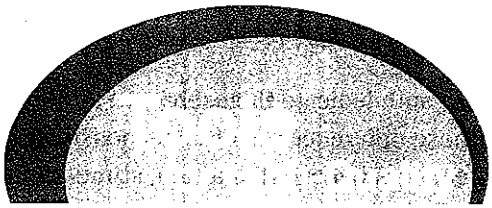
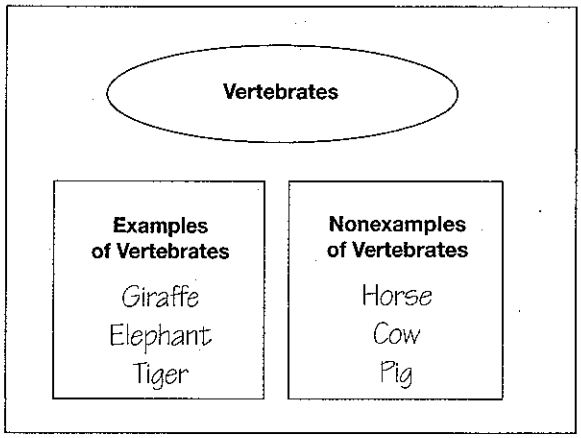


DIFFERENTIATED INSTRUCTION

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.

Figure 1 **Miguel's 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.

The sixth misconception is subtle, yet important: many teachers believe that they already differentiate because they vary their teaching style. It clearly is good teaching practice to vary teaching style so that students with a particular learning style or preference are not at a constant disadvantage in the classroom. However, teachers in differentiated classrooms take this principle a step further by recognizing that, on some days, it would be better for some students to experience one style while others experience a different style. Thus, they come prepared with more than one way for students to experience, practice, or produce. In other words, on the same day, visual students might work primarily visually, auditory students might work auditorily, and kinesthetic students might work kinesthetically.

A final, related misconception about differentiation concerns the common teaching practice of altering a lesson plan on the spot when it becomes clear that it is not working for a particular student or group of students. This often happens when we notice that some students are struggling to succeed, while others appear to have already mastered the material or tasks we have set before them. Making appropriate changes to our plans "on the fly" is clearly an important teaching practice. In the differentiated classroom, however, teachers strive to be more *proactive* than *reactive* in planning for student variation. They consider the varied needs they are likely to encounter before they walk in the classroom door and come prepared with variation in content, process, and product to meet these needs.

What Differentiation Is

Six terms are key to understanding the differentiation model. The first three are familiar to most of us. In the differentiated classroom, a teacher typically differentiates content, process, or (culminating) product, or some combination of these three. In general, content differentiation involves varying *what* we teach or *how* students gain access to that content; process differentiation involves providing varied opportunities for students to process or make sense of that content; and product differentiation involves allowing students to show, in varied ways, what they know, understand, and are able to do. It is typical for teachers new to the differentiation model to focus their differentiation on only one of these elements of curriculum. Over time, however, teachers find that to best meet student needs, they often need to differentiate more than one element for a particular unit of study. See Figure 2 for some common examples of how teachers differentiate content, process, and product.

The final three terms that are key to understanding and practicing differentiation refer to the major ways students seem to vary: by interest, learning profile, and readiness. Interest refers to both general interests that a student has and specific interests she may find fascinating within a discipline or topic; when we can interest a student in what we are teaching, we maximize her motivation to learn. Learning profile includes a number of concepts related to how a student likes to learn. Learning and thinking styles, multiple intelligences, culture, gender, and environmental preferences are all part of this aspect of differentiation. When we allow students to work in ways that are comfortable for them, we maximize their learning efficiency. Readiness refers to a complex set of factors that affect the level of difficulty at which students are ready to learn and the rate at which they grow. Readiness

Figure 2 **Differentiating Content, Process, and Product**

Content	• Leveled or topical readers • Books on tape • Highlighted text • Varied topics for research • Independent study options • Interest centers • Optional minilessons on a specific topic or skill • Compacting the curriculum • Online extension activities • Mentors
Process	• Opportunity to work alone, in pairs or in small groups • Group roles when in small groups • Literature circles roles • Varied journal prompts • Choice of review activities • Supportive technology • Amount or kind of teacher help available • Various types of graphic organizers and supporting documents (vocabulary, formulas, key dates, etc.) • Homework options ("Do this section if you need more practice on . . . " or "Do this section if you feel ready for a challenge.")
Product	• Product options that respond to varied interests or learning profiles • Varied timelines or check-in points • Varied criteria for success (e.g., from novice to professional) • Varied audiences (in age, background knowledge, size, etc.) • Varied roles in a performance assessment • Some choice of questions on tests and quizzes

is not synonymous with ability, although a student's ability is likely to play a role in her readiness. However, there are numerous other factors that affect student readiness, including whether or not a student's basic needs are being met outside—and inside—the classroom, physical and emotional developmental factors, her previous exposure to a topic, her physical and mental health on a particular day, whether or not she has made a connection with the teacher, and so forth. In fact, we might even collapse interest and learning profile into the readiness category, as students are more ready to learn if they are interested in a topic and if that topic is presented and practiced in ways that are comfortable to them. Figure 3 offers some common ways teachers can address student variance in interest, learning profile, and readiness.

In sum, differentiation should be viewed as good teaching that attends as often as possible to differences in student readiness, interest, and learning profile with the intent of maximizing student growth, motivation, and efficiency of learning (see Figure 4).

Figure 3 **Addressing Interest, Learning Profile, and Readiness**

Area of Variation	Teacher Talk That Responds to the Variation
Interest	• What are some things that *you* hope we do during this unit? • On yesterday's exit card, several of you asked how this technique helps architects save time and effort. • For those of you who are interested in finding out more about the fourth state of matter, I put some magazines on the topic in the resource center. • Some of you raise horses and are wondering how the life cycle of a horse compares to the life cycle of humans. • I want you to research the Spanish-speaking country that you would most like to visit someday. Later, we'll share what we learned in mixed-interest groups. • Darius is planning to show his understanding of balance of powers in the United States by sharing information about the government in his homeland. • Amanda, I've found someone at the local university who is willing to have you work with him in his lab.
Learning Profile	• To write your newsletter, you will need someone who is a good artist, someone who is a good writer, someone who is a good researcher, and someone who is a good organizer. • It doesn't matter to me *how* you show me that you know the parts of a plant and how they work together to keep the plant healthy. You could tell or show me or draw or write about it. • As long as you choose wisely, you may choose where and with whom to sit. • There are study carrels in the back if you need a quiet space to work. • As long as you do not distract others, you may bring in a drink or snack to eat during class. • To get started with today's work on alliteration in poetry, you may choose to listen to poems that use alliteration, read poems that use alliteration, or write a poem using alliteration. • You may present your final product in front of the class or to me via video or appointment. • Let's think, pair, and then share. • Last week, we broke into teams to see which team knew the most math facts. Today, I want you to work by yourself to improve your score or your time. • You will each take on a different role to debate the effect of current immigration policy.
Readiness	• Those of you who indicated a need for help in coming up with a topic for your short story, please meet over here, and I will help you brainstorm ideas. • If you rated yourself a novice in writing lab reports, start with this assignment. If you rated yourself an apprentice, try this other assignment. • If you feel that you have already mastered the material in this chapter, please see me to discuss an alternative project. • Please visit those stations that will most help you review for the test. • If you have trouble reading and following a map, you will find some bookmarked Web sites that will help you improve your skills. • If you feel that the work I am asking you to do is too hard or too easy, please write me a note. • There are vocabulary sheets available for those of you who need them. • I have put some sample projects in the back of the room so you can see how other students have approached this assignment in the past. • As you think about your independent research topic, browse this journal for some ideas that scientists in the field are currently tackling. • I have provided resources that are at varied levels of reading. Please use the techniques we have discussed to help you choose appropriately.

Figure 4 **What Differentiation Is and Is Not**