10

# THE How To's OF Planning Lessons Differentiated BY Learning Profile

Learning profile refers to ways in which we learn best as individuals. Each of us knows some ways of learning that are quite effective for us, and others that slow us down or make learning feel awkward. Common sense, experience, and research suggest to us that when teachers can tap into routes that promote efficient and effective learning for students, results are better. The goals of learning-profile differentiation are to help individual learners understand modes of learning that work best for them, and to offer those options so that each learner finds a good learning fit in the classroom.

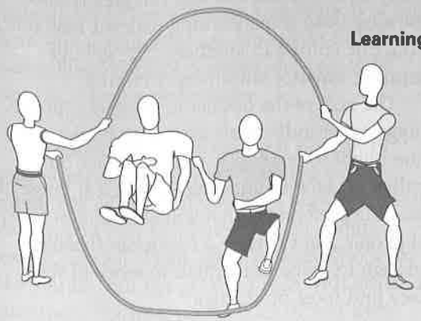
## The Categories of Learning-Profile Factors

There are four categories of learning-profile factors, and teachers can use them to plan curriculum and instruction that fit learners. There is some overlap in the categories, but each has been well researched and found to be important for the learning process. A student's learning style, intelligence preference, gender, and culture can influence learning profile. Figure 10.1 suggests some ways of thinking about learning profiles in students—and ourselves as educators, as well.

### Learning-Style Preferences

Learning style refers to environmental or personal factors. Some students may learn best when they can move around, others need to sit still. Some students enjoy a room with lots to look at, color, things to touch and try out. Other students function best when the environment is more "spare" because they find a "busy" classroom distracting. Some students need a great deal of light in a room in order to feel comfortable. Other students prefer a darker room. Some students will learn best through oral modes, others through visual channels, still

**Figure 10.1**
**Focus on Learning Profile**



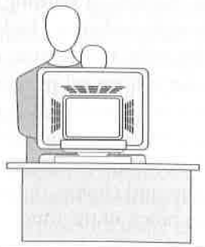
**Learning Profile Factors**


**Group Orientation**
independent/self-orientation
group/peer orientation
adult orientation
combination

**Cognitive Style**
creative/conforming
essence/facts
whole-to-part/part-to-whole
expressive/controlled
nonlinear/linear
inductive/deductive
people-oriented/task or object-oriented
concrete/abstract
collaboration/competition
interpersonal/introspective
easily distracted/long attention span
group achievement/personal achievement
oral/visual/kinesthetic
reflective/action-oriented

**Learning Environment**
quiet/noise
warm/cool
still/mobile
flexible/fixed
"busy"/"spare"

**Intelligence Preference**
analytic
practical
creative
verbal/linguistic
logical/mathematical
spatial/visual
bodily/kinesthetic
musical/rhythmic
interpersonal
intrapersonal
naturalist
existential



others through touch or movement. Although a teacher cannot manipulate all these elements, and other learning style components, all the time, it is possible for a teacher to give students some learning choices. It's also possible for a teacher to create a room with different "looks" in different portions of the room, or with differing working arrangements.

### Intelligence Preferences

Intelligence preference refers to the sorts of brain-based predispositions we all have for learning. Two theorist/researchers have proposed ways of thinking about intelligence preferences. Howard Gardner (1993) suggests that we each have varying strengths in combinations of intelligences he calls verbal linguistic, logical mathematical, visual spatial, musical rhythmic, bodily kinesthetic, interpersonal, intrapersonal, and naturalistic—and perhaps existential. Robert Sternberg (1985) suggests that we all have varying strengths in combinations of intelligences he refers to as analytic (schoolhouse intelligence, preference for learning in linear ways often typical of school), practical (contextual intelligence, preference for seeing how and why things work in the world as people actually use them), and creative (problem-solving intelligence, preference for making new connections, innovation). Indications are that when students approach learning in ways that address their intelligence preferences, results are quite positive.

### Culture-Influenced Preferences

Culture affects how we learn, as well. It can influence whether we see time as fixed and rigid or flexible and fluid, whether we are more effusive or reserved in expressing emotions, whether we learn best in a whole-to-part or a part-to-whole approach, whether we prefer to learn material that's contextual and personal or discrete and impersonal, whether we prefer to work with a group or individually, whether we most value creativity or conformity, whether we are more reflective or more impulsive—and many other preferences that can greatly affect learning. Also some learning patterns may differ from one culture to another; there is huge learning variance within every culture.

The goal of the teacher is, therefore, not to suggest that individuals from a particular culture ought to learn in a particular way, but rather to come to understand the great range of learning preferences that will exist in any group of people and to create a classroom flexible enough to invite individuals to work in ways they find most productive.

### Gender-Based Preferences

Gender also influences how we learn. As is the case with culture, there are learning patterns in each gender—but great variance, as well. Whereas more males than females may prefer competitive learning, for example, some males will prefer collaborative learning and some females will prefer competition. Some of the same elements that are influenced by culture can also be influenced by gender (for example, expressiveness versus reserve, group versus individual orientation, analytic versus creative or practical thinking, and so on).

### Combined Preferences

Combinations of culture and gender will create unique constellations of learning preferences in individuals. Patterns of learning preference are certainly complex when we look at an individual's learning style; intelligence; culture-influenced, gender-influenced preferences. A sensitive teacher understands that her students may have learning preferences much like or much different than that of the teacher and tries to create options and choices that make everyone comfortable much of the time.

## Some Guidelines for Learning-Profile Differentiation

Though there is no single way of ensuring that students get to learn in ways that work best for them, some guidelines are broadly useful in establishing classrooms responsive to a wide range of learning preferences.

• **Remember that some, but not all, of your students share your learning preferences.** For example, if you are a highly auditory learner, you may be prone to be an auditory teacher, as well. That's great for kids who learn like you do, but not great for kids with visual or kinesthetic learning preferences. If you were successful in school, you may find analytic and part-to-whole learning a breeze. Some students in your class will like those approaches as well, but students who need more creative, contextual, and whole-to-part approaches may feel like they are working in a fog unless you stretch your own comfort zone and teaching repertoire.

• **Help your students reflect on their own preferences.** Give your students a vocabulary of learning-profile options. Let them know you're offering creative, practical, and analytic learning choices today—or that you've intentionally created both competitive and collaborative study formats—or that you're making a connection between whole-to-part (global, big idea) and part-to-whole (detail) portions of today's lab. Then invite students to talk about which approaches make learning most natural and effective for them. That's also a good opportunity to help students realize that not everyone in the class learns the same way, and that a good teacher works hard to honor many routes to learning, rather than only one.

teacher to think about using several intelligences as ways for students to explore or express ideas. Often, only the teacher can ensure flexible use of time or combination of presentation modes. Even when a teacher does not have time to structure or craft several learning-profile options for a lesson, much can be accomplished by asking students to make their own choices. Students can select modes of expression and decide whether to work alone or with a peer, to sit in a desk or curl up on the floor with a book, to accept inevitable classroom sounds or screen them out by using earplugs or headphones, and so on. When students are partners with teachers in making the learning environment a good fit, more is accomplished with less strain on the teacher.

• **Select a few learning-profile categories for emphasis as you begin.** We know a great deal about learning preferences—so much, in fact, that it can seem overwhelming. As you begin to differentiate your instruction in response to a range of learning-profile needs, select a few categories to emphasize in your planning. You may, for example, work with Sternberg's (1985) three intelligences as you create tasks; using both contextual and factual illustrations for your students, you may employ both visual and auditory approaches to sharing information with your students. That's enough to begin. Then, whenever possible, offer your students learning decisions that they can make to further craft the classroom to match their learning needs.

• **Be a student of your students.** It's very hard to "get inside someone else's skin." It's devilishly difficult to see life as someone who experiences the world differently than you do. We particularly fail many students whose cultural

works and doesn't work for them, and to invite them to make suggestions or pose alternatives that seem more promising. It's also useful to ask parents to provide insights into what works, or doesn't, when their students learn. If we can expand our vision beyond the parameters of our own private universe, we become more welcoming and effective teachers of children who inevitably inhabit private universes different from our own.

## A Glimpse at Strategies That Support Learning-Profile Differentiation

There are numerous instructional strategies that help us focus on students' learning-profile needs. Figure 10.2 lists a number of them. Here are brief explanations of a few strategies helpful in differentiating instruction in response to students' learning profiles.

**Complex Instruction.** This powerful strategy emphasizes teachers studying their students to determine which intellectual strengths each student brings to the classroom. The teacher then designs high-level, complex learning tasks that draw on the intellectual strengths of each student in a collaborative group (Cohen, 1994).

**Entry Points.** It is possible to encourage students to enter a topic or explore it through a learning preference (Gardner, 1993), thus making early experiences a good fit. Entry point explorations can be narrational (telling a story), quantitative (scientific approaches), foundational (looking at beliefs or frameworks of meaning at the core of the topic), aesthetic (sensory, arts-based approaches), or experiential (hands-on, personal opportunities to become involved).

**4-MAT.** This approach to planning suggests that varied learners would prefer (1) mastery of information, (2) understanding of key ideas, (3) personal involvement, or (4) creating something new related to a topic. A teacher using 4-MAT plans lesson sequences on a given topic in which each of the four preferences is stressed. This ensures that every student experiences the topic through a preferred approach and also has opportunities to strengthen learning in less preferred modes (McCarthy, 1996).

**Varied Approaches to Organizing Ideas.** It's important that students organize their thinking so they can make sense of ideas, communicate clearly, and retain and retrieve information. Often it's less important which approach to organization a student uses than that they have an organizational approach that works for them. When there's no compelling reason why all students must use the same organizational approach, encourage students to select from strategies such as summarizing, mind-mapping, concept mapping, storyboarding, or outlining. Of course, you'll have to ensure that all students understand the various options; but once that's accomplished, you'll quickly see some students gravitate to one approach while other students make different decisions. It's likely to be a learning-profile issue.

## Using Learning Profile to Differentiate Content, Process, and Product

As is true for readiness and interest, attending to learning profile provides teachers with a way to differentiate content, process, and product. Here are some examples.

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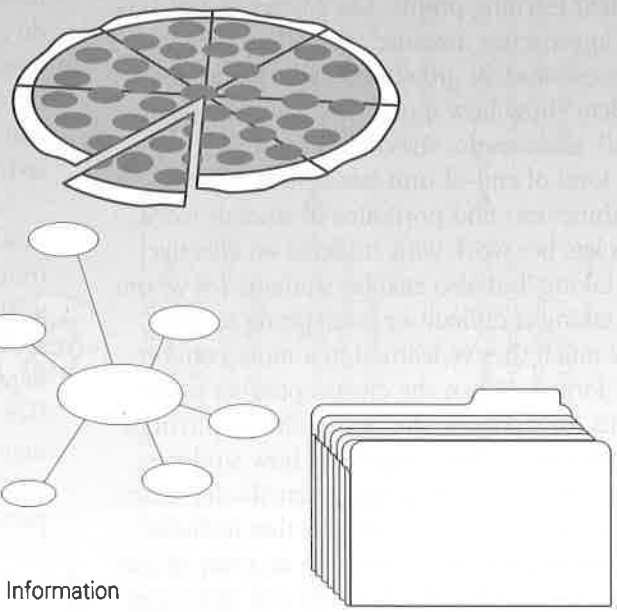
Ms. Lide sometimes differentiates content in ways likely to tap in to student-learning profile. She tape-records key materials (or has others do the recording) so that auditory learners can lis-

**Figure 10.2**
**Strategies That Support Learning-Profile Differentiation**

- ☑ Vary Teacher Presentation
  - ☑ auditory
  - ☑ visual
  - ☑ kinesthetic
  - ☑ whole-to-part
  - ☑ part-to-whole
- ☑ Vary Student Mode of Expression
  - ☑ Gardner's 8 or 9 intelligences
  - ☑ Sternberg's 3 intelligences
- Working Choice Arrangements
- 4-Mat
- Flexible Environment
- Complex Instruction
- Multiple Modes of Assessment
- Organizers
- Varied Approaches to Organizing Ideas and Information
- Entry Points



ten rather than being solely dependent on visual contact with materials. She also sometimes uses role-play just after the students have completed reading, asking students to volunteer to act out what they have read. She finds that kinesthetic learners like this more physical approach to comprehension. When introducing ideas to her students, she makes sure to use graphic organizers to show them how parts of their study fit the big picture of meaning. She also makes certain that she uses an overhead projector or flip chart as she talks so that students can hear and see ideas.

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to explore a math concept today. One approach might ask students to use words and pictures to create directions for how to solve the kind of problem that's the focus of the unit. A second approach might provide multiple versions of the problem to practice, with the opportunity to check answers for accuracy as they go along. A third option might entail students investigating how the kind of math problem could be used to solve a real-life dilemma. A fourth approach might ask students to use manipulatives and words to demonstrate how the problem type works. Whatever the student's selection, they then decide whether they work more effectively alone or with a peer. Mr. Larsen talks with students about learning to make wise selections

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In differentiating products in response to student learning profile, Ms. Michaels uses several approaches. Because she believes her goal is to assess student growth in ways that let each student show how much they know, understand, and can do, she often uses more than one kind of end-of-unit assessment. She may combine tests and portfolios of student work. This lets her work with students on effective test taking, but also enables students for whom test taking is difficult or uninspiring to show how much they've learned in a more comfortable format. When she creates product assignments for students, she nearly always provides at least two or three choices of how students can express what they have learned—for example, through a museum exhibit that includes models and narratives, through an essay or dialogue, or through an annotated and illustrated time line. She also tries to vary research materials to include artifacts, visuals, print materials, interviews, and technology. She varies working arrangements so students sometimes work alone, sometimes with peers, and sometimes in whichever format they prefer.

There are many ways to accommodate students' preferred ways of learning. Looking for a good learning fit for students means, at least in part, trying to understand *how* individuals learn and responding appropriately.

## Bringing the Elements Together

In the early stages of differentiation, it's helpful to think about using student readiness, interest, and learning profile to differentiate content, process, and product. Breaking down the task into elements not only lets us focus on smaller and more manageable pieces of teaching, but can also help us assess the degree to which we are looking broadly or narrowly at addressing students' learning needs.

In the end, however, the goal is to have a flow of differentiation so that much of what we do is a fit for each student much of the time (see figures 10.3 and 10.4). That means our goal is to bring together the elements we can differentiate and ways we can go about differentiating them so that there is wholeness to what we do.

A teacher whose skills of differentiation are fluid continually asks, "Would students benefit from flexibility in approaching today's learning goals?" When the answer is yes, the teacher seeks alternative avenues to learning for her students, and invites them to join her in that quest. (see figure 10.5 for sample diagnostic questionnaires). Here's a brief example of an elementary teacher's classroom in which differentiation is pervasive.

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Mrs. Chen and her students are studying explorers and exploration. As she selects reading material for them, she makes sure to find selections with a wide range of readability. Sometimes she and the class will read a piece in common. Sometimes she will assign materials to particular students. Sometimes they will select what to read. In this way, she hopes to take into account common needs of the whole class as well as both reading readiness and interests of individuals.

As she plans activities, Mrs. Chen envisions both similar readiness groups for some tasks and mixed readiness groups for others. For example, when students are honing their writing skills, they may work with students who have similar goals at a given time. On the other hand, when they write scenarios to depict the challenges faced by explorers, she will form groups that include students who have good ideas, students with a flair for the dramatic, students who write well, and students who are leaders.

**gure 10.3**
**efore and After: The Flow of Instruction (A Secondary Example)**

**BEFORE**

teacher → **2** Students read assigned material → **3** Teacher gives notes → **4** Students work on an activity → **5** Students practice at home
oduces the
/topic

s discussion → **7** Teacher gives notes → **8** Students work on activity → **9** Students watch a video → **10** Class discussion
dents
plete a project → **12** Students take a test → **13** Class moves to next topic

*After*

e teacher → **2** Teacher introduces lesson with student knowledge and interest in mind → **3** Students read material at varied reading levels or with support, as appropriate → **4** Teacher and students debrief reading for key knowledge, concept, and principles. → **5** Teacher gives notes with a guided lecture format accompanied by a demonstration.
-assesses
dent knowledge,
lls, and interests

acher assesses → **7** Students do an assigned tiered activity matched to current understanding → **8** Students complete one of two homework choices they feel will help them most → **9** Teacher gives noteswith digest, as appropriate → **10** Students do paired journal writing with teacher-choice partner and student-choice entry
dent understanding
h exit cards

dents work → **12** Teacher assigns product with common elements and student options → **13** Teacher offers review session and mini-workshop on product skills → **14** Class discussion with questions at varied levels of difficulty → **15** Students take a quiz with common and differentiated elements
a Jigsaw on
topic, based on
ir interests

**Figure 10.4**
**Before and After: The Flow of Instruction (A Math Example)**

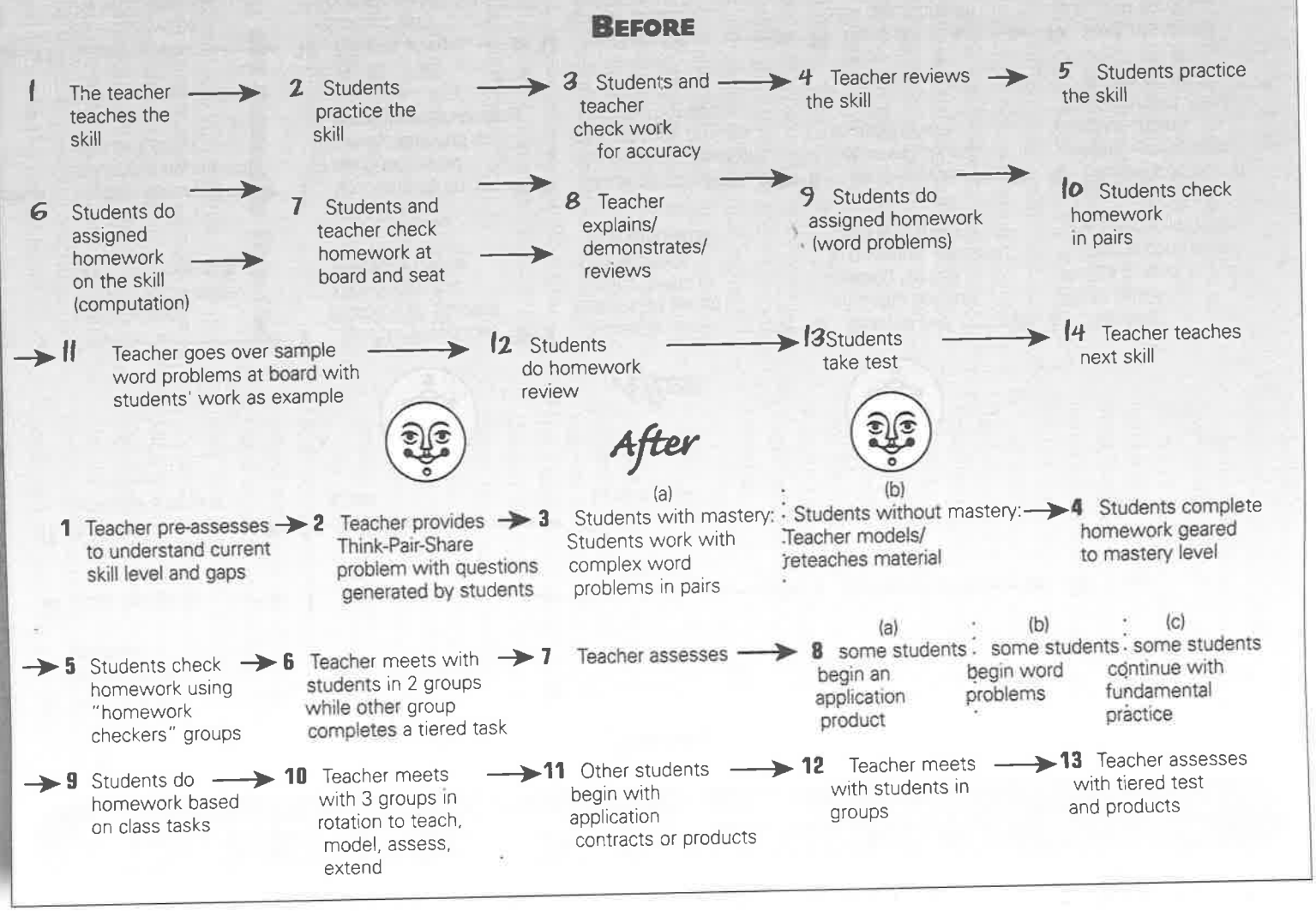
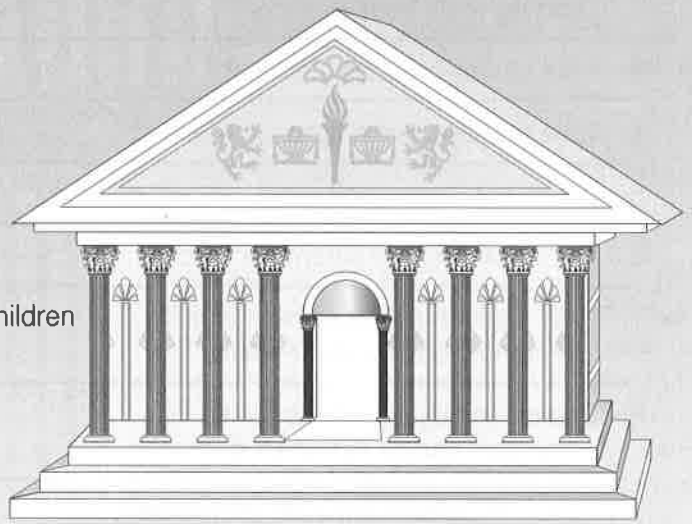


**Figure 10.5**
**Diagnosing Student Readiness, Interest, and Learning Profile**

### Interest Questionnaire: What Do You Want to Learn About Rome?

These are some of the topics we will be studying in our unit on Ancient Rome. We want to know what you want to learn about. Number your choices from 1 to 8. Make sure that 1 is your favorite and 8 is your least favorite.

____ geography
____ government (laws)
____ agriculture (foods they grew)
____ architecture (buildings)
____ music and art
____ religion and sports
____ roles of men, women, and children
____ other (please tell us more)



### Readiness Questionnaire: What Can You Tell Us About Rome?

1. What country is Rome in?

2. What does "civilization" mean?

3. Give some examples of different civilizations.

4. Name any famous Roman people.

5. Many things in our country and culture came from the Romans. What can you think of?

**Figure 10.5 (CONTINUED)**
**Diagnosing Student Readiness, Interest and Learning Profile**

**Learning Profile Qeustionnaire: How Do You Like to Learn?**

| | | |
|---|---|---|
| 1. I study best when it is quiet. | ☐ yes | ☐ no |
| 2. I am able to ignore the noise of other people talking while I am working. | ☐ yes | ☐ no |
| 3. I like to work at a table or desk. | ☐ yes | ☐ no |
| 4. I like to work on the floor. | ☐ yes | ☐ no |
| 5. I work hard for myself. | ☐ yes | ☐ no |
| 6. I work hard for my parents or teacher. | ☐ yes | ☐ no |
| 7. I will work on an assignment until it is completed no matter what. | ☐ yes | ☐ no |
| 8. Sometimes I get frustrated with my work and do not finish it. | ☐ yes | ☐ no |
| 9. When my teacher gives an assignment, I like to have exact steps on how to complete it. | ☐ yes | ☐ no |
| 10. When my teacher gives an assignment, I like to create my own steps on how to complete it. | ☐ yes | ☐ no |
| 11. I like to work by myself. | ☐ yes | ☐ no |
| 12. I like to work in pairs or in groups. | ☐ yes | ☐ no |
| 13. I like to have an unlimited amount of itime to work on an assignment. | ☐ yes | ☐ no |
| 14. I like to have a certain amount of time to work on an assignment. | ☐ yes | ☐ no |
| 15. I like to learn by moving and doing. | ☐ yes | ☐ no |
| 16. I like to learn while sitting at my desk. | ☐ yes | ☐ no |

*Source:* Developed by Denise Murphy and Beth Ann Potter.

As the unit ends, students will demonstrate their learning in part through "exchanges" between past explorers and contemporary explorers. All students are responsible for demonstrating designated knowledge, understandings, and skills. The teacher will assign each student a past explorer based on the quantity and availability of research material that is available in the school on the various explorers. Students will select their own contemporary explorer from a teacher-provided list to which students can add names. Here students will make selections based on personal interests, such as science, sports, writing, technology, television, and so on. Students may work alone on their tasks, with one partner, or with a group of three to four students. Individuals and groups then select the format for their explorer exchange. Among choices are a live symposium or dialogue format, a pair of Web pages, a videotaped conversation, a set of letters exchanged between the two, and so on.

There's certainly whole-class instruction in Mrs. Chen's room, but chances are that whole-class instruction will be followed by opportunities for students to come to grips with ideas and skills on their own terms. Chances are also good that there is flexibility built in to much of what goes on so that each student feels the classroom "belongs" to him.

Figures 10.3 and 10.4 provide two more examples of the flow in a differentiated classroom where all the elements come together. In both instances events in the classroom are first presented as they might occur in a one-size-fits-all version, then are re-presented as they might look in a classroom where the teacher honors and plans for individual learning needs.

## Diagnosing Student Interest, Readiness, and Learning Profile

Although there are many published tools to help teachers determine student readiness, interest, and learning profile, sometimes it's most economical to begin with common sense and a little teacher ingenuity. Figure 10.5 provides one such example.

Two beginning teachers understood their need to match what they were about to teach to students whom they did not yet know well. As they began an elementary unit on Ancient Rome, the teachers developed a three-part assessment based on students' prior knowledge about what they were going to teach (readiness) and questions the teachers felt comfortable addressing related to interest and learning profile. You'll see that the format of the assessment is simple and straightforward. It's also clear that the knowledge about students that the teachers gleaned from this multipart assessment gave them lots to work with as they began to plan their unit to ensure its match for their learners.

Remember that everything students do is a potential source of information about their current understanding and skills, what they like to learn about, and how they learn best. Consider the possibility that you can learn a great deal about students by using simple teacher-made tools and by observing and reflecting on data that are around you every day.

In the next chapter, we shift our focus from students to the content of the curriculum (but keep in mind all we have learned from our students).