# Tools for High-Quality Differentiated Instruction

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What Differentiation Is and Is Not

As part of a pre-assessment for a science unit, students are filling out a chart that asks them to list or draw some examples of vertebrates and some nonexamples. Figure 1 shows how Miguel completed his chart.

From this, it looks at first like Miguel is on the right track. Each of the animals he lists in the left column has a backbone, the distinguishing characteristic of a vertebrate. But look at what he has put in the nonexample column. Miguel appears to have classified vertebrates as having something to do with animals he has seen at the zoo and invertebrates as those he might see on a farm. Fortunately, his teacher asked for examples and nonexamples and is now armed with the knowledge that Miguel has some misconceptions about vertebrates that will need to be addressed!

Just as students can have misconceptions about what they are learning, educators can have misconceptions about differentiated instruction. To be sure that we understand what differentiation is, let's begin by considering what differentiation is not.

What Differentiation Is Not

First of all, differentiation is not a new idea. The terms used in this model of instruction may be new to some, but the fundamental philosophy of differentiation—recognizing and responding to students’ varied needs—is not.
Think about the teacher in the one-room schoolhouse who had multiple grade levels in her charge. She had to differentiate her instruction to be effective, even though she certainly did not use this term.

Second, differentiation is not the same thing as individualized instruction, although individualized instruction can be seen as a type of differentiation. In the differentiated classroom, teachers recognize that each student is an individual and therefore has specific needs that may vary from his neighbor’s. But teachers also realize that, given the time constraints they face and the large number of students they deal with on a daily basis, it will be impossible to individualize everything for each student. Nevertheless, these teachers strive to have a few learning options for as much of the instruction as they can, knowing that doing so will provide each student with a better match than a one-size-fits-all classroom could offer.

Third, differentiation of instruction is not a newfangled version of tracking. A lot of discussion exists in education about the equity and efficacy of assigning students to separate tracks of classes. Critics often see such classes as unequal in terms of richness of curriculum and student performance expectations. Particularly, educators worry about students whose test scores, grades, or behavior patterns may keep them from being included in advanced-level or college-prep coursework, severely limiting their future career and educational options.

While tracked classrooms are themselves not as homogeneous as we tend to think and thus need differentiation as well, differentiated classrooms are purposefully heterogeneous. Teachers in differentiated classrooms recognize and rejoice in the heterogeneous mix of student interests, learning profiles, and readiness that is present and dedicate themselves to addressing these differences as often as possible. These teachers believe that a rich, stimulating, and challenging curriculum can be made available to all students in every classroom through the use of flexible grouping in terms of student interests, learning profiles, and readiness.

A fourth misconception about differentiation is that all students do in the differentiated classroom is work in groups, leaving no place in this model for whole-group teaching and lecture. On the contrary, we see a variety of grouping configurations in action in the differentiated classroom, including whole-class, small-group, and individual work. The teacher’s decision whether or not to group students on a particular day depends most upon the thoughtful consideration of the desired learning outcomes and specific learner needs to determine appropriate instructional strategy. For a particular activity in a differentiated classroom, some students may work in small groups while others work alone or with a partner.

A fifth misconception is that in the differentiated classroom, students work only in ways that are comfortable for them or on topics of interest to them. Teachers worry that this practice will encourage students to stay in their comfort zone and will not teach them to adapt to situations in which their preferences can’t or won’t be taken into account. On the contrary, teachers in a differentiated classroom are keenly aware of their responsibility to balance attention to students’ current interests and comfortable learning modalities with an introduction to new interests and practice with unfamiliar learning modalities. Thus teachers consciously decide about when it is most appropriate to indulge student preferences and when it is better to ask them to stretch.
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Tool: Who Am I?

This tool asks students to individually assess themselves on a variety of classroom and life skills and to share their assessments with the class. The self-assessment will help students to see that they have both strengths and weaknesses. Sharing the assessments will not only help everyone to get to know each other but it will also give students a visual illustration of why differentiation is necessary.
**Section:** Getting to Know One Another

**Who Am I?**

Ask students to rate themselves on a scale from 1 to 10 for a variety of classroom and life skills and color in the boxes on the chart to make a bar graph. (Alternately, you can provide descriptors for various levels such as: “I’ve never even heard of this”; “I can sort of do this”; “I can do this”; “This is easy for me.”) See below for a list of suggested skills from which you can choose according to the grade level and backgrounds of your students. Be sure that you include some skills that are not traditional school skills. The point of the exercise is to have students notice that they have both strengths and weaknesses. If you include only school subjects, some students will rate themselves low or high across the board and miss this important message. Consider leaving one or more attribute boxes empty, and ask students to fill in other skills that they would like to rate themselves on.

Some skills you could use for this activity are:

- Adding in your head
- Adding on paper
- Asking questions in class
- Brainstorming ideas
- Building a snowman
- Caring for animals
- Cleaning up your area
- Conducting experiments
- Cooking
- Dancing
- Dividing
- Diving
- Drawing
- Drawing comics
- Driving a car
- Eating healthy
- Exercising
- Fixing something that is broken
- Following directions
- Gardening
- Giving directions
- Graphing
- Hiking
- Hitting a baseball
- Ice skating
- Kayaking
- Keeping a diary
- Keeping up with current events
- Keeping your room neat
- Listening to directions
- Making a speech
- Making change
- Making friends
- Making up stories
- Miniature golf
- Multiplying
- Painting
- Playing an instrument
- PowerPoint
- Reading
- Reading a map
- Riding a bike
- Rotating objects in your head
- Running
- Singing
- Skateboarding
- Snow skiing
- Speaking a language other than English
- Subtracting
- Talking in front of a group
- Talking to teachers
- Telling jokes
- Turning in your homework on time
- Walking a balance beam
- Water skiing
- Word processing
- Working alone
- Working in a group
- Writing poems
- Writing stories
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**Skills:**
Once students have completed their graphs, post them around the room and talk about the many ways that they differ and what that might mean for the differentiated classroom.

For a variation on this activity, post large cards around the classroom or some other space. Each card should have a number from one to five. Ask students to move to the card number that represents their skill or interest in something, with 1 representing the least interest or skill and 5 the greatest. Pause occasionally for students to discuss with one another why they rated themselves the way they did.
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**Tool:** Should I Differentiate My Unit Test?

First, review the lists at the beginning of the tool for some common concerns and thoughts about differentiating tests that teachers who differentiate instruction often have. Then, complete the chart as indicated.

<table>
<thead>
<tr>
<th>SECTION</th>
<th>SUMMATIVE ASSESSMENT</th>
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Should I Differentiate My Unit Test?

The idea of differentiating tests often raises concerns among teachers. Below are some common concerns expressed by educators, followed by thoughts that arise from the principles and practices of differentiation. As you read those ideas, take time to reflect on your own beliefs and concerns about differentiated tests.

Common Concerns
- Won’t students feel it is unfair to have different tests?
- Am I enabling struggling students by giving them an easier test? Won’t that give them an incorrect view of what they know?
- Won’t the advanced students resent getting a “harder test”? What if they get a lower grade as a result?
- Parents wouldn’t understand.
- My tests have to reflect standards, and standards aren’t differentiated!
- I don’t have time to differentiate my tests!

Common Thoughts
- If I believe in differentiating what and how students learn in a unit of study, it seems logical to differentiate the corresponding test.
- All students should have an opportunity to feel successful at the culminating point of a unit.
- All students should have an opportunity to show and feel proud of the growing they have done throughout a unit of study.
- Good differentiated tests should first and foremost measure the unit KUD, no matter what interests they may target, what learning profiles they tap into, or what readiness level at which they ask students to work.
- If student work over the course of a unit has reflected varied interests, then I owe it to the students to allow or encourage that variation to come through in the unit test.
- Some students have difficulty showing all that they know, understand, and can do on a traditional paper and pencil test. If the format of all or part of the test is not crucial to my goals, then why not offer a choice? If it doesn’t matter if students diagram or write an explanation, I think I should try to let them do what will help them best demonstrate their learning.
- There are some parts of a test that I probably shouldn’t or can’t differentiate.
- All students need opportunities to practice the standard test-taking skills that will be important throughout their school years.
- I don’t have time to differentiate everything in my unit, but I can make a long-term plan to add to my differentiation repertoire over time.
Use the column on the left to list reasons for differentiating tests. In the center column, list your worries about doing so. In the column on the right, brainstorm some ways around the issues you might encounter should you decide to differentiate a test or other form of summative assessment.

<table>
<thead>
<tr>
<th>Justification</th>
<th>Worries</th>
<th>Approaches/Solutions</th>
</tr>
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Ensuring Common Goals

Articulating appropriate KUD goals for a unit or lesson is a vital step in setting the stage for high-quality differentiation because all variations of a good differentiated activity should lead to the same or very similar KUD goals. The tools and samples in this section give you the opportunity to analyze sample differentiated activities in numerous subject areas and how they lead to stated KUD goals. Here are some tips to remember when reviewing differentiated activities:

1. Differentiated or not, does this represent good curriculum? Is the task worthy of teacher and student time?
2. Does each task appear to lead to the same goals (KUD)?
3. Do the differentiated tasks seem equally respectful, or do some feel “dumbed down” or “fluffy”?
4. Do all tasks require the students who will do them to stretch as much as possible?

To be respectful, activities must be designed with the student in mind. That is, we cannot make decisions about how (or if) we should differentiate without considering our audience: the students. Some of these tools include sections that may be used to plan differentiated activities and to help you think about issues that may come up as you carry out your plans.
Analyzing Sample Tasks and Goals

Samples:  Secondary Social Studies: New World Explorers
 secondary Science: Planet Show and Tell 1
 secondary Science: Planet Show and Tell 2
 Physical Education: Soccer Skills
 Elementary Science: Performance Assessment
 Elementary Language Arts: Writing Prompts
 Math: Fraction Cards

The samples in this section provide examples of differentiated learning activities and assessments in general subject areas and grade levels. As you read each example, focus on how each of the differentiated tasks addresses the KUD goals for the lesson or unit. Each sample includes questions to focus your analysis and commentary (the author’s responses to questions) to help you expand your thinking.
Section: Ensuring Common Goals

Secondary Social Studies: New World Explorers

<table>
<thead>
<tr>
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<th>UNDERSTAND</th>
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<tbody>
<tr>
<td>• Names of New World explorers</td>
<td>Exploration involves</td>
<td>• Conduct research</td>
</tr>
<tr>
<td>• Key events during the explorers’ travels</td>
<td>• risk</td>
<td>• Share results</td>
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<tr>
<td>• Explorers’ contributions</td>
<td>• costs and benefits</td>
<td>• Demonstrate key knowledge and understandings</td>
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This activity serves as a summative assessment at the conclusion of a unit. Students are assigned either the task on the left or the one on the right.

Using the list of resources and list of product options that I have provided, show how two key explorers took chances, experienced success and failure, and brought about both positive and negative change. Provide evidence.

Using reliable and defensible research, develop a way to show how New World explorers were paradoxes. Include the unit’s principles, but also go beyond them.

Think About:

1. Study the version on the left. What about this activity makes it good curriculum for all students? Is this activity differentiated? Explain your thinking.

2. Study the example on the right. What makes this version more difficult than the one on the left?

3. In what ways does each activity lead students to the same KUD goals? How might you strengthen that bond?

4. Imagine you have students who would struggle with both of these versions. How could you rewrite the activity so that it is appropriate for these students but still meets the KUD goals?
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Exploring Jigsaws

Sample: Jigsaw for AP Psychology

Tool: Jigsaw Planner

The sample shows you an example of a jigsaw activity for an advanced psychology class. The tool gives you tips for creating jigsaws and an opportunity to develop your own. Remember that for a jigsaw activity to succeed, students must be able to work effectively in groups, with all students taking responsibility for learning and contributing to the group’s understanding. Discussion modeling practice, teacher feedback, and group assessment of how well they functioned together will help students develop these skills.
**Section: Using Flexible Grouping**

**Jigsaw for AP Psychology**

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<td>Major theories of learning</td>
<td>Not all theories of learning are compatible. Theories tend to have both advocates and detractors. For theories to be respected in the scientific community, they must be backed by research.</td>
<td>Compare and contrast theories, and critique their relative strengths and weaknesses.</td>
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**Directions:**

1. Yesterday, you each ranked your interest in four theories of learning. I have used that information to place you into expert groups. Each member of your expert group will be responsible for reading the packet of articles about your theory and its applications in the classroom. Place sticky note flags to indicate places in the article about which you have questions or that you would like to explore with other expert group members.

2. Discuss the articles with your group members. As you discuss, fill out the appropriate row in your graphic organizer. Appoint a discussion leader, who will use the questions below to guide discussion:
   * What is this theory? How, where, and when did it come about?
   * What is the intent or purpose of this theory?
   * What are the particular strengths and weaknesses of this theory?
   * How has this theory been implemented in schools? Where? With what results?

   Note: All individuals should go away from this discussion confident in their ability to effectively teach the theory and answer questions about its use in the classroom.

3. Next, you will regroup so that each group has an expert in all four theories. For each theory, devote _____ minutes (Appoint a timer!) to explaining, discussing, and critiquing the theory. Fill out your graphic organizer so that you have notes on all four theories. Spend the last _____ minutes comparing the theories. What do they have in common? How do they differ? Share which theory appeals most to each of you, and explain your thinking.

**Author’s Commentary:**

- Note that this jigsaw differentiates to a certain extent for varied student interest in a particular theory of learning. In this situation, because the teacher needed all theories to be equally represented, she may not have been able to give everyone his or her first choice.
- If some of the articles or theories were more difficult than others, perhaps she could have chosen to assign expert groups according to readiness.
Think About:

- Check and recheck your instructions for clarity and accuracy. Jigsaws can get complicated due to their multiple parts, especially when carried out over more than one day. Give each student a set of written directions.
- Discussion questions and note-taking guides or graphic organizers can help keep students on track and accountable.
- Physically separate the groups as much as possible, given your classroom space, so that groups will be less distracted by other groups’ discussions.
- Roam around the room and listen carefully to group discussions. During the expert group discussions, make sure to check in with each group to ensure they do not have any unanswered questions or misconceptions about the theory. You don’t want the student experts to teach incorrect information to their mixed groups. As you get more practice with jigsaws, you will find that your ears become attuned to misinformation, and you can begin to catch it fairly quickly, even when you have lots of groups in the room.
- If the jigsaw occurs over more than one day, make a plan for what you will do if a group member is absent or unprepared.
- Jigsaws seem to work best when the topics have enough commonalities that what students learn by becoming an expert in one topic easily transfers to other topics, especially in terms of big ideas.

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<th>KNOW</th>
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<th>BE ABLE TO DO</th>
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Topics for each expert group:
Task directions:

Materials and resources for each group (books, articles, Web sites, graphic organizers, note-taking aids, etc.):

Expert group assignments:
- Teacher-assigned by readiness
- Student choice

Roles:
- Discussion facilitator
- Timer
- Resource coordinator
- Other: ______________________________________________

Key questions each group must discuss:

Double-check—will the activities you’ve designed help all students reach the KUD goals after the home teams have reconvened?
References and Resources

References


**Resources**


Kiernan, L. J. (Producer). (2004). Instructional strategies for the differentiated classroom


