Appendix: Tools to Guide Planning for Differentiated Instruction

Tool 1: Elements, Attributes, and Instructional Strategies for Effective Differentiation

This tool presents a general model for thinking about how to differentiate instruction in diverse classrooms. First, it summarize, the characteristics of the quality **content, processes** (or sense-making activities), and **products** (summative assignments or other authentic assessments) that all learners should experience. These requirements should be at the center of all teacher planning, whether the teacher is thinking about how to present content, develop processes, or create assignments for the whole class or in response to specific student readiness levels, interests, or learning profiles.

Following each set of requirements are sample instructional strategies a teacher can use to differentiate content, processes, and products in response to readiness, interest, or learning profile. Although these lists are not exhaustive, they do reflect a current understanding of effective educational process. Note that all instructional strategies should be appropriate for both content requirements and student needs.

Effective Differentiation: Elements, Attributes, and Instructional Strategies

Content Requirements	Process Requirements	Product Requirements
• Clear goals for knowledge, understanding, and skill (KUDs) • Concept and understanding based • High relevance • Engaging • Coherent • Transferable • Powerful • Authentic to the discipline • Multiple modes of teaching and student "intake"	• Clear goals for knowledge, understanding, and skill, tightly aligned with content KUDs • Concept and understanding based • Focused • High level • Purposeful • Aims at transfer • Balances critical and creative thought • Promotes metacognition • Multiple modes of expression	• Clear goals for knowledge, understanding, and skill, tightly aligned with content KUDs • Concept and understanding based • Skills of planning taught and required • Skills of production taught and required • Requires integration and transfer of all key content KUDs • Authentic problems, real audiences • Multiple modes of expression

Strategies for Differentiating Content	Strategies for Differentiating Process	Strategies for Differentiating Product
• Multiple texts and supplementary print resources • Varied internet resources • Varied audio and visual resources • Varied support mechanisms for reading • Modeling/demonstrations • Varied time allotments • Interest-based materials • Small-group instruction • Mini-workshops • Multiple teaching modes • Etc.	• Tiered assignments • Learning centers • Interest centers • Graphic organizers • Tri-mind options • Models of student work at different degrees of complexity • Varied modes of exploration and expression • Varied working arrangements • Learning contracts • Simulations • Complex instruction tasks • RAFT assignments • Literature or discussion circles • Web quests/web inquiry • Etc.	• Complex instruction products • Tri-mind options • Varied working arrangements • Varied resource options • Community-based products • Mentorships • Independent study • Orbital studies • Graduated rubrics • Varied modes of expression • Use of varied media • Tiered product assignments • Varied scaffolding • Web quests/web inquiry • Etc.

Tool 2: The Equalizer

This tool, designed to resemble the controls on audio equipment that a listener can slide to the left or right to adjust tone, volume, balance, and so on, is a useful model for thinking about and planning for **readiness differentiation.** The continuums of the Equalizer suggest "settings" that a teacher can adjust in an effort to find the most appropriate challenge level for individual learners.

To differentiate for variance in learners' readiness levels for a particular task, a teacher should always begin with the goal of ensuring solid, focused, significant curriculum and instruction—content, processes, and products that meet the requirements articulated in Tool 1. With that established, the teacher can then think about moving one or more of the Equalizer controls toward the left (more basic) or right (more complex) to adjust the initial task for a learner's starting point. For example, a learner who knows a great deal about the planets and who reads quite well might need to use relatively complex research resources to prepare for tomorrow's presentation. A classmate who doesn't read well and whose background knowledge on planets is less extensive may need more basic research materials to prepare for the presentation.

The Equalizer: A Tool for Planning Readiness-Based Differentiation

1. Information, Ideas, Materials, Applications

Foundational  **Transformational**

2. Representations, Ideas, Applications, Materials

Concrete  **Abstract**

3. Resources, Research, Issues, Problems, Skills, Goals

Simple  **Complex**

4. Disciplinary Connections, Directions, Stages of Development

Single Facet  **Multiple Facets**

5. Application, Insight, Transfer

Small Leap  **Great Leap**

6. Solutions, Decisions, Approaches

More Structured  **More Open**

7. In Process, in Research, in Products

Clearly Defined Problems  **Fuzzy Problems**

8. Planning, Designing, Monitoring

More Structured  **More Open**

9. Pace of Study, Pace of Thought

Slower  **Quicker**

As with an audio equalizer, it is not necessary to move all the controls at the same time. It's also important to note that students who may need several Equalizer controls moved toward the left when they begin work on a topic or skill should, as a unit progresses, need activities and products that steadily reflect movement of the controls toward the right in order both to reflect their growth and to support further growth. This progression should be the case for all students in a class, regardless of their point of entry into a topic of study.

Please note that these continuums are not exhaustive; in fact, it's a good reflective exercise for teachers to think about what they do to make tasks appropriate for the varied learners in their own classroom and then create additional continuums to customize the Equalizer.

Tool 3: Equalizer Descriptors

This tool is designed to help teachers and curriculum developers consider **ways to modify curriculum and instruction along the various continuums in the Equalizer in response to learner readiness.** For example, if a learner is struggling with a particular idea or skill, a teacher may want to design a task for that child that is *foundational* (basic). The key to getting one student to make the necessary mental connections or complete an application activity may be to ask him to work with an idea or skill in a way that is familiar—perhaps largely like the examples covered in a textbook or discussed in class or resembling personal experience. However, a learner in the same classroom who is already comfortable with the idea or skill may be ready to apply it in a way that is *transformational*—meaning, removed from text and class examples or removed from personal experience.

Remember that the goal of readiness differentiation is to provide students with work that is meaning-rich or understanding-focused and set at a challenge level that requires them to stretch themselves. Simultaneously, teachers must plan the scaffolding, or supports, students need in order to meet the challenge and reach the new, higher level. Once that happens, it is time to slide the Equalizer controls to the right so that the challenge, once again, seems a bit out of reach—and so that, once again, with appropriate support or scaffolding, all students can succeed.

Thinking About the Equalizer

1. Information, Ideas, Materials, Applications

Foundational	Transformational
• Close to text or experience	• Removed from text or experience
• Export idea and skill to similar or familiar setting	• Export idea or skill to unexpected or unfamiliar setting
• Use key idea or skills alone	• Use key idea or skill with unrelated idea or skill
• Fundamental skills and knowledge emphasized	• Use but move beyond fundamental skills and knowledge
• Fewer permutations of skills and ideas	• More permutations of skills and ideas

2. Representations, Ideas, Applications, Materials

Concrete	Abstract
• Hold in hands or hands-on	• Hold in mind or "minds on"
• Tangible	• Intangible
• Literal	• Symbolic or metaphorical
• Physical manipulation	• Mental manipulation
• Event based	• Idea based
• Event to principle	• Principle without event
• Demonstrated and explained	• Not demonstrated or explained

3. Resources, Research, Issues, Problems, Skills, Goals

Simple	Complex
• Use idea or skill being taught	• Combine idea or skill being taught with those previously taught
• Work with no, one, or few abstractions	• Work with multiple abstractions
• Emphasizes appropriateness	• Emphasizes elegance
• Requires relatively less originality	• Requires relatively more originality
• More common vocabulary	• More advanced vocabulary
• More accessible readability	• More advanced readability

4. Disciplinary Connections, Directions, Stages of Development

Single Facet	Multiple Facets
• Fewer parts	• More parts
• Fewer steps	• More steps
• Fewer stages	• More stages

5. Application, Insight, Transfer

Small Leap	Great Leap
• Few unknowns	• Many unknowns
• Relative comfort with most elements	• Relative unfamiliarity with many elements
• Less need to change familiar elements	• More need to change familiar elements
• Requires less flexible thought	• Requires more flexible thought
• Few gaps in required knowledge	• Significant gaps in required knowledge
• More evolutionary	• More revolutionary

Thinking About the Equalizer (*continued*)

6. Solutions, Decisions, Approaches

More Structured	More Open
• More directions or more precise directions	• Fewer directions
• More modeling	• Less modeling
• Relatively less student choice	• Relatively more student choice

7. In Process, in Research, in Products

Clearly Defined Problems	Fuzzy Problems
• Few unknowns	• More unknowns
• More algorithmic	• More heuristic
• Narrower range of acceptable responses or approaches	• Wider range of acceptable responses or approaches
• Only relevant data provided	• Extraneous data provided
• Problem specified	• Problem unspecified or ambiguous

8. Planning, Designing, Monitoring

More Structured	More Open
• More teacher or adult guidance and monitoring on - problem identification - goal setting - establishing time lines - following time lines - securing resources - use of resources - criteria for success - formulation of a product - evaluation	• Less teacher or adult guidance and monitoring on - problem identification - goal setting - establishing time lines - following time lines - securing resources - use of resources - criteria for success - formulation of a product - evaluation
• More teacher scaffolding	• Less teacher scaffolding
• Learning the skills of independence	• Demonstrating the skills of independence

9. Pace of Study, Pace of Thought

Slower	Quicker
• More time to work	• Less time to work
• More practice	• Less practice
• More teaching and reteaching	• Less teaching and reteaching
• Process more systematically	• Process more rapidly
• Probe breadth and depth	• Hit the high points

Once again, these descriptors are not definitive, and teachers are encouraged to expand those they find here and create new sets of descriptors for their own custom Equalizers by thinking about what they do to make tasks appropriate for the varied learners in their own classroom and adding descriptors that reflect their way of adapting task difficulty based on student readiness.