention on the student.
- Create and deliver instructions carefully.
- Have a "home base" within the classroom for students.
- Be sure that students have a plan for getting help when the teacher is busy with another student or a group.
- Give the students as much responsibility for their learning as possible.
- Encourage students to talk about classroom procedures and group processes.
- Use flexible grouping.

Tomlinson. Carol A. How to Differentiate Instruction in Mixed Ability Classrooms.

Alexandria. Virginia: Association for Supervision and Curriculum development, 1995

Anchor Activities

I'm done. Now what?

What are anchor activities?

- specified ongoing activities on which students work independently
- ongoing assignments that students can work on throughout a unit
- self-directed
- · include aspects that can be completed on an ongoing basis
- relate to the concepts and the content being learned
- · engaging, meaningful tasks, not busywork or packets of worksheets
- activities that everyone in the class will have a chance to do

Why use anchor activities?

- provide a strategy for teachers to deal with "ragged time" when students complete work at different times
- they allow the teacher to work with individual students or groups
- · provides ongoing activities that relate to the content of the unit
- provide differentiation due to student choice of activities (DI Bingo)
- allow the teacher to develop independent group work strategies in order to incorporate a mini lab of computers in classroom

When are anchor activities used?

- · to begin the day
- · when students complete an assignment
- · when students are stuck and waiting for help

How can I assess anchor activities?

Help students to take responsibility for their roles in classroom routines. Clear expectations, rationale for expectations and student self evaluation are integral to developing classroom procedures and student ownership within the learning environment.

How can I assess individual anchor activity work?

- Ongoing anecdotal records and checklists
- · Student conferences for evaluation and goal setting
- Learning journals
- Learning Contracts
- Student portfolios
- Rubrics
- Random checks
- Peer review

How can I manage the classroom?

"The brain seeks to make order out of chaos....You can establish patterns of
appropriate behavior and systems for doing things in a classroom... Confusion and
frustration will be reduced as the brain feels secure in knowing and detecting the
pattern for appropriate behavior." "Begin with the Brain" Martha Kaufeldt, 1999

- Post a daily or weekly AGENDA
- Create simple PROCEDURES for the expected behaviors on how things are to be done in the classroom
- Guide students to create personal GOALS for themselves.
- Establish routines, rituals, celebrations
- Practice

Anchor Activities

Language Arts	Math
Silent Reading	Create test questions/Story problems
Journaling	 Do "Problems of the Week"
Guinness Book Scavenger Hunt	 Create a folder of review activities
Brain Quest	 Create a folder of problem solving activities
 Respond to the <u>quote of the day</u>. 	Puzzles and math games
Create own Brain Quest questions	Create math games
 Word analogy games and puzzles 	Manipulatives
Word Wall Bulletin Board	Magazines (Have kids connect articles to math)
Free computer time	Extended activities/Module project
 Fluency tests 	Math journal writing
 Write Jingles – to help recall content 	Research a math topic
Create Magnetic Poetry	Computer programs
 Mad-gabs or Mad-libs 	Practice budgeting (holiday shopping, check book,
 Word Sorts (Parts of Speech) 	weekly allowance)
 Sentence sequencing 	Review electric bills/water bills from the last three
 Check out and read a biography about the life of 	months. Find an average amount spent for the
someone you are interested in learning about. Then,	three months. Think of a list of ways we might be
prepare a short biography in your own words to share	able to reduce the amount of energy or water we
with the class.	use to save money and resources.
 Write a letter to the author of a book you've enjoyed. 	Research calendars or other time-keeping devices.
 Create a best-seller list for your ten favorite books! 	Find out when and by whom they were first used.
 Compare and contrast two books by the same author. 	Research money and bartering systems. Work to
 Find two works that could be apired together. (a 	discover where and when these systems
nonfiction book about WWII and a poem about WWII)	originated.
• Compare and contrast two books from the same genre	• Find out the names and values of at least 5
(i.e.: fiction, biography,	different types of foreign currency. Be sure to tell where the currencies come from and what
mystery, realistic fiction, humorous, etc).	denominations they come in.
 Forecast the sales of a new book in a series or by a certain author. Justify your sales forecast. 	Imagine a trip you'd really like to take. With
Rewrite the ending of a book you've read and make it	permission from your teacher, visit a travel
end a different way.	website (such as travelocity.com) and check on
Create an original dialogue between two characters	available plane tickets and lodgings. Add up the
from a book you've read.	total amount it would cost you to take the trip.
nom a book you ve read.	How could you get the best deal?
	 Plan a road trip across the U.S. stopping by at least
	5 famous landmarks. Use a map/map scale to
	measure distances. Then, add up the total amount
	of mileage the entire trip (round trip) would take.
	Decide how many days you'd be gone and
	calculate the cost of gas, motel rooms, and meals
	for a family of four. What would the total cost of

	the twin he?
	the trip be?
Social Studies	Science
 Create vocabulary flash cards Map activities Board games Create brochures guides Summarize chapters in FUN ways (TV Guide) Independent reading (Historical Fiction) Create a mini-activity menu Create a crossword puzzle Journal Write a song to help you learn Brain Teasers Design a monument Create a play or skit Write a biography about your historic hero Choose an important event that took place in U.S. or world history (example: the first atomic bomb explosion during WWII). Explain how science advancements at the time made the event possible. Choose an important individual from some part of U. or world history. Then, write a first-hand journal entr that might have been written by him/her during that time period. Find similarities and differences between two events that took place at different times in history. You may want to illustrate the comparisons with a Venn diagram. Critique a political leader's "platform" on a debatable issue in current events. Create an imaginary continent. Then, draw and name the countries on thatcontinent. Be sure to include borders, capital cities, etc. Then, write about one of the countries. Explain its government, culture, and laws. List the populations of 8-10 countries in order from greatest to smallest. Explain why you think the populations are the way they are. Brainstorm ways you could've contributed to your family's well-being during the depression if you lived during that time. Research a famous entrepreneur of the "gilded age." Find out how he/she earned a fortune and what he/she did with it. Find an interesting book written during a particular period in history. Explain how this book might've had an impact on how people thought about issues during that time period. Come up with a "get rich quick" scheme you could've 	 Mini-lab centers Science "Question of the Week" Learning log Read science articles Create a mini-experiment Science puzzles and games Draw vocabulary pictures Create a review game Act out vocabulary Add to "Science in the News" board Write content songs Add illustrated words to the word wall Add to class timeline Write scientist biographies Write a letter to a member of the government about an environmental issue we've talked about in class. Write a letter to a famous scientist or person who has contributed to science. Be sure to include questions you'd really like this person to answer for you. Come up with a list of new "essential questions" you'd like to have answered about our unit of study (or future units from our web). Create a perfect "habitat" for an animal of your choice. Use any format you'd like to illustrate your habitat. Write an experiment you could conduct to teach others about a science concept you've learned in
used during the "roaring twenties" to make your fortune. Write a business plan.	
Miscellaneous	Individual Inquiry
Games and puzzles	Computer Search
Reading	Novel/Short Story Writing
Logic Activities	Research project

 Analogy Activities Mapping Graphing Computer Time Music/Art	 Life Plan project Social action project Career Planning Hobby or Passion Physical Education
 Play piano with headphones Create new rhythm pattern Read "Music Alive" or Art Articles Create rap or song or visual mnemonic for another content area Create a new melody (choose instrument) Research favorite music or art, musician or artist 	 Practice sports drills Walk or jog Do stretches Yoga or aerobics Research a PE or health topic Meditate

Anchor Activity Planning and Implementation

Indicators and Outcomes: Have all the skills and/or concepts been taught previously?

Name and description of Anchor Activity:

Differentiation of Anchor: How will you make it respectful of each ability level/ learning profile in the class?

Instructional Task: What do you have to do so all students can work on the anchor independently?

Materials needed: What will students need? Where will the materials be?

Management and Monitoring

Expectations: When do you expect students to work on this?

Due date: How much time do you want it to take? Will there be checkpoint due dates along the way?

Points and/or rubric: What is the activity worth as a grade? Do you want to grade them or just give credit?

Accountability: What's collected? Where does finished work go? What is checked by the teacher? the students?

Additional Implementation Suggestions:

- · Go over the entire anchor activity with the class.
- Model all of the games.
- If you are using contracts, go over the contract with everyone and make sure they all understand the expectations.
- Hand out rubrics and review them.
- Point out where materials will be kept.
- Be clear on expectations.
- Review management strategies with the class so they know what to do if they have a
 question and you're busy.
- Let students know if any of the activities can be done at home or if they're all meant to

be done in class.

Sample Generic Rubric

4	Exceeds the requirements (ex: does more than the minimum number of constructions), more creativity displayed, understanding of concept demonstrated at a deeper level
3	Meets all requirements of task, all mathematics is accurate, understanding of the concept is demonstrated, creativity is demonstrated
2	Most of the requirement is accurate, understanding of concepts partially developed, some or little creativity displayed
1	Some or little requirements correct, understanding of concept poorly developed, little or no creativity

Title:Name	
Name I will complete the following activities:	Activity Completed
Check point due dates Due date signatures	
FINAL DUE DATE	
student signature parer	nt signature
teacher signature	

Sources:

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file:///E:/Strategies%20Materials%20for%20Participants/Anchor%20Activities/anchoractivities.htm http://curry.edschool.virginia.edu/files/nagc_anchor_activities.pdf http://www.webster.k12.mo.us/education/components/docmgr/default.php?sectiondetailid=40844 http://www.beginwiththebrain.com/resources/I_M%20DONE_NOW_WHAT_ASCD_07_comp.pdf

Directions: Reassemble the following syllables into words.

Theme of the puzzle: Government

•	a	•	i	•	ra
•	ate	•	i	•	ral
•	ate	•	i	•	re
•	au	•	i	•	re
•	cab	•	is	•	re
•	cap	•	jor	•	ref
•	cial	•	ju	•	rep
•	con	•	la	•	ry
•	con	•	lec	•	scite
•	chy	•	lect	•	sec
•	су	•	leg	•	sen
•	су	•	lia	•	sen
•	dem	•	li	•	sti
•	dent	•	lic	•	ta
•	di	•	ma	•	ta
•	dum	•	mend	•	tal
•	e	•	ment	•	tion
•	e	•	ment	•	tive
•	en	•	ment	•	tive
•	er	•	mi	•	tive
•	ern	•	net	•	toc
•	ern	•	nor	•	Tol
•	ec	•	0	•	tu
•	ex	•	ос	•	ty
•	gar	•	or	•	ty
•	gov	•	or	•	ty
•	gov	•	par	•	ty
•	gress	•	par	•	u
•	İ	•	pleb		
	i	•	plu		
	İ	•	pres		
•	i	•	pub		
		•	ra		

- amendment
- autocracy
- cabinet
- capital
- capitol
- congress
- constitution
- democracy
- election
- electorate
- executive
- government
- governor
- judicial
- legislative
- majority
- minority
- oligarchy
- parliament
- party
- plebiscite
- plurality
- president
- referendum
- representative
- republic
- secretary
- senate

Flexible Grouping Options

In a differentiated classroom, teachers will often design tasks for students based on their judgment of students readiness for and interest in those tasks. At such times, the instructor will most likely want students to discuss quickly an idea with a nearby ask or reassigned thinking partner. Or, it may be more convenient to have students work with others at their table. Often, students can select their task partners or they may prefer to work alone. Using a wide variety of groupings with different task conditions. This flexibility keeps students from feeling that they are "pegged" into a given classroom niche. (1)

Of course, how a teacher groups students has a lot to do with the individual's own teaching style. There are at least five instructional styles that have been identified among teachers:

- Command Style-This is commonly employed by teachers at any grade level. In the command style, the teacher controls almost all of the decision-making that takes place, and the students merely offer responses at the proper time.
- Pupil-Teacher Contract Style-As the name suggests, the classroom teacher plans individual contracts or learning agreements cooperatively with the students. This style allows more one-on-one interaction and can incorporate the use of many differentiation tools.
- Task style-Here, the teacher begins to provide choices for students and to
 organize the classroom so that several different activities may be occurring
 simultaneously. This teacher might employ the use of learning centers, tiered
 assignments, and other appropriate tools that differentiate instructions.
- Peer Partner Style-This instructional style involves helping students work with each other to learn specific skills in one or more subject areas. The teacher must identify compatible pairs of students so that one member of the pair is strong in a particular skill and the other needs assistance.
- Self-directed Style- This style is the culmination of the transition from command instruction to independent, self-directed learning. The teacher can assume this style when the students begin to initiate plans for their own learning.

Based upon these teaching styles, the following possibilities exist for grouping students within a given classroom:

- Group according to common student interests.
- Group to facilitate peer tutoring.
- Group according to student readiness for a particular task.
- Group randomly for cooperative learning.
- Group to divide the content into workable smaller segments.
- Gather all students for whole group instructions.
- Group by allowing students to choose their own group.
- Avoid the use of groups entirely, and allow each student to work independently.

Regardless of the type of grouping chosen, it is always helpful to select a facilitator and recorder for each group. This will further the progress of the group and free the teacher's time to move among all the groups during a given class period. (2)

Strategies and Activities that Assist with Process Differentiation

Pass the Word - Students form a circle. The teacher chooses a category and asks students to think of four words that could fit into that category. Students hand the ball to the person on their right. As the ball is passed around the circle to a student, he/she calls out a word to fit the category. NOTE: the last person to receive the ball has the hardest job because he/she cannot repeat any words that have been previously spoken. The activity is timed to determine how long it takes the class to complete passing the ball around the circle. If a student has trouble voicing a word that has not already been called, the person on either side may help him/her.

Variation #1 - A verbal student steps into the middle of the circle. He/she calls out as many words as possible to fit the category while the class acts as a timer, quickly passing the ball completely around the circle. The

number of responses is counted by another student or the teacher.

Variation #2 - A student controls the ball by standing in the middle. This student randomly tosses the ball to anyone in the circle. When the person in the circle catches the ball, he/she calls out a word in the category. The ball is then thrown back to the student in the center who generates another word and throws the ball to a new person in the circle. The student in the center generates every other response.

Variation #3 - Paired association

Expert Game - two or more participants - Two students assume the role of experts and speak to the audience by alternating one word at a time between them. They are experts in a field chosen by the audience or teacher. The students then answer questions in that field posed by the audience, speaking alternately one word at a time.

Vocabulary Variation - Vocab Master - Three to five students create a sentence correctly using the given vocabulary word. The sentence is formed by

each student contributing one word at a time.

Mathematics Variation - Math Roulette or Math All Around - This is a timed activity with teams of five students. Each team is given 5 basic math facts. They must state the problem and its answer, with each student only offering one word of the problem. Student 5 always gives the answer. As soon as the answer is given, Student 5 runs down and becomes Student 1. In this way, all students will give one of the answers. If the answer is incorrect, another team member may call "time out". The team huddles and the correct answer is given to the person who gave the incorrect number. The team must then restate the problem correctly. Each team is timed as to how long it takes to work through five problems, including the team outs. The team with the lowest time wins.

Value Lines. Students line up according to where they stand on a given value issue. For example, "Do you agree or disagree with school uniforms?" Students who feel strongly either way line up at the poles and then discuss their feelings with a person next to them. To engage students in the middle, who don't have strong opinions, try the **Split and Slide** variation.

Traveling Heads Together. This is a good way to stimulate movement in the room and help those wallflower, quiet students get something to talk about. Group students and assign numbers to each student based on the number of people in the groups. Thus, for a group of four, students in the class would all be assigned a number-- either one, two, three, or four. The teacher asks a question. Students then put their heads together to make sure everyone knows the answer or has an idea to share. The teacher then calls a number. Students with the corresponding number travel to a new team to share their answers.

Find My Rule. This type of activity promotes inductive thinking skills. The teacher presents to the class many items that follow a rule. It is up to the students to induce the rule. The teacher can place items in a Venn diagram, or simply place items in two different boxes. Thus, for example, if the rule is symmetry, the teacher would place symmetrical shapes in one box and non symmetrical shapes in another. If a team or student thinks that they know the rule, they are allowed to suggest further examples of items for each box which helps other teams see examples of the rule.

Find the Fib. This is a nice alternative to help students test their knowledge about any given topic. Students write three statements: two true and one that is false, but plausible. They then share their statements, challenging others to decide which is the false item. Students can also use cards with FIB written on them. They hold these up when they hear the inaccurate statements. This allows the teacher to see by means of a signal who understands and who does not.

Who Am I? Students attempt to identify their secret identity (a card with the key word written on it taped on their back) by circulating around the room and asking yes/no questions of classmates. They are allowed to ask three questions per classmate, or unlimited questions until they receive a no response. They then move to find another classmate. When the student has guessed who he/she is, they then become a consultant to give clues to those who do not yet know their own identity.

Lyrical Lessons. An old standby. Students create songs based on familiar tunes to help record and recall key pieces of information. Students should first brainstorm key concepts or ideas, phrases or words that are particular to the unit of study at hand. Then students try to place these phrases into popular tunes.

Team Chants. This is a nice addition to Kinesthetic Symbols. Students work in small groups to create team chants which express key words or concepts of a given unit of study. They can add rhythm to their chant by

adding stomping or clapping or other movements.

Formations. This is a variation of Kinesthetic Symbols. In this case, the teacher presents the class or teams with a challenge. For example, "Show me the meaning of entropy." Or "Show me the function of the cell nucleus." Students then work together to create a scene/body sculpture that demonstrates their understanding. Try doing the activity within a given time limit or try having groups compete for speed. Follow-up questions and explanations from the students help to reinforce key concepts of the original command.

Inside/Outside Circle. Divide the class in half. One half becomes the interior of a circle, the other half the exterior. Students inside then face those on the outside. The teacher announces a topic or asks a question. Students talk to one another about the answer. One of the circles then rotates for a new question so that students are partnered with a new classmate.

Team-Pair-Solo. A good way to mix up guided practice. Students solve a problem or complete a task first as a team of four. Then the team splits in half and both pairs work on a similar problem. If they have questions, they can consult with the other pair on their team. Finally, students work on a similar problem independently or solo.

Paraphrase Passport. Useful for encouraging active listening and furthering discussion in larger group settings. Before a student may contribute to the discussion, he or she must first paraphrase what the student said who spoke before: "You feel that school uniforms are a violation of a person's freedom to express himself."

Talking Chips. Great for small group discussion. Each student has an equal number of "talking chips" (cheap poker chips from the Dollar Store work well). Students place their chip in the center of the table each time they speak. They can speak in any order, but they may not speak again until everyone has placed a first chip in the center. (Variation: Hand out different colored chips so that each member of the group has his/her own color. DON'T worry about the above rule that everyone must first contribute a chip before taking a second turn at talking. Let discussion proceed for a given time limit and then have students check their piles. This will help students monitor who did a lot of the talking.)

Blackboard Share. As students are generating ideas in teams, if they have an idea, or even a question perhaps, to share with the class, one student goes to the board to post his or her team's idea/questions. There may be

several students posting ideas at the same time. If a second idea is generated by the team and it is not yet posted, a second team member goes to the board to post it. This technique allows groups to work in teams while still also offering items that might later be useful fodder for larger classroom discussion.

Carousel Review. Review topics are posted on chart paper in various spots around the room. Each team stands by a chart and is given a minute to discuss the topic. They then are given another minute to record on the chart paper the most pertinent items discussed. Time is called and the team moves to the next review topic station. They are given one minute to read items recorded by the team who was at that station before. They then begin discussion of the review topic so that they can add new ideas to the list. Rotation continues until teams have visited, read, and contributed to all review topics.

Newspaper Vignettes - 4 or more participants - Students stand in line, shoulder to shoulder, facing the audience. The audience creates an interesting newspaper headline. Two students then step out from the line and briefly start a scene that the headline suggests. It is necessary only to start the scene, not to develop it fully. Once the scene is suggested, they step back into line and two other students must step out to do the same thing. Students take turns stepping in and out of line-- not in any particular order but simply as ideas for brief scenes come to them. For example: If the headline is "Local man wins one million dollars in lottery", two students may step out and quickly create a scene of the man collecting his check with his wife at his side; two other students may decide to create a scene of the man being interviewed by a reporter; yet another scene may be of two people watching as the lucky numbers are drawn on television.

Cubing. This strategy is a wonderful way to structure review or discussion. Take two mug boxes and wrap them in laminated white paper. Now you can write on the face of each cube with an overhead pen. To review larger units of instruction, first have students brainstorm a list of subtopics within that unit of study. Choose six of these and write them on the faces of one of the cubes. Next, as teacher, select six formats for presenting information. (Hint: see associated RAFT sheets for product choices.) Write these on the faces of the second cube. Students role each cube. They review the material of the given subtopic from Cube One using the format described by the roll of Cube Two.

Furthermore, students themselves can create questions for one another in a review-type setting by having Cube One represent these question starters: WHAT, WHERE/WHEN, WHICH, WHY, WHO, and HOW. Cube Two contains the following verbs: IS, DID, CAN, WOULD, WILL, and MIGHT. The resulting rolls of each cube create 36 question prompts that span the range of thinking and questioning: How might? Who is? What did? The students can use these to generate and answer their own questions about any content.

Strategies to Increase Student Talk

Structured Think-Pair-Share - Class is divided into partner groups. The most verbal of the two is designated Person A and the other becomes Person B. Present the content and/or question to be discussed. Person A talks for one minute (shorter for primary students), discussing the content/question. Person B only listens and cannot speak during the minute. At the end of a minute, Person B will respond and talk for a minute, using one of the following response starters: "I really liked what you said about..." or "What you said reminds me of..." or "Another way to look at this is..." or "Here's what I heard you say..."

Fortunately/Unfortunately - This can be a whole class, small group, or partner activity. The content/story/question is discussed alternately using the words "fortunately" and "unfortunately" to begin each individual response.

Alphabetically Speaking - This can be a whole class, small group, or partner activity. The content/story/question is discussed by beginning the first word of the response with the next consecutive letter of the alphabet.

Round Robin is a simple turn-taking strategy for talking. Think of this as Think-Pair-Share turned up a notch. In teams (4 is a good number), one student shares his thoughts with teammates, and then the next student shares. Sharing may go one round with longer discussion topics, or even many rounds in order to create a verbal list of short answers. Variations of this exist, as they do in Think-Pair-Share strategies.

Think-Write-Robin. Students are given a discussion topic and then some time to write about their ideas. (They might also be given something to listen to first-- or read, or view, touch/handle.) Allowing this combination of think time and stimulus gives students a chance to articulate their thoughts before they are asked to share them.

Thinkpad Brainstorming. A variation of Think-Write-Robin, announce a topic and then give students just a short time to write a few ideas on slips of paper. All the ideas can then be collected and a category system can be devised to sort the ideas and further examine them.

Sages Share. An extension of Thinkpad Brainstorming. Post the ideas generated during the Thinkpad session and have students initial the slips of

paper which contain topics they feel they can explain to others. Other classmates then take turns interviewing these "sages." This works well for review of events, main ideas, principles, and algorithms.

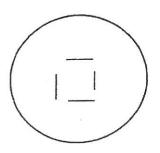
A-Z Brainstorming. Students write the letters A through Z vertically down the left-hand side of a piece of paper. In teams, or alone, the first student thinks of/brainstorms a word or idea that starts with A about that theme or topic. The next student comes up with a B idea.

Round Table. Students pass around a sheet of paper and a writing utensil. As each gets the paper, he or she reads previous responses and adds to one or adds a different idea. Increase the amount of contribution by having students pass around four sheets simultaneously.

Think-Pair-Square. This variation of Think-Pair-Share simply ups the opportunities students have to share thoughts with other people. Pairs join another pair. (Determine who is a "face" partner and who is a "shoulder" partner.) Students can discuss a topic in Think-Pair-Share format with their face partner and then turn to their shoulder partner for further conversation.

Pairs Compare. Students work in pairs to generate a list of ideas. Pairs then pair up and compare their lists. These groups of four can use a Venn diagram or some other sorting device to analyze their results. Furthermore, they can then see if, as a larger group, they can add even more new items to the original lists.

Kiva. Students sit in a large circle, with four chairs placed in the center as shown below. Discussion questions have been prepared, based upon the current unit of study. Four students are selected to leave the large circle and



sit in the center chairs. One student is given the question or topic to read and the four students in the center begin discussing. When a student in the outer circle wants to add to the discussion, he/she enters the center, taps one of the four on the shoulder, and takes that student's place. The teacher can hand new questions as needed to students in the outer circle, who then enter and read the new topic. The class can be told how

many questions will make up the day's Kiva discussion and that each student must take at least one turn in the center. Reluctant talkers can be given the question to read. A limit on the number of times that a student enters the center should be set so that very verbal students don't monopolize the discussion.

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ReadingQuest http://www.readingquest.org

A B C Brainstorm

TOPIC

N _____ C_____ E _____ V _____ J_____ Y____ Summary Paragraph:

.....

VOCABULARY WORD MAP

DEFINITION or SYNONYMS	ANTONYMS
VOCABULA	ARY WORD
WRITE A SENTENCE USING IT MEANINGFULLY	

DRAW a FICTORE OF IT

KEY WORD MAP Theme Movies Love Comance Popcom MUSIC lack + happiness Sweet Kiss date Novel Butter Roll Beach Party Binigo Chita and Microwave ANa belle Hotdas Sex

ACTIVITIES TO DIFFERENTIATE THE WRITING PROCESS

Sustained Writing - This activity is designed to give students the opportunity to spend several minutes just thinking about an idea, topic, problem, or possibility. Sustained writing puts the focus on thinking about the topic while writing about it and creates a sustained effort of concentrating on it. Students are asked to write about a topic or question continuously for a set period of time. The time is arbitrary, but should probably be somewhere between 3 and 5 minutes. Students must keep writing the whole time. If they run out of ideas or responses, they keep writing anyway, even if it's only to say "I've written all I can think of about (the topic) and am not sure what else I can say." What often happens is that students will wander back into saying even more on the given prompt, but only if they've not quit writing. This activity has students thinking about and focusing on the content, even when they are limited in the their knowledge about it. It also helps them draw out their background knowledge.

Outcome Sentences - These are also called sentence starters and have been around for a long time. Outcome sentences are a way to give students a push in the right direction to get their thinking started. They can be openended or more directed. They should never be confused with fill-in-the-blank. What is written should come mostly from the students. Some examples:

- · In this lesson I found out that ...
- · I disagree with ...
- · I was surprised that ...
- I still don't understand ...
- · A new understanding for me was...

Examples specifically for language arts:

- I would ask the author ...
- I became angry (or sad) when I read ...
- Things that I like (or dislike) about a character (or event) are ...
- When I was reading, and event from my own life that came to mind was ...
- · I think that (an unfamiliar word) might mean ...

Paragraph Frames - Many times, students struggle to compose a basic paragraph, regardless of what subject they are writing about. Paragraph Frames are a tool to help them practice the flow and organization of basic paragraph writing. They are also great for directing student responses and quick reflection on learning. We will do several examples together during the workshop.

Sticky Note Discussions - This strategy is a way to have students responding directly to text as they read it - a means for active engagement with

the written word. Simple sticky (Post-It) notes are used for students to record questions, thoughts, comments, reactions, and notes directly on the text where they feel provoked in their thinking. Sticky notes are a means for purposeful reading of text. They can be used for note taking, question-asking, personal reaction, or any other purpose which the teacher might design. The sticky notes can be used to subsequently arrange notes into categories or groups or build an outline on the board as students come up and place their sticky notes in the appropriate slots of the outline. The notes can also complete outcome sentences described above.

Carousel Brainstorming - This strategy has students brainstorming in smaller groups, either to activate background knowledge or check understanding after studying a topic. The class is divided into groups of 3 or 4, with each group being given a different topic associated with the unit or novel. The topic is written at the top of a sheet of paper. One student in each group serves as the recorder, with each recorder writing in a different colored marker. Each group has a short period of time, say 30 seconds (this is arbitrary), to write down on their paper all the terms or phrases associated with their topic. Explain upfront that they will then pass their sheet to the next group, who will then add onto the information already generated around this new topic. After three or four passings, the teacher will probably want to extend the writing time to 40 or 45 seconds, maybe even a minute, because all the easy ideas will have been taken by previous groups, and the students will need more time to talk about and think of other terms to be added to the brainstorm list. Continue to pass sheets until each group has the one with which they began.

SYNECTICS

Developed by William Gordon, the strategy known as synectics attempts to produce creative solutions of problems through the use of metaphorical modes of thinking. The basic idea behind this technique is to make the familiar strange. To apply this strategy requires the individual to look at familiar objects/ideas/scenarios in a new perspective. The use of metaphors to accomplish this goal involves unique comparisons based on three particular techniques:

<u>Direct analogy –</u> This is a comparison of two situations or objects to look for similarities. How is popcorn like a flower? How is a sandwich like a crowd.

<u>Personal analogy-</u>This technique asks an individual to put oneself in the place of an element of a problem. How would you feel if you were toothpaste in a tube? How could you be sure that you could get out before the tube is thrown away? Questions such as these might be asked to help solve the given problem: How could one get the most toothpaste out of the tube?

<u>Compressed conflict</u>- This technique involves looking at supposed opposites in combination to find new relationships. For instance, what is an example of a loud whisper or a sad smile?

Synectics also allows students to expand their thinking in a manner that is both creative and critical. Two sets of exercises follow that provide examples of questions that stretch student thinking.

SYNECTICS: ANALOGIES

- 1. Which has more bounce a book or a tennis ball? Why?
- 2. Which is louder a sunrise or a sunset? Why?
- 3. Which is more fragile a democracy or a monarchy. Why?
- 4. Which is more lasting lost or found? Why?
- 5. Which is more restful a circle or a line segment? Why?
- 6. Which is quieter failure or embarrassment? Why?
- 7. Which is taller science or math? Why?
- 8. Which is wider writing or speech? Why?
- 9. Which is stronger a doctor or the President? Why?
- 10. Which has more stretch forgetfulness or helplessness? Why?

SYNECTICS: MIDDLE SCHOOL SOCIAL STUDIES

- 1. Which country is like your family?
- 2. Which is more circular communism or democracy?
- 3. Which has more stretch Russia or the United States?
- 4. Which Eurasian country is most like a supreme pizza? A cheese pizza? Why?
- 5. Is Christianity more like McDonalds or Burger King? Why?
- 6. Which ecosystem is most like a duck? Why?
- 7. Which Eurasian country is most like a cavity? A wisdom tooth? Why?
- 8. Is Northern Europe more like gummy bears or chocolate? Why?
- 9. Which form of government are you most like? Why?
- 10. Which geographic feature is your bedroom most like? Why?

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