has reasonably mastered (i.e., knowing 70–75 percent or more of the content). Students who are compacting are exempt from whole-class instruction and activities in content areas they have already mastered, thus "buying time" for learning more challenging and interesting material.

In **Stage 2,** the teacher notes any skills or understandings covered in the study in which the student did not demonstrate mastery, and then lays out a plan to make certain the student learns those things. The plan may require the student to join other classmates for particular portions of the study, do homework that provides practice on missing skills, or demonstrate mastery of those skills in a product that is created in the third and final stage of the compacting process.

At the beginning of **Stage 3**, the teacher and student design an investigation or study for the student to engage in while others are working with the general lessons. The teacher and student together agree on the project's parameters, goals, time lines, procedures for completing the tasks, criteria for evaluation, and any other necessary elements. The student does not have to reinvest freed-up time in the same subject from which he was compacted. One student who compacts out of math, for example, may elect to spend his time working on a project in a special interest area such as science fiction. Or, if he especially likes math, he might want to develop a plan for using advanced mathematics software available in class.

Keeping records when using compacting has three benefits: (1) teachers demonstrate accountability for student learning, (2) parents understand why it is advantageous for their children to work with an alternate task, and (3) students develop awareness of their specific learning profiles.

Advanced learners gain little by continuing to relearn the known, but they gain much from the expectation that they will continually engage in challenging and productive learning in school. Compacting helps eliminate the former and facilitate the latter.

Using Varied Text and Resource Materials

Grade-level texts are often far too simple for some students in a given class, and yet too complex for others. Using multiple texts and combining them with a wide variety of other supplementary materials increases your chances for reaching all your students with content that is meaningful to them as individuals. You can develop valuable differentiation resources by building a classroom library from discarded texts of various levels (or requesting that textbook money be used to buy three classroom sets of different books rather than one copy of a single text for everyone), and by collecting magazines, newsletters, brochures, and other print materials.

The rich array of materials available through the Internet makes it far easier than once was the case for a teacher to differentiate materials based on student need. Other things being equal, advanced learners will usually use advanced resources, but may occasionally find it helpful, when beginning a complex study, to find out about a topic in the more straightforward presentation found in a less-challenging source. Likewise, struggling learners may from time to time grasp an idea better by looking at diagrams or pictures in a more advanced source.

As students' task needs vary, so should their use of resources. Many computer programs present increasing levels of challenge and complexity. In math or science, some students may need to use manipulatives to understand a concept, while others can move directly from an explanation or reading to abstract use of that concept without working with manipulatives. Some videos present key ideas with clarity, others extend explorations with greater breadth

Varied Support Systems

You can make content of varying complexity levels more accessible to your students by using a variety of support systems, such as study buddies, reading partners, audio and video recorders, and peer and adult mentors. These strategies can help many students stretch their capacities as learners.

Reading Partners and **Audio/Video Recorders.** A 5th grader can be great at audiotaping books for 2nd graders who need assistance with their reading. A 3rd grader who records a grade-level book can help create enriching materials for a classmate who has trouble decoding or reading long passages. High school students can create tapes summarizing journal articles on a particular topic to give advanced 6th graders access to materials beyond the scope of their classroom or school library. Some of those 6th graders can help 4th graders learn how to make a speech by making a video on the subject. An advanced 4th grader can make a video on the types of buildings in the community, which could then be used in a kindergarten learning center.

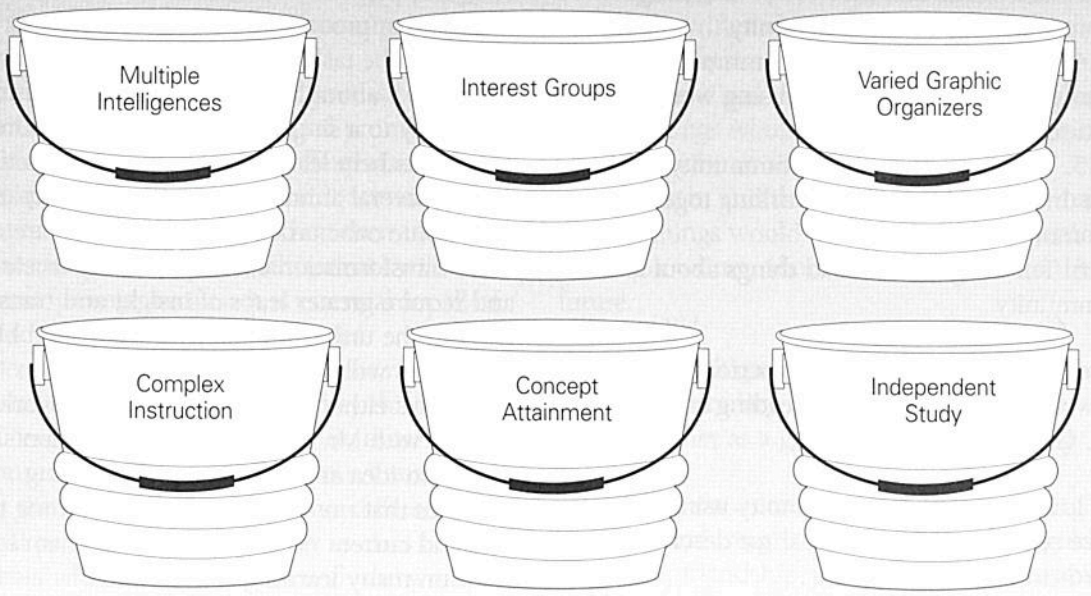
Note-Taking Organizers. Some students, even of older ages, find it very difficult to read text or listen to a lecture and come away with a coherent sense of what it was all about. For such students, it can be quite useful to work with a visual organizer that follows the flow of ideas from the text or lecture. Not only might such organizers help them focus on key ideas and information, but they may also help some learners see how a teacher or author develops a line of thought. Remember, however, that students who read independently may find it restrictive to have to use such organizers. The point is always to provide individual learners with a support system that helps the student grow—not one that feels like an impediment.

Highlighted Print Materials. A teacher can highlight critical passages in text or supplementary materials, keeping several copies of the highlighted materials in the teacher's desk. When a student has difficulty managing an entire chapter or article, the teacher can easily provide that student with a highlighted version. From the outside, the material looks like everyone else's, but because of the highlighting, the student can expend energy on reading and understanding essential portions of the chapter rather than becoming discouraged with what seems like an insurmountable amount of print.

Digests of Key Ideas. Most effective teachers could, with minimal expenditure of time, create a one- or two-page capsule of ideas in a unit. Such a digest can be of great assistance to students who struggle with print materials, lectures, or even organization of information. The digest could be in the form of sentences and paragraphs, a flow chart or concept map of the unit or topic, or a combination. It might also spotlight key vocabulary and provide essential questions the unit is designed to address. Such digests also help teachers clarify their own thinking about the core of a unit or topic.

Peer and Adult Mentors. Adults often volunteer to help youngsters who are behind with their work and in need of additional guidance. All learners—not just those who are struggling—benefit from time with adults who can answer questions about shared interests, sharpen their thinking, or give them access to advanced research skills. A bright 5th grader can also be a great mentor for an advanced 3rd grader who shares similar interests. You can create extensive support systems by using the people and technologies in your classroom, school, and community, thus giving everyone a chance to reach higher, learn more, and contribute to one another's learning.

Figure 12.1
Instructional Strategies: Buckets for Delivering "The Stuff"



But it's still the quality of "the stuff" that predominately affects student understanding!

matches their learning needs, as well as specified learning goals.

These instructional strategies are ideal for offering differentiated sense-making or processing options for students in mixed-ability classrooms. The following two scenarios show how teachers use some of these strategies to help their students process and "own" key ideas in ways that work best for them.

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Mr. Jackson and Cubing

Students in Mr. Jackson's 2nd grade class are studying communities. Right now, they are examining ways in which animal communities are like and unlike human communities. Last week, students viewed a video about ants. Yesterday, they read about bees and individually selected one other animal to learn about from a list Mr. Jackson provided. Today, as they proceed with their study, Mr. Jackson makes sure his students understand the elements of a community and how they might apply to animals. To help his students think about and make sense of these ideas, he uses cubing. Each six-sided cube carries these instructions for students: describe, compare, tell your feelings about, tell the parts of, use, and tell the good and bad things about.

Mr. Jackson assigned each student either a blue or green cube. Students using blue cubes are performing at or below grade level in reading and writing. Blue cube tasks are to

1. Describe an ant community in pictures or words.
2. Compare an ant community to your community in pictures or words.
3. List words that describe your feelings about watching an ant community.
4. Tell the parts of an ant community and what goes on in each part by using words or pictures or by building it.
5. Tell a way that an ant community helps you understand living and working together in a community.
6. Tell the good and bad things about an ant community.

Students using *green cubes* are performing above or well above grade level in reading and writing. Green cube tasks are to

1. Describe an ant community using at least three sentences with at least three describing words in each sentence.
2. Use a Venn diagram to compare an ant community with the community of the animal you selected.
3. Pretend that ants think like people. Write and cartoon what you think an ant feels like as it goes through a day in its community. Do the same thing with another kind of animal from a different sort of community.
4. Make a diagram of an animal community with parts labeled and tell what each part is for.
5. Write a rule for living together in a community and tell how it would be useful in two different communities.
6. Write a song or draw a picture that tells what you think is best and worst about being part of a community.

Students begin cubing by sitting at a table with other students using cubes of the same color. Students take turns rolling their cube. If the first roll turns up a task the student doesn't want to do, a second roll is allowed. As they work on their own task, students can also help one another. When their tasks are complete, Mr. Jackson rearranges the seating so that groups of four to five students who did a same-colored cube task can share with each other their varied ideas and approaches on a similar topic.

Blue cube tasks help learners think in a variety of ways about how key elements of community apply to a single animal community. Green cube tasks help learners make such connections among several animal communities. Compared to the blue cube tasks, green cube tasks are more transformational, complex, multifaceted, and require greater leaps of insight and transfer. Later in the unit, students who completed blue cube tasks will complete some of the green cube tasks either in small groups or by working directly with Mr. Jackson. Thus, all students engage in idea and information processing activities that not only match their learning profiles and current needs but also coax them forward on many learning continuums.

Mrs. Miller and Interactive Journals

Mrs. Miller's 6th graders are all reading the novel *Tuck Everlasting*. She knows that the book is difficult for some of her students and doesn't much stretch some others, but she likes to have the class read some books together, just as she sometimes finds it useful to have several different novels read by her students simultaneously. Because the current novel is not a "best fit" for all learners in her class, she is making a special effort to ensure that she uses a differentiated process strategy that she does vary according to the student's readiness and interest.

By using differentiated interactive journals throughout this novel, Mrs. Miller provides her students with writing prompts that, for example, may encourage them to interact with the

book as they predict what will occur next, reflect on something that has just taken place, apply understandings about elements of literature such as conflict or figurative language, relate to a character or situation, or grapple with meanings central to the authors' purposes in writing the book.

In the past, Mrs. Miller has given all students the same interactive journal prompts. This year, in trying to craft a differentiated classroom, some days she gives varied journal prompts to her students based on their interests and needs. On other days, all students will have the same prompt because it is essential for all of them to think about a common idea.

On the day prior to beginning the novel, she asks students to jot down what they think the word "everlasting" means. Based on those responses, as well as her cumulative knowledge about the students, she gives three different journal prompts on the next day as class begins. Students who seem unfamiliar with the word work in pairs to do the following:

1. Guess what "everlasting" means and write their "best guess" explanation.
2. Find definitions of the word in two dictionaries and use what they learn from the dictionary to write a good 6th grade definition of the word.
3. Write a definition of "everlasting" that would be crystal clear to a 1st grader.
4. Illustrate at least five things that they believe are everlasting, including defending why they think so.
5. Hypothesize what they think a book called *Tuck Everlasting* might be about.

A larger group of students who seemed to understand the word in the brief pre-assessment activity but whose general vocabulary and comprehension are generally within the expected range for 6th graders work either alone or with a partner on these tasks:

1. Hypothesize what a book called *Tuck Everlasting* might be about and explain how they came to their hypothesis.
2. Present and defend their choices of what sorts of things would be included as everlasting in a book written about everlasting things in their own lifetimes.
3. Present and defend their choices of what sorts of things would be included as everlasting in a book written about life 200 years ago.
4. Present and defend their choices of what sorts of things would be included as everlasting in a book written about life 200 years into the future.

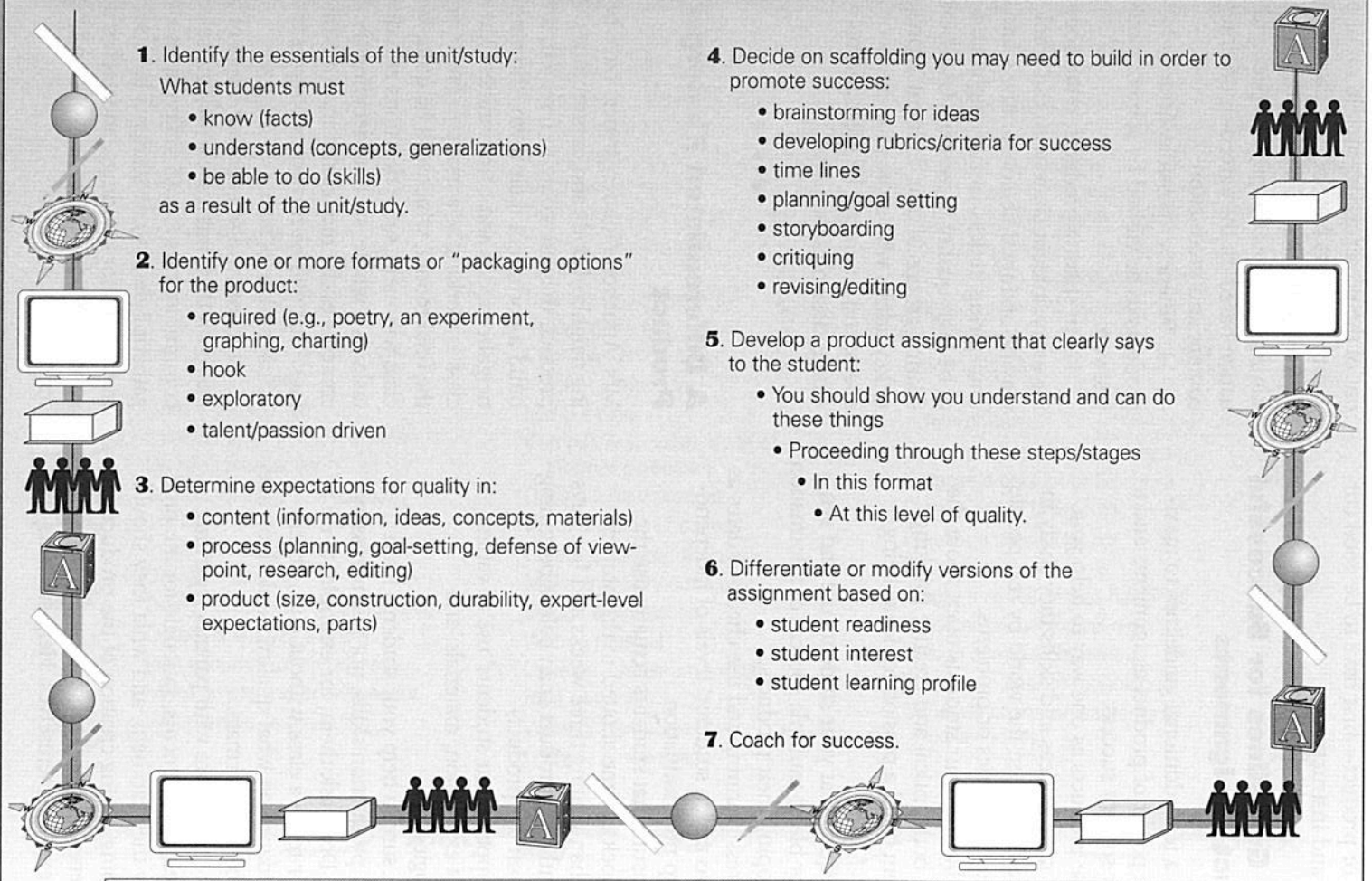
Finally, a small group of students with advanced skills of vocabulary, writing, and abstraction work together as a group to do the following:

1. Place on a continuum of "less enduring" to "more enduring" a list of items such as gold, coal, love, friendship, energy, time, fear, happiness, and additional items of their choosing.
2. Write a poem or paragraph that expresses their reasoning in placing the items on the continuum.
3. Hypothesize what a book called *Tuck Everlasting* might be about and be ready to defend their hypothesis.

All students in the class use interactive journals and have a task that causes them to make leaps of thought and insight and to deal with a powerful and central concept in the book they are about to begin reading together. These three interactive journal assignments themselves, however, are increasingly transformational, abstract, open-ended, and require increasingly greater leaps of thought for successful completion.

When class starts on the day they begin the novel, Mrs. Miller accommodates her students' varied pacing needs by distributing their journal assignment sheets, giving the instruction to read at least the first 25 pages of the novel, and then

Figure 13.1
Creating a Powerful Product Assignment



1. Identify the essentials of the unit/study:

What students must

- know (facts)
- understand (concepts, generalizations)
- be able to do (skills)

as a result of the unit/study.

2. Identify one or more formats or "packaging options" for the product:

- required (e.g., poetry, an experiment, graphing, charting)
- hook
- exploratory
- talent/passion driven

3. Determine expectations for quality in:

- content (information, ideas, concepts, materials)
- process (planning, goal-setting, defense of viewpoint, research, editing)
- product (size, construction, durability, expert-level expectations, parts)

4. Decide on scaffolding you may need to build in order to promote success:

- brainstorming for ideas
- developing rubrics/criteria for success
- time lines
- planning/goal setting
- storyboarding
- critiquing
- revising/editing

5. Develop a product assignment that clearly says to the student:

- You should show you understand and can do these things
  - Proceeding through these steps/stages
    - In this format
      - At this level of quality.

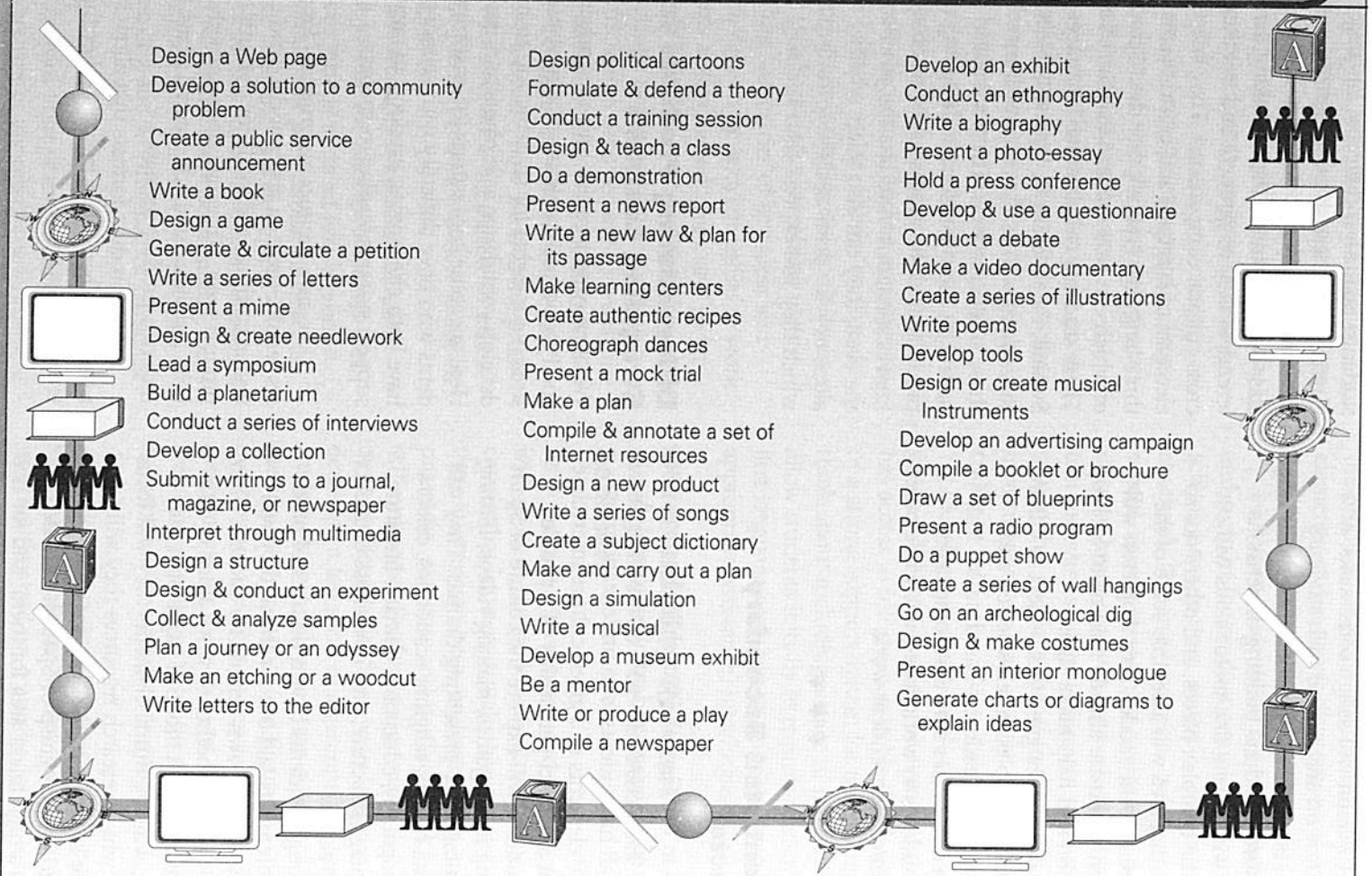
6. Differentiate or modify versions of the assignment based on:

- student readiness
- student interest
- student learning profile

7. Coach for success.

It is the teacher's job to **make explicit** whatever you thought was implicit.

Figure 13.2
Product Possibilities



- Design a Web page
- Develop a solution to a community problem
- Create a public service announcement
- Write a book
- Design a game
- Generate & circulate a petition
- Write a series of letters
- Present a mime
- Design & create needlework
- Lead a symposium
- Build a planetarium
- Conduct a series of interviews
- Develop a collection
- Submit writings to a journal, magazine, or newspaper
- Interpret through multimedia
- Design a structure
- Design & conduct an experiment
- Collect & analyze samples
- Plan a journey or an odyssey
- Make an etching or a woodcut
- Write letters to the editor
- Design political cartoons
- Formulate & defend a theory
- Conduct a training session
- Design & teach a class
- Do a demonstration
- Present a news report
- Write a new law & plan for its passage
- Make learning centers
- Create authentic recipes
- Choreograph dances
- Present a mock trial
- Make a plan
- Compile & annotate a set of Internet resources
- Design a new product
- Write a series of songs
- Create a subject dictionary
- Make and carry out a plan
- Design a simulation
- Write a musical
- Develop a museum exhibit
- Be a mentor
- Write or produce a play
- Compile a newspaper
- Develop an exhibit
- Conduct an ethnography
- Write a biography
- Present a photo-essay
- Hold a press conference
- Develop & use a questionnaire
- Conduct a debate
- Make a video documentary
- Create a series of illustrations
- Write poems
- Develop tools
- Design or create musical Instruments
- Develop an advertising campaign
- Compile a booklet or brochure
- Draw a set of blueprints
- Present a radio program
- Do a puppet show
- Create a series of wall hangings
- Go on an archeological dig
- Design & make costumes
- Present an interior monologue
- Generate charts or diagrams to explain ideas

Appendix

A Few Instructional and Management Strategies for Differentiated, Mixed-Ability Classrooms

STRATEGY	DESCRIPTION OF STRATEGY	RATIONALE FOR USE	GUIDELINES FOR USE
Compacting	A 3-step process that (1) assesses what a student knows about material to be studied and what the student still needs to master, (2) plans for learning what is not known and excuses student from what is known, and (3) plans for freed-up time to be spent in enriched or accelerated study.	• Recognizes large reservoir of knowledge in some learners • Satisfies hunger to learn more about more topics than school often allows • Encourages independence • Eliminates boredom and lethargy resulting from unnecessary drill and practice	• Explain the process and its benefits to students and parents • Pre-assess learner's knowledge and documents findings • Allow student much choice in use of time "bought" through previous mastery • Use written plans and time lines for accelerated or enrichment study • Can use group compacting for several students

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A Few Instructional and Management Strategies for Differentiated, Mixed-Ability Classrooms—continued

STRATEGY	DESCRIPTION OF STRATEGY	RATIONALE FOR USE	GUIDELINES FOR USE
Independent Projects	A process through which student and teacher identify problems or topics of interest to the student. Both student and teacher plan a method of investigating the problem or topic and identifying the type of product the student will develop. This product should address the problem and demonstrate the student's ability to apply skills and knowledge to the problem or topic.	• Builds on student interest • Satisfies curiosity • Teaches planning and research skills at advanced levels • Encourages independence • Allows work with complex and abstract ideas • Allows long-term and in-depth work on topics of interest • Taps into high motivation	• Build on student interest • Allow the student maximum freedom to plan, *based on student readiness for freedom* • Teacher provides guidance and structure to supplement student capacity to plan and to ensure high standards of production • Use preset time lines to zap procrastination • Use process logs to document the process involved throughout the study • Establish criteria for success

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A Few Instructional and Management Strategies for Differentiated, Mixed-Ability Classrooms—continued

STRATEGY	DESCRIPTION OF STRATEGY	RATIONALE FOR USE	GUIDELINES FOR USE
Interest Centers or Interest Groups	Interest centers (often used with younger learners) and interest groups (often used with older learners) can provide enrichment for students who demonstrate mastery/competence with required work and can be a vehicle for providing these students with meaningful study when required assignments are completed. In addition, all learners enjoy and need the opportunity to work with interest centers/groups in order to pursue areas of special interest to them. These centers/groups can be differentiated by level of complexity and independence required, as well as by student interest, to make them accessible and appropriately challenging for all learners.	• Allows student choice • Taps into student interest—motivating • Satisfies curiosity—explores hows and whys • Allows study of topics not in the regular curriculum • Can allow for study in greater breadth and depth • Can be modified for student readiness • Can encourage students to make connections between fields of study or between study and life	• Build on student interest • Encourage students to help you develop interest-based tasks • Adjust for student readiness • Allow students of like interests to work together • Develop clear (differentiated) criteria for success • For advanced learners, allow long blocks of time for work, change centers less often to allow for depth of study, make certain tasks are challenging

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Appendix – continued

A Few Instructional and Management Strategies for Differentiated, Mixed-Ability Classrooms—continued

STRATEGY	DESCRIPTION OF STRATEGY	RATIONALE FOR USE	GUIDELINES FOR USE
Tiered Assignments	In a heterogeneous classroom, a teacher uses varied levels of activities to ensure that students explore ideas at a level that builds on their prior knowledge and prompts continued growth. Student groups use varied approaches to exploration of essential ideas.	• Blends assessment and instruction • Allows students to begin learning from where they are • Allows students to work with appropriately challenging tasks • Allows for reinforcement or extension of concepts and principles based on student readiness • Allows modification of working conditions based on learning style • Avoids work that is anxiety-producing (too hard) or boredom-producing (too easy) • Promotes success and is therefore motivating	• Be sure the task is focused on a key concept or generalization essential to the study • Use a variety of resource materials at differing levels of complexity and associated with different learning modes • Adjust the task by complexity, abstractness, number of steps, concreteness, and independence to ensure appropriate challenge • Be certain there are clear criteria for quality and success

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Appendix – continued

A Few Instructional and Management Strategies for Differentiated, Mixed-Ability Classrooms—continued

STRATEGY	DESCRIPTION OF STRATEGY	RATIONALE FOR USE	GUIDELINES FOR USE
Flexible Grouping	Students are part of many different groups—and also work alone—based on the match of the task to student readiness, interest, or learning style. Teachers may create skills-based or interest-based groups that are heterogeneous or homogeneous in readiness level. Sometimes students select work groups, and sometimes teachers select them. Sometimes student group assignments are purposeful and sometimes random.	• Allows both for quick mastery of information/ideas and need for additional exploration by students needing more time for mastery • Allows both collaborative and independent work • Gives students and teachers a voice in work arrangements • Allows students to work with a wide variety of peers • Encourages teachers to "try out" students in a variety of work settings • Keeps students from being "pegged" as advanced or struggling • Keeps students from being cast as those in need of help and those who are helpers	• Ensure that all students have opportunities to work both with students most like themselves and with students dissimilar from themselves in readiness and interest • Teacher assigns work groups when task is designed to match individual readiness/interest based on pre-assessment or teacher knowledge • Teacher assigns work groups when desirable to ensure that students work with a variety of classmates • Students select groups when task is well-suited for peer selection • Alternate purposeful assignment to groups with teacher/student selection • Ensure that all students learn to work cooperatively, collaboratively, and independently • Be sure there are clear guidelines for group functioning that are taught in advance of group work and consistently reinforced

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AA Few Instructional and Management Strategies for Differentiated, Mixed-Ability Classrooms—continued

STRATEGY	DESCRIPTION OF STRATEGY	RATIONALE FOR USE	GUIDELINES FOR USE
Learning Centers	Learning centers can be "stations" or collections of materials learners use to explore topics or practice skills. Teachers can adjust learning center tasks to readiness levels or learning styles of different students.	• Allows matching task with learner's skills level • Encourages continuous development of student skills • Allows matching task with student learning style • Enables students to work at appropriate pace • Allows teacher to break class into practice and direct instruction groups at a given time • Helps develop student independence	• Match task to learner readiness, interest, learning style • Avoid having all learners do all work at all centers • Teach students to record their own progress at centers • Monitor what students do and what they understand at centers • Have clear directions and clear criteria for success at centers

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Appendix – continued

A Few Instructional and Management Strategies for Differentiated, Mixed-Ability Classrooms—continued

STRATEGY	DESCRIPTION OF STRATEGY	RATIONALE FOR USE	GUIDELINES FOR USE
Varying Questions	In class discussions and on tests, teachers vary the sorts of questions posed to learners based on their readiness, interests, and learning styles.	• All students need to be accountable for information and thinking at high levels • Some students will be challenged by a more basic thought question • Others will be challenged by a question that requires speed of response, large leaps of insight, or making remote connections • Teachers can "try out" students with varied sorts of questions as one means of assessing student progress and readiness • Varying questions appropriately helps nurture motivation through success • In oral settings, all students can hear and learn from a wide range of responses	• Target some questions to particular students and "open the floor" to others • Use open-ended questions where possible • Use wait time before taking answers • When appropriate, give students a chance to talk with thinking partners before giving answers • Encourage students to build on one another's answers • Require students to explain and defend their answers • Adjust the complexity, abstractness, degree of mental leap required, time constraints, connections required between topics, and so forth, based on learning profile of the student being asked a question

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A Few Instructional and Management Strategies for Differentiated, Mixed-Ability Classrooms—continued

STRATEGY	DESCRIPTION OF STRATEGY	RATIONALE FOR USE	GUIDELINES FOR USE
Mentorships/ Apprentice-ships	Students work with a resource teacher, media specialist, parent volunteer, older student, or community member who can guide their growth in a particular area. Some mentorships may focus on design and execution of advanced projects, some on exploration of particular work settings, some on affective development, and some on combinations of goals.	• Mentorships extend learning beyond the classroom • Mentorships make learning a partnership • Mentorships can help students expand awareness of future options and how to attain them • Mentorships allow teachers to tap into student interest, strengths, and needs • Mentorships have a low teacher-to-learner ratio (often one-to-one)	• Match the mentor with the student's needs (interests, strengths, culture, gender) • Be clear in your own mind and specific about the goals of the collaboration • Make sure roles of mentor, student, teacher, and parent are written and agreed upon • Provide appropriate preparation and instruction for mentors, including key information about the student • Monitor the progress of the mentorship regularly and help problem solve if snags occur • Connect what is learned in the mentorship to what goes on in class whenever feasible

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Appendix – continued

A Few Instructional and Management Strategies for Differentiated, Mixed-Ability Classrooms—continued

STRATEGY	DESCRIPTION OF STRATEGY	RATIONALE FOR USE	GUIDELINES FOR USE
Contracts	Contracts take a number of forms that begin with an agreement between student and teacher: The teacher grants certain freedoms and choices about how a student will complete tasks, and the student agrees to use the freedoms appropriately in designing and completing work according to specifications.	• Can blend skill- and content-based learning matched to student's need • Eliminates unnecessary skill practice for students • Allows students to work at appropriate pace • Helps students learn planning and decision-making skills important for independence as learners • Allows teachers time to work with individuals and small groups • Can encourage extended study on topics of interest • Can foster research, critical and creative thinking, application of skills, and integrated learning	• Blend both skill- and content-based learning in the contract • Match skills to readiness of the learner • Match content to readiness, interests, and learning style of student • Allow student choice, especially in content-based portions of the contract • From the outset, establish clear and challenging standards for success • Provide rules for the contract in writing • When possible, focus the contract on concepts, themes, or problems, and integrate appropriate skills into required projects or products • Vary levels of student independence and time span of the contract to match student readiness

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