Tools for Schools

Differentiated Instruction – *A Tool for All Students*

Resource Materials

Tools for Schools
Differentiated Instruction: Checklist for Self-Assessment

Across the nation, urban, rural and suburban schools are striving to reach higher standards and to improve the academic performance of their students. The *Tools for Schools* teleconference series has been designed to support schools as new State assessments linked to higher learning standards are phased in. Six components that leading national educational experts and high performing schools have found effective in enhancing student performance are featured in this series. This *Checklist for Self Assessment* can assist school administrators, teachers and other school personnel, parents, and the greater school community in reviewing their own teaching and learning environment, and stimulate discussion towards developing strategies to raise standards for student achievement, build capacity to reach the standards and to answer for results and improve them.

Responsive Leadership	*Always*	*Frequently*	*Sometimes*	*Never*
▪ Do we set high expectations for achievement for all students in all subject areas and at all grade levels?				
▪ Is our vision for success of all students communicated to all school staff, students and parents?				
▪ Do we use student needs assessments and results of State tests to modify our teaching strategies?				
▪ Do we recognize the diversity of students' learning styles and base our instruction on these styles?				
▪ Are our strategies and approaches to achieving high academic performance collaborative and part of a team effort to meet all students' needs?				
▪ Are techniques for differentiated instruction used as part of our classroom instructional strategies?				

Tools for Schools
Checklist for Self-Assessment

On-going Staff Development	Always	Frequently	Sometimes	Never
▪ Are teachers provided information, materials and training about instructional strategies to meet diverse student needs?				
▪ Do we use the expertise of our school's teachers who use differentiated instruction techniques as part of our staff development efforts?				
▪ Are opportunities provided on a regular and on-going basis for teachers to share strategies for differentiating instruction in their classrooms?				
▪ Do teachers provide input on the types of staff development they need to meet the diversity of learning needs in their classrooms?				
▪ Do teachers receive training on how to implement differentiated instruction strategies to help students meet State standards?				
▪ Are the skills of special education teachers used to help develop instructional strategies for students in inclusive classrooms?				
▪ Are staff development activities on-going and related to the academic performance of all students?				

Tools for Schools
Checklist for Self-Assessment

Engaging Curriculum	*Always*	*Frequently*	*Sometimes*	*Never*
▪ Do we promote the active involvement of all of our students in their learning?				
▪ Are all of our students continuously challenged to improve their thinking skills in all subject areas?				
▪ Do we focus our instructional efforts on individual learners including students with disabilities?				
▪ Are all students provided interdisciplinary learning experiences to enable them to make connections across subject areas?				
▪ Are our instructional activities designed to connect student learning to real-life experiences?				
▪ Are all students provided challenging work that enables them to strive to reach their highest potential?				
▪ Do we use cooperative learning experiences to help students strengthen both their academic and their social skills?				
▪ Do we recognize the diversity of students and the different learning styles in our teaching and learning strategies?				

Tools for Schools
Checklist for Self-Assessment

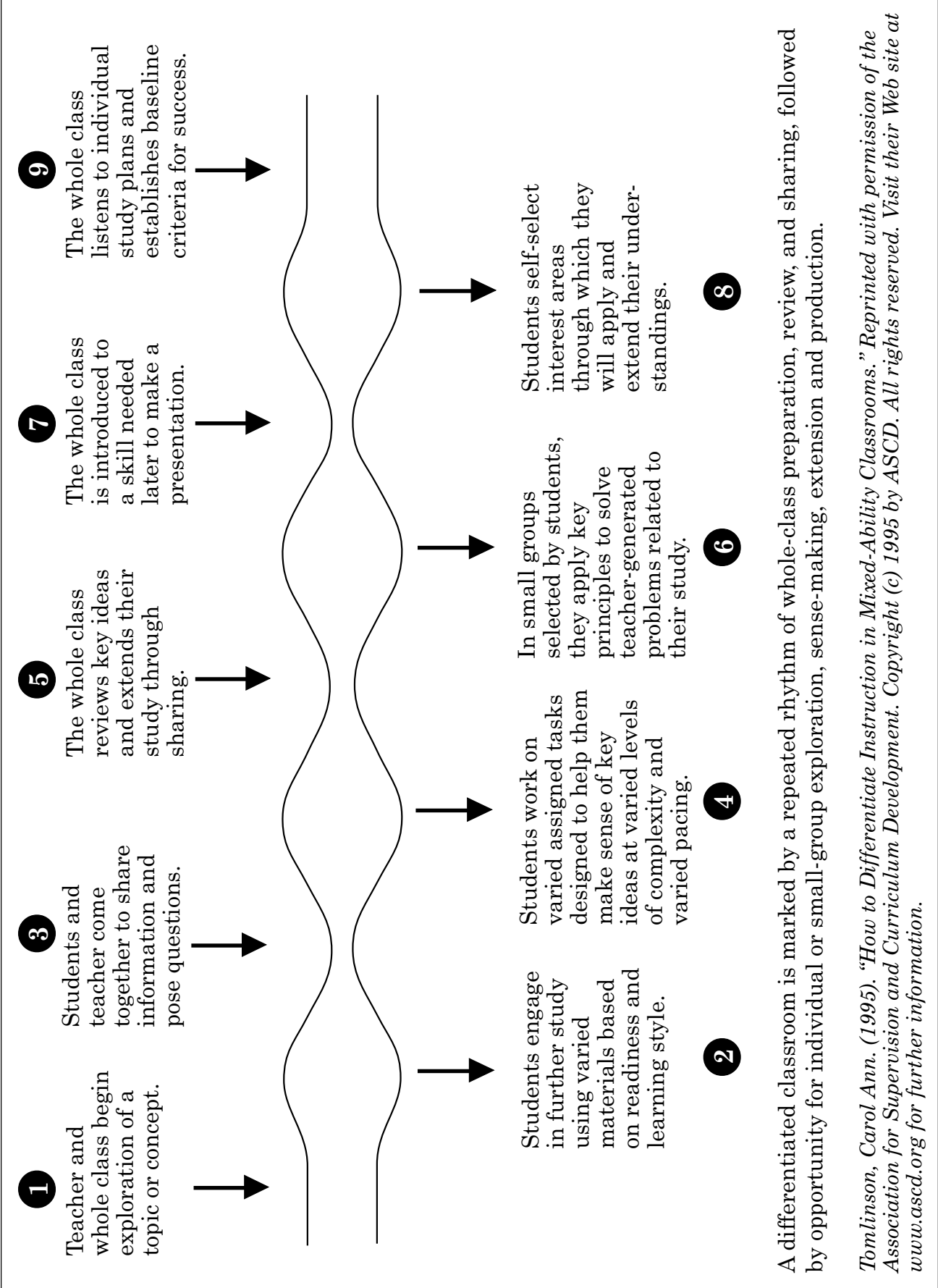| Flexible Resources	Always	Frequently	Sometimes	Never
▪ Do we seek ways to ensure that the maximum amount of time during the school day is devoted to teaching and learning?				
▪ Do we assign independent projects to students that build upon their interests and motivate them to learn more about specific topics?				
▪ Do we establish interest centers or interest groups to make learning accessible and appropriately challenging for all learners?				
▪ Do we use flexible grouping of students to adjust to different learning styles and interests of diverse students?				
▪ Do we target discretionary grants and funds to expand differentiated instruction strategies in the school?				
▪ Do we provide summer school programs to help all students achieve the learning standards?				
▪ Do we seek volunteers as tutors and mentors to help all students achieve success?				
▪ Do we use school community partnerships to provide supportive assistance to all students including those with special needs?				

Tools for Schools
Checklist for Self-Assessment

Supportive Involvement of Parents and Community	*Always*	*Frequently*	*Sometimes*	*Never*
▪ Do we provide information to parents about the instructional strategies we use in the classrooms?				
▪ Do we seek input and the insights of parents about their children and the types of learning activities they enjoy?				
▪ Do we develop instructional activities that parents can use at home to reinforce learning in school?				
▪ Do we provide professional development activities for teachers that help them work with parents to become more involved in their children's education?				
▪ Do we make parents feel welcome in our school?				
▪ Do we invite parents to serve on school district and building committees that plan our educational programs?				
▪ Do we consider parents' work schedules and family commitments when we schedule meetings?				
▪ Have we considered ways of involving community members to help meet the academic needs of diverse learners?				

Tools for Schools
Checklist for Self-Assessment

Comprehensive Planning	*Always*	*Frequently*	*Sometimes*	*Never*
▪ Do we develop school building plans that provide for the diverse learning needs of all our students?				
▪ Have we secured input and involved all stakeholders in developing our plans?				
▪ Do our plans focus on student achievement and establish specific goals for educational improvement of all our students?				
▪ Do our plans build on our successes and our strengths as models for activities we could use in areas in need of improvement?				
▪ Do our plans set clear priorities and high expectations for student achievement for all students and devote resources to meet the priorities?				
▪ Do our plans include professional development activities to ensure that teachers can address the learning needs of a diverse student population?				
▪ Are our plans aligned with the State's learning standards?				
▪ Do we monitor and evaluate plan implementation to determine if we are achieving our goals?				

Tools for Schools

Flow of Instruction in a Differentiated Classroom

1 Teacher and whole class begin exploration of a topic or concept.

2 Students engage in further study using varied materials based on readiness and learning style.

3 Students and teacher come together to share information and pose questions.

4 Students work on varied assigned tasks designed to help them make sense of key ideas at varied levels of complexity and varied pacing.

5 The whole class reviews key ideas and extends their study through sharing.

6 In small groups selected by students, they apply key principles to solve teacher-generated problems related to their study.

7 The whole class is introduced to a skill needed later to make a presentation.

8 Students self-select interest areas through which they will apply and extend their under-standings.

9 The whole class listens to individual study plans and establishes baseline criteria for success.

A differentiated classroom is marked by a repeated rhythm of whole-class preparation, review, and sharing, followed by opportunity for individual or small-group exploration, sense-making, extension and production.

Tomlinson, Carol Ann. (1995). "How to Differentiate Instruction in Mixed-Ability Classrooms." Reprinted with permission of the Association for Supervision and Curriculum Development. Copyright (c) 1995 by ASCD. All rights reserved. Visit their Web site at www.ascd.org for further information.

Differentiated Instruction Is/Is Not

What differentiated instruction is not:	What differentiated instruction is:
An approach designed primarily to meet the needs of students with disabilities.	An approach that benefits all learners including those who are racially, culturally, and linguistically diverse, and those with a range of skills, gifts, strengths, needs, abilities and disabilities.
Adaptations that are "tacked on" to pre-developed lessons.	Curriculum, instruction, and assessment that is carefully designed to incorporate the needs of all learners up-front.
Another disconnected model/approach for teachers to implement and fit into the school day.	A reform that intersects with and ideologically fits with dozens of other current reforms and approaches including cooperative learning, authentic assessment, co-teaching, constructivist teaching, project-based instruction, active learning, culturally relevant teaching, community-based instruction, multicultural education, and inclusive schooling.
Changing pieces of the lesson for one or two students.	Creating diversity in instruction and continuously "mixing up" lesson formats, materials, instructional arrangements, teaching strategies, and personal support for all learners.
A new and unfamiliar approach to teaching and learning.	Something that most teachers are doing already, perhaps without realizing it. Teachers who offer a range of assessment choices, assign diverse roles to students in cooperative groups, or offer enhancement to learners who need extra challenge are using differentiated instruction. For most teachers using DI will simply involve expanding the strategies used in the classroom and differentiating across students and lessons consistently!

Kluth, Paula (2000)

Instructional and Management Strategies for Differentiated, Mixed Ability Classrooms

Strategy	Description of Strategy	Rationale for Use	Guidelines for Use
Compacting	A three-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 timelines for accelerated or enrichment study • Can use group compacting for several students
Independent Projects	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 • Teachers 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 timelines to zap procrastination • Use process logs to document the process involved throughout the study • Establish criteria for success

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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
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 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 harsh) 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

continued

Tools for Schools

Instructional and Management Strategies for Differentiated, Mixed Ability Classrooms, *continued*

Strategy	Description of Strategy	Rationale for Use	Guidelines for Use
Flexible Groupings	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 in readiness and/or interest, and with students dissimilar from themselves in readiness and; or interest • Teacher assigns work groups when task is designed to match individual readiness/interest based on preassessment 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 guidelines for group functioning that are taught in advance of group work and consistently reinforced

continued

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 tasks 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
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, etc., based on learning profile of the student being asked a question

Instructional and Management Strategies for Differentiated, Mixed Ability Classrooms, *continued*

Strategy	Description of Strategy	Rationale for Use	Guidelines for Use
Mentorships/ Apprenticeships	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 combination 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

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 • Establish clear and challenging standards for success from the outset • 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

Ideas for Differentiating Instruction

■ **Station Teaching**

Using centers or stations involves setting up different spots in the classroom where students work on various tasks simultaneously. These stations invite flexible group-ings because not all students need to go to all stations all the time. This format is appropriate for any class and any age and is ideal for co-teaching (one teacher can support groups, one can assess, work with individual students, etc.).

■ **Compacting**

This strategy encourages teachers to assess students before beginning a unit of study or development of a skill. Students who do well on the pre-assessment do not continue working on the material they already know. Instead, they may pursue independent projects or additional research related to the unit while other students address the typical curriculum.

■ **Agendas**

These are lists of tasks that a student must complete in a specified time, usually dur-ing 2 or 3 weeks. The agendas can be personalized (e.g., include IEP tasks, more chal-lenging work) for individual students, if needed. Students work individually (or in small groups) to complete the agenda tasks.

■ **Complex Instruction**

This strategy uses challenging materials, open-ended tasks, and small instructional groups. Teachers float among groups/pairs/individuals, asking questions, giving mini-lectures, probing student thinking.

■ **Entry Points**

A strategy from Howard Gardner proposes student exploration of a given topic through as many as 5 avenues: Narrational (presenting a story), logical-quantitative (using #s or deduction), foundational (examining philosophy and vocabulary), aesthetic (focusing on sensory features), and experiential (hands-on).

■ **Peer Tutors / Cross-Age Tutors**

Engineering student tutoring groups or pairs can provide opportunities for different learners/groups to work at different paces and/or on different material while offering students another perspective from which to learn.

Kluth (2000)- adapted from ASCD: Curriculum Update (Winter 2000); Tomlinson (1999)

Indicators of a Quality
Early Elementary Program

The indicators listed below will help teachers improve the teaching and learning process to help all students become more successful learners.

Learning Environment

Emotional Climate
- The atmosphere is free from pressure and constant hurry.
- All students feel valued.
- Students trust and respect adults and other classmates.
- Adults respect each other and each student.
- Students are helped to make friends and share ideas.
- Students are encouraged to express themselves through conversation and interacting with others.
- Teachers listen attentively to students and encourage them to listen to others.
- Students are given time to talk with adults on an individual basis or during group meetings.
- Parents are welcome as partners in the learning process.
- Adults acknowledge and reinforce positive student behavior.
- An appreciation for individual differences is modeled by adults and promoted by students.
- Students are encouraged to negotiate and problem solve with their peers to resolve their own conflicts.

Physical Climate
- Students' work is attractively displayed throughout the classroom and school building.
- Space is arranged to allow students to work alone or with other classmates.
- A special area is set aside for students to engage in a "meeting time".
- Space is provided to support small and large group activities.
- Interest centers are set up for all curriculum areas.
- Age appropriate materials and equipment are readily accessible to all students.
- Sufficient quantities of high quality literature and other materials are readily accessible to all students.
- Materials are organized and displayed attractively at the eye level of the students.
- There is a table where the teacher can work with small groups of students.
- Students sit at tables or with desks pushed together in small groups.
- Seating arrangements are flexible and allow every child to hear and see what is being asked and demonstrated.

Curriculum and Instruction

Teaching and Learning

- A variety of resources are available to support student learning at all levels, including adaptive resources for students with disabilities.
- The daily schedule is open and flexible and incorporates large blocks of time for students to work on projects.
- An understanding of how students learn and develop is used to shape curriculum and instruction.
- The curriculum describes realistic goals and objectives for what students should know and be able to do.
- The curriculum allows for creativity and flexibility for students and teachers.
- The curriculum is designed to help integrate all content areas.
- Student exploration and inquiry are fostered.
- A balance is maintained between activities that are selected by the students and activities planned by the teacher.
- A balance of "active" and "quiet" learning activities is maintained to stimulate different learning styles.
- Social interaction among students and between teachers and students is encouraged.
- Continuity of curriculum, instruction, and assessment is ensured between and across grade levels.
- Students are given opportunities to apply learning in meaningful contexts.
- Classroom activities and materials allow students with diverse needs and interests to experience success.
- The curriculum reflects the diversity of experiences and learning among all groups of students.
- Play is viewed positively and supported as an active learning process.

Assessment

- A combination of individual student work, student projects, and teacher observation is used to assess student achievement of the learning standards.
- Assessment data are used to plan curriculum and instruction.
- Teachers use assessment data to monitor students' work and progress.
- Assessment data are used to strengthen the teaching and learning process in the classroom.
- Assessment data provide a continuum of knowledge about students as they move from class to class and grade to grade.
- Teachers use assessment data to identify students' strengths and areas in need of improvement.
- Students use assessment data to evaluate their own learning.
- Parents are included as partners in assessment and receive specific information about their child's progress.

Adapted from: Early Elementary Resource Guide to Integrated Learning. The University of the State of New York, The State Education Department.

Classroom Instruction in the Middle School

Teachers in middle-level classrooms understand and appreciate the emotional, intellectual, physical, psychological, and social changes that are occurring within their students and recognize the behaviors manifested by these changes. They use instructional techniques and processes that capitalize on the unique developmental characteristics and individual needs of early adolescents. Successful middle-level teachers in a standards-focused school:

- Provide instruction that is challenging, rigorous, and purposeful.
- Know and understand the needs and developmental characteristics of young adolescents.
- Have a deep understanding of their subject matter, of different approaches to student learning, and of diverse teaching techniques.
- Know and understand each of the State's 28 learning standards and – when and where appropriate – reinforce them routinely during regular classroom instruction.
- Use a range of successful, research-based teaching strategies that are developmentally and cognitively appropriate, matching instruction to the students' varied learning styles and different intelligences.
- Involve students in their learning, encouraging them to contribute to their learning experiences, to make choices, to explore, to question, to experience, to learn, to grow.
- Vary activities to maintain student interest.
- Use technology purposefully to support and enhance learning.
- Focus instruction on thinking, reasoning, and problem solving and, at the same time, ensure that students acquire necessary content and subject matter.
- Use interdisciplinary approaches to help students integrate their studies and meet learning standards.
- Use flexible grouping based upon student needs and interests to help each student achieve the learning standards, with students changing groups often, depending on individual needs and program purposes.
- Use classroom assessments that reflect the State's learning standards and are aligned with State assessments.
- Use classroom assessments that are instructionally useful indicators of individual student growth and performance not only to monitor each student's progress in meeting the State's learning standards but also to plan instruction.
- Use cooperative learning groups and peer-tutoring opportunities to develop social and interpersonal skills in addition to academic proficiency.
- Consult with each other and with other school personnel. Teachers with regular education assignments and those assigned to programs for students with special needs work closely together.
- Inform and involve parents of middle-level students in their children's education by helping them understand the learning standards their children must meet, the instructional program, their children's progress, and how to help their children at home with schoolwork, school decisions, and successful development through adolescence.
- Are themselves learners who are constantly engaged in professional and intellectual growth activities.
- Recognize that they must work together cooperatively and collaboratively – rather than individually and in isolation-to ensure that all their students achieve at high levels and meet all the State's learning standards.

Essential Elements of Standards-Focused Middle-Level Schools and Programs. The University of the State of New York, The State Education Department.

Differentiated Instruction at the Elementary, Middle, and High School Levels

Sample Classroom Experiences

Teachers face challenges in the classroom every day. Differentiated instruction is a way of thinking, a belief that students differ in their readiness to learn, and that the classroom and instructional time can be organized to meet the needs of diverse learners. Following are examples of classroom experiences that build on the broad range of strategies available to educators.

Elementary Level

In a fourth grade classroom, students are engaged in community-based research, with a focus on the English Language Arts standards. An inquiry fueled by interviewing brought out the stories of the people who had lived along a brook in a northern New York State community. Students took responsibility for their own learning and for sharing the unique material such inquiry yielded. To meet the diverse needs of students, options included: obtaining letters from residents who could not be interviewed; facts from an interview done by the teacher provided students with severe cognitive disabilities with an ability to participate; and additional adult (parents and assistant) support provided at interview time was provided for students who needed the supervision or assistance. Tape recorders were provided, mini-lessons on organizing information, interview techniques, elaborating, checking accuracy, social uses of language, phone calls, and other supports were provided. More advanced students could organize publishing results. *(The full learning experience is available in the English Language Arts Resource Guide with Core Curriculum at www.nysed.)*

In a fifth grade classroom during social studies, students are learning about classrooms and learning in the nineteenth century. The teacher introduces the topic with children's literature reflective of the time period. The teacher then provides opportunities for children to experience "reading, writing, and arithmetic" lessons from the past. The children may do a variety of activities with children's literature. These may involve writing story summaries, creating comparison charts, or writing fictional diaries. Tape recorders can be provided for students with disabilities or limited writing skills, with their story transcribed for illustration. Learning centers can be established to assist children with a range of abilities. The use of learning centers gives children the opportunity to try different media approaches. The range of abilities can be addressed by incorporating a range of grade-level materials. Students with specific interests can create books that represent the era or try recipes for homemade ink. *(The full learning experience is available in the Social Studies Resource Guide with Core Curriculum at www.nysed.)*

Middle School Level

A seventh grade class is exploring the performance indicator for modeling and multiple representation within Mathematics, Science and Technology, by developing and exploring models that do and do not rely on chance. When people buy cars, they may study the reliability ratings of different models. Based on the personal experiences of car owners, cars are rated to be reliable or unreliable. Some students may use Consumer Reports and other sources that provide background information on car safety, others may develop a series of interview questions and conduct interviews of local car dealerships and owners. Students of varying abilities can be paired for inter-

viewing, with each listening for ideas to help support their theory. Others may scan Internet sites for information regarding car ownership and satisfaction. Some students may develop options for presenting the material through artwork or graphics. Students are encouraged to work in groups representing the full range of abilities within the classroom, and develop strategies to assure that each group member can participate. *(Further information is available in the Mathematics Resource Guide with Core Curriculum at www.nysed.)*

An eighth grade English Language Arts class is exploring novels about bravery. Students can select novels from a broad variety of reading levels. Students reading the same book form investigative clusters designed to provide opportunities for key questions to emerge about bravery. Students are asked to develop the questions themselves and interview each other about their opinions about bravery. Using their definition, students are encouraged to write, draw, or record a time in their own life when they were brave and draw parallels about the characters in the book and their own experiences. Students assume roles as authors, illustrators, investigators, and recorders. Through the selection of certain books, students sort into self-selected groups. By practicing differing roles within the group, students can learn at their own pace. Students who have difficulty in reading may be asked to be good listeners and interpret what they hear. The teacher has available guides for each story to prompt readers who need assistance in their inquiry. Other students can be challenged by moving across groups and begin to compare the characteristics of bravery in different settings. *(Further information is available in the English Language Arts Resource Guide with Core Curriculum at www.nysed.)*

High School Level

Jim and Josh were partners in the science lab. Jim is a junior enrolled in general education and Josh is a student with significant learning disabilities related to reading and writing. By working together, the pair accomplished the laboratory lesson for the day. While Jim conducts the actual experiment, Josh uses an adapted check off sheet designed by the special education teacher in collaboration with the science teacher to assure that all of the steps of the experiment are correct. The teacher uses such graphics organizers and learning logs to help students complete the lab work. The learning logs help the teacher identify key areas where students may need further understanding or assistance. Sometimes videos are used to support the sequence of steps and demonstrate the expected result. At the conclusion of the experiment, Josh verbally shares the results with the teacher, while Jim completes the written report. Together, both students achieve success. For other students who have grasped the basic scientific principles being explored, the teacher provides a more complex lab experience to further stimulate thinking at a higher level. *(Further information is available in the Science Resource Guide with Core Curriculum at www.nysed.)*

Students in grade twelve were able to investigate the pros and cons of key public policy issues in participation in government and economics. Working within groups, students listed all of the ways that they could gather information. Some students took responsibility to listen to news shows with their families and dictate their observations. Others did Internet research to determine potential positions. Others scheduled interviews with individuals identified by the group. Students with limited writing abilities were paired with other students and conducted the interview questions while another student recorded observations. Some began to develop graphic presentations for the full class. Other students conducted informal polls in the cafeteria and before classes began. Each student was able to contribute to the final project. All students were able to express opinions in developing a final group position. *(Further learning experiences are available in the Social Studies Resource Guide with Core Curriculum at www.nysed)*

Creating Small Groups in Differentiated Instruction

In a differentiated classroom, over time, all students complete tasks individually and in small groups as well as in whole group settings.

Teachers in differentiated classrooms use a range of small group strategies including:

- Investigative (alternative solutions) clusters
- Debate (exploring perspectives) teams
- Detective (problem-solving) squads
- Mentor-guided (older students or volunteers) teams
- Technology-supported (Internet research) researchers
- Performance (using the arts) clusters
- Tournament (competitive) teams
- Integrative (linking learning to real-life experiences) teams
- Supportive (building each other's skills) groups

Teachers in differentiated classrooms use a range of strategies to support small groups, including:

- Creating a supportive environment for group work
- Clearly defining criteria for success in collaboration with students
- Developing flexible group structures, sometimes selected by the teacher, by students, or by both
- Offering alternative tasks within the group structure to accommodate different learning styles
- Providing opportunities for group appraisal of its own work
- Monitoring progress and supporting results

Using Technology in Differentiated Instruction

In a differentiated classroom, the use of technology can enhance learning for all students based on their ability.

Teachers in differentiated classrooms create an atmosphere where technology can enhance the learning process by:

- Locating technology where instruction and learning are taking place

- Making technology available to each student, based on their ability

- Implementing instruction on the use of technology

- Using student-based strategies, such as peer tutoring to enhance and reinforce technology learning for all students

- Offering a broad range of technology options suited to diverse abilities; e.g. research, writing, reading, publishing

- Integrating technology into learning in a meaningful way

- Creating opportunities for interaction with others outside the classroom through the use of technology strategies such as distance learning

- Providing opportunities for students to practice, grow and expand their skills in a technology environment

- Encouraging students to enrich their learning through the use of technology through discovery

- Engaging in staff development opportunities

- Reflecting on the value of technology as a learning tool in the classroom

Using Assessments in Differentiated Classrooms

Teachers in differentiated classrooms use a range of assessments including:

- Exhibitions
- Portfolios
- Written tests
- Presentations
- Student-created tests/quizzes/exams
- Formal papers
- Self-assessments
- Learning logs
- Anecdotal reports
- Observations
- Collaborative exams
- Take-home exams
- Labs
- Journals
- Miscue Analysis/Records
- Essays
- Reflective papers
- Debates
- Score sheets
- Puzzles and games
- Surveys
- Models
- Photographic essays
- Collages
- Art work
- Questionnaires
- Interviews
- Focus Groups
- Daily work/selected work samples

Kluth, Paula (2000)

Differentiating Instruction for Gifted Students

Curriculum Compacting

Curriculum compacting is one of the most common forms of curriculum modification for academically advanced students. Based on an article by Del Siegle, entitled Curriculum Compacting: A Necessity for Academic Advancement in the Fall 1999 Newsletter from The National Research Center on the Gifted and Talented at the University of Connecticut in Storrs, Connecticut, there are eight basic steps to curriculum compacting.

1. Determine the learning objectives for the material.
2. Find an appropriate way to assess those objectives.
3. Identify students who may have already mastered the objectives (or could master them more quickly).
4. Assess those students to determine their mastery level.
5. Streamline practice or instruction for students who demonstrate mastery of the objectives.
6. Provide small group or individual instruction for students who have not yet mastered all of the objectives, but are capable of doing so more quickly than their classmates.
7. Offer more challenging academic alternatives based on student interest.
8. Maintain a record of the compacting process and instructional options provided. (Reis, Burns, & Renzulli, 1992a)

The article goes on to state that educators new to the process should consider the following recommendations.

- Start with one or two responsible students.
- Select content with which they feel comfortable.
- Try a variety of methods to determine student mastery of the material (a brief conversation with a student may be just as effective as a written pretest).
- Compact by topic rather than time.
- Define proficiency based on a consensus with administrators and parents.
- Don't be afraid to request help from available sources such as community volunteers. (Reis, Burns, & Renzulli, 1992b)

The article concludes that curriculum compacting works best when adopted by a school district as a regular part of good teaching practices. When superintendents, principals, and other administrators support and encourage the process it is certainly much easier. All students, including those who are academically advanced, are entitled to an education in which instruction is geared to their needs, interests, and developmental levels.

References

Plucker, J. A., & McIntire, J. (1996). Academic survivability in high-potential, middle school students. *Gifted Child Quarterly*, 40, 7-14.

Reis, S. M., Burns, D. E., & Renzulli, J. S. (1992a). *Curriculum compacting: The complete guide to modifying the regular curriculum for high ability students*. Mansfield Center, CT: Creative Learning Press.

Reis, S. M., Burns, D. E., & Renzulli, J. S. (1992b). *A facilitator's guide to help teachers compact curriculum*. Storrs, CT: University of Connecticut, The National Research Center on the Gifted and Talented.

Renzulli, J. S., & Reis, S. M. (1985). *The Schoolwide Enrichment Model: A comprehensive plan for educational excellence*. Mansfield Center, CT: Creative Learning Press.

Starko, A. J. (1986). *It's about time: Inservice strategies for curriculum compacting*. Mansfield Center, CT: Creative Learning Press.

Effective Instructional Practices for Students with Disabilities

VESID continues its efforts to support students with disabilities through identification of instructional practices based on research and/or solid evidence that demonstrates the effectiveness of the instructional program or practice. The purpose of identifying effective practices is to encourage schools to learn from each other how to replicate those instructional programs and practices that improve the performance and achievement of students with disabilities within a continuum of learner styles. Teachers should adjust learning strategies to meet the diverse needs of all students. Practices which support the implementation of differentiated instruction in the classroom focus on:

- Collaboration between general and special educators;
- Curriculum modifications;
- Supplemental instructional programs;
- Innovative scheduling;
- Innovative delivery of related services;
- Peer support and cooperative learning strategies;
- Thematic instruction;
- Systems of positive behavioral supports and services; and
- Supporting students as they transition to less restrictive settings.

A full listing of schools that have implemented these practices can be found on VESID's web site at: http://web.nysed.gov/vesid/sped/effective/effecmain.html.

Differentiating Instruction: Resources

Campbell, L., Campbell, B., & Dickinson, D. (1999). <u>Teaching and learning through multiple intelligences</u>. Needham Heights, MA: Allyn & Bacon.

Cole, R. (1995). (Ed.). <u>Educating everybody's children: Diverse teaching strategies for diverse learners</u>. Alexandria, VA: Association for Supervision and Curriculum Development.

Educational Leadership. (September 2000). <u>How to differentiate instruction</u>. Volume 58, Number 1. Alexandria, VA: Association for Supervision and Curriculum Development.

Janney, R., & Snell, M. <u>Modifying schoolwork</u>. Baltimore, MD: Brookes.

Putnam, J. (Ed.). <u>Cooperative learning and strategies for inclusion</u>. Baltimore, MD: Brookes.

Tomlinson, C. (1995). <u>How to differentiate instruction in mixed-ability classrooms</u>. Alexandria, VA: Association for Supervision and Curriculum Development.

Tomlinson, C. (1999). <u>The differentiated classroom: Responding to the needs of all learners</u>. Alexandria, VA: Association for Supervision and Curriculum Development.

Winebrenner, S. (1996). <u>Teaching kids with learning difficulties in the regular classroom: Strategies and techniques every teacher can use to challenge and motivate struggling students</u>. Minneapolis, MN: Free Spirit.

Teacher Resources Related to Instruction of Students with Disabilities

Access to Courses and Tests

The Board of Regents and the New York State Education Department have made a strong commitment to ensure students with disabilities are included in the total school program, meet high standards and are integrated with their non-disabled peers. Students with diverse learning needs may require accommodations, program modifications or adaptations of instructional methods and materials to maximize their learning and/or adjust for their learning capabilities.

In order for students with disabilities to be prepared to take the new Regents examinations they must be taught the same content areas and participate in classroom, school and state-wide testing as do all other students. Students must also receive the appropriate special education supports, supplementary aids and services and testing accommodations they need in order to be successful in achieving and demonstrating their knowledge of the general education curriculum.

Safety Net for Students with Disabilities

The Board of Regents ensures a safety net for students with disabilities during the phase-in period of requiring all students to take and pass five Regents examinations in order to graduate. During the phase-in period, students receiving special education services and entering 9th grade between September 1996 and September 2000 will take each Regents exam required for their entering class. Students who fail a Regents exam required for their class will be allowed to take the Regents Competency Test (RCT) in that subject and receive a local diploma. The student may take the RCT before or after the Regents examination. For some students, an Individualized Education Program (IEP) diploma is available based on satisfactory completion of the goals and objectives on the student's IEP.

Resource Materials

Deciding What to Teach and How to Teach It: Connecting Students Through Curriculum and Instruction, Castagnera, E., Fisher, D., Rodifer, K., and Sax, C. Peak Parent Center, Colorado Springs, Colorado, 1998. (phone - 800 - 284-0251) www.peakparent.org

Adapting Curriculum and Instruction in Inclusive Classrooms: A Teacher's Desk Reference, 2nd Edition, The Center for School & Community Integration, Institute for the Study of Developmental Disabilities, Bloomington, Indiana, 1999 (phone - 812-855-6508)

Web sites with additional information regarding students with disabilities:

Special Education Training and Resource Centers (SETRC):
   www.vesid.nysed.gov/lsn/setrc.htm

Effective Practices:
   http://web.nysed.gov/vesid/sped/effective/effecmain.html

Resources on the inclusion of students with disabilities into general education classrooms:
   http://systemschange.syr.edu

Assistive Technology:
   http://go.to/trecenter