Tiffany, a 10th-grade student with a learning disability, attends general education classes except for a special education study skills class that is devoted to developing improved learning strategies. At the beginning of the school year, Mr. Manning, Tiffany’s special education teacher, met with her general education teachers to review Tiffany’s learning needs and to identify ways to ensure her success. Ms. Uyehara, her history teacher, expressed particular concern about having Tiffany in her class. Ms. Uyehara was unsure of what to do and requested additional assistance from Mr. Manning.

Ms. Uyehara is not alone. More and more students with disabilities are receiving special education services in the general education classroom. In fact, 75% of the students with disabilities served under IDEA are educated in general education classrooms (U.S. Department of Education, 2000). At the same time, schools are experiencing an increase in the number of students identified as “at-risk” due to environmental, interpersonal, and familial factors (McWhirter, McWhirter, McWhirter, & McWhirter, 1998). Many at-risk students do not qualify for special education services, but nonetheless would benefit from individualized attention in the general classroom.

Given the number of students needing individual assistance in the general classroom, teachers need strategies to assist them in making appropriate modifications and adaptations to their curriculum, instruction, and learning environment. In Tiffany’s case, Mr. Manning suggested that he and Ms. Uyehara implement a systematic process whereby they examine Tiffany’s needs within the context of the history class and select, then implement specific adaptations. Mr. Manning and Ms. Uyehara met and completed the following process (see Table 1). They solicited Tiffany’s assistance with some of the steps.

### Steps to Modify the Learning Environment

1. **Show concern for the targeted student.**
   - Teachers often have difficulty showing positive regard and concern for students who are struggling in their classroom, particularly when students misbehave. Showing concern for the student may be demonstrated by setting a positive tone in the classroom and focusing on the student’s strengths, rather than their weaknesses. Students believing that...
The first and most important step toward success: Show concern for the student.

their teacher truly cares about them as individuals can carry students a long way. Ms. Uyehara and Mr. Manning conclude that she, indeed, is concerned about Tiffany or she would not have approached Mr. Manning for assistance.

2. Have faith in yourself and your targeted student. Many students, particularly those with learning problems, have developed learned helplessness. These individuals believe their efforts are not connected to the desired outcome. They generally expect to fail and become dependent on others to solve their problems. They may also be defined as passive or inactive learners. They need to be taught appropriate strategies to become more active learners and to connect skills and effort to failure and success (see box, “Learned Helplessness”).

Ms. Uyehara and Mr. Manning believe Tiffany has developed some learned helplessness. They decide, however, that at this time they are going to focus on making instructional adaptations, hoping that success will increase her self-confidence and modify her belief about her abilities. Ms. Uyehara is confident that Tiffany can be successful in her classroom if provided appropriate supports.

3. Examine your classroom. Before educators can make adjustments in the learning environment to accommodate the needs of students, they need to examine five characteristics of their classroom. It would be a CRIME to ignore the classroom. The CRIME acronym can help teachers remember the five elements to examine: Curriculum, Rules, Instruction, Materials, and Environment. Teachers need to analyze their teaching and their classrooms by asking questions such as the following.

**Curriculum:**
- What determines the curriculum in my classroom?
- What are the state and/or district standards?
- How difficult, comprehensive, and important is the material?

**Rules:**
- What are my posted rules?
- How well do I make students accountable for keeping the rules?
- What behaviors are important to me that are not posted?

**Instruction:**
- How do I usually present new information?
- What kind of assignments and tests do I require?
- Do I expect individual or group work or both?
- How important is homework?

**Materials:**
- What supplementary teaching materials are available to me?
- Do students have access to support materials such as computers, calculators, and cassette players?
- Are students expected to supply their own basic materials?

**Environment:**
- How is the furniture in my classroom arranged?
- What are the visual and auditory distracters in my classroom?
- What time of day am I teaching this content?

After thinking about and discussing the answers to questions such as these, you should summarize your responses in writing under each category in a form similar to the one Ms. Uyehara filled out (see Table 2).

4. Write down the targeted student’s strengths and limitations AND

5. Include skills, learning preferences, and behaviors specific to your classroom. All students who qualify for special education services have an individualized education program (IEP) on which the student’s strengths and limitations should be listed as present levels of performance. Teachers should identify the student’s strengths and limitations in context of their classroom and in perspective of their expectations and demands. Teachers should ask themselves specific questions, such as the following. If appropriate, the student may participate in this process by self-identifying skills, learning preferences, and behaviors.

**Skills**
- What academic and social skills does the student have?
- What academic and social skills does the student need to be more successful?
Table 2. CRIME Strategy: Ms. Uyehara’s Step 3 Results

<table>
<thead>
<tr>
<th>CRIME Categories (Examples)</th>
<th>Ms. Uyehara’s Classroom</th>
</tr>
</thead>
<tbody>
<tr>
<td>Curriculum (content, difficulty, standards)</td>
<td>All students in my classroom are working toward the state curriculum standards. The level of difficulty is on grade-level (approximately 10th grade). Students are accountable for meeting the standards to graduate in 2 years.</td>
</tr>
<tr>
<td>Rules (explicit, implicit, and written rules)</td>
<td>There are 3 written rules that are posted (no talking, show respect for others, do your own work). I make students accountable for keeping the rules, particularly doing their own work. It is also important to me that students come to class on time and turn their homework in on time, although they are not part of the written rules.</td>
</tr>
<tr>
<td>Instruction (teaching style, individual and group work pace, teacher and student directed)</td>
<td>I vary my instructional style. Sometimes I lecture with classwide discussion. Sometimes students work independently, and other times they work in groups. Students are always asked to complete the end of the chapter questions (usually as homework) and I always give a chapter test every other Friday.</td>
</tr>
<tr>
<td>Materials (textbooks, trade books, tests, homework, equipment, supplies)</td>
<td>We are using the ___ textbook series. My tests are always essay. Homework is usually completing end of the chapter questions plus a major written project each term, which must be typed. We have a computer in the classroom, but I only use it for e-mail. I have the typical school supplies available, although students are responsible for bringing their own paper, pens, and pencils.</td>
</tr>
<tr>
<td>Environment (furniture, seating, space, doors, window, barriers)</td>
<td>The desks are arranged in rows, although when students work together (about once a week) they are allowed to move the desks closer together. The windows face the football field, and the door is in the back of the room. Space is tight, particularly in the classes with more than 25 students.</td>
</tr>
</tbody>
</table>

- What does the student do particularly well?
- **Learning Preferences**
  - In what situations does the student perform well?
  - Does the student enjoy working alone or with others?
  - If the student were given free time, what would he or she select to do?
  - Does the student have any other particular learning preference to be considered?
- **Behavior**
  - What behaviors does the student exhibit that may enhance or inhibit learning?
- Does the student consistently complete assignments and homework?
- Does the student generally comply when asked?

Mr. Manning interviewed Tiffany and asked questions similar to these. Her self-evaluation, coupled with Ms. Uyehara’s and Mr. Manning’s analysis of Tiffany, appears in Table 3.

6. Line up student and classroom characteristics as those that facilitate, provide barriers, or are neutral for the individual student’s learning success. Each teacher and each student have different teaching/learning preferences, strengths, and limitations. Therefore, to determine appropriate modifications, teachers should examine the classroom characteristics, identified in Steps 3 and 4, in context of the learner’s characteristics as determined in Step 5. Each learner characteristic can be categorized as a “facilitator” or “barrier” to a specific student’s learning or as “neutral” to his or her learning process.

Ms. Uyehara and Mr. Manning examined classroom and student variables and found they clearly fell into one of the three categories. They completed the form as it appears in Table 4.

7. List 1-3 classroom characteristics you could modify and skills you could teach. After identifying the individual student’s characteristics as facilitators, barriers, or neutral to the teacher’s classroom elements, teachers should select classroom characteristics that they are willing to modify to accommodate the student. Examples of possible modifications are listed in Table 5. For additional and more specific strategies, techniques, and activities, the reader may wish to consult additional references such as Choate (2000), Kennedy (1997), Landers and Weaver (1997), Melzer et al. (1996), and Winebrenner (1996). In addition to modifications or adaptations, potential new skills that would help the student succeed in the general classroom should also be considered. For example, the student may benefit from learning a specific computer skill like accessing appropriate Web sites as resources for reports, developing Powerpoint presentations to make oral class presentations, or using a spelling checker prior to submitting written reports. New skills may be taught to the targeted student or to the whole class by the teacher or by a classmate who has already acquired the skills.

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Identify the student’s strengths and limitations in context of your classroom.
8. Select and implement adaptation[s] and goal[s]. Once the potential adaptation[s] have been identified, teachers can implement them. At this stage, teachers may decide to make adjustments that affect all students or make modifications for the individual student only. Not only are adaptations important, but so are teaching new skills. Again, teachers may elect to teach the skill to a group of students or to the targeted student only.

### Table 3. Completion of Steps 4 and 5 for Tiffany

<table>
<thead>
<tr>
<th>Categories</th>
<th>Strengths</th>
<th>Limitations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skills</td>
<td>Although Tiffany has reading problems, she seems to understand the concepts we are discussing in class. She expresses herself well verbally and has shown to have a strong auditory memory.</td>
<td>Tiffany's writing skills are poor. She has difficulty putting her thoughts on paper. Her tests and homework assignments are usually very sloppy. Her projects are neatly word processed.</td>
</tr>
<tr>
<td>Learning Preferences</td>
<td>Tiffany seems to enjoy class discussions and working in groups.</td>
<td>Tiffany doesn’t like to work by herself. And she seems to have great difficulty taking notes when I lecture or have class discussion.</td>
</tr>
<tr>
<td>Behavior</td>
<td>Tiffany gets along with all the other students in the class. She tries to do well, but she gets frustrated.</td>
<td>She sometimes shows frustration, particularly when she forgets to bring her homework, which she says she completed at home. She also appears discouraged with her test scores.</td>
</tr>
</tbody>
</table>

### Table 4. CRIME Analysis: Facilitators and Barriers for Tiffany

<table>
<thead>
<tr>
<th>Category</th>
<th>Ms. Uyehara’s Classroom</th>
<th>Facilitators for Tiffany</th>
<th>Neutral for Tiffany</th>
<th>Barriers for Tiffany</th>
</tr>
</thead>
<tbody>
<tr>
<td>Curriculum</td>
<td>State curriculum standards</td>
<td>Conceptual understanding Verbal expression</td>
<td>Reading Writing</td>
<td></td>
</tr>
<tr>
<td>Rules</td>
<td>Complete own work</td>
<td></td>
<td></td>
<td>Independent work</td>
</tr>
<tr>
<td></td>
<td>Class on time</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>Turn in homework on time</td>
<td></td>
<td></td>
<td>Forgetful</td>
</tr>
<tr>
<td>Instruction</td>
<td>Lecture Auditory skills</td>
<td></td>
<td>Note taking</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Independent work</td>
<td></td>
<td>Reading Writing Not a learning preference</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Group work Learning preference Gets along with others</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>End of chapter questions Conceptual understanding</td>
<td></td>
<td>Reading Writing</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Weekly written tests Conceptual understanding</td>
<td></td>
<td>Reading Writing</td>
<td></td>
</tr>
<tr>
<td>Materials</td>
<td>Essay tests Conceptual understanding</td>
<td></td>
<td>Reading Writing</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Written projects Conceptual understanding</td>
<td></td>
<td>Writing</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Computer in classroom Submits projects word processed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Student responsible for own materials</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Environment</td>
<td>Crowded classroom</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Auditory distractions</td>
<td></td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>
In Tiffany’s case, both Ms. Uyehara and Mr. Manning were willing to adjust their instruction to accommodate her needs. After discussing possible adaptations, Ms. Uyehara thought that all of her students could benefit from switching the final term project from an individually written report to a cooperative learning group assignment. Ms. Uyehara also selected adaptations specific to Tiffany. After discussing these changes with Tiffany to solicit her support, she arranged for Tiffany to tape-record the lectures and to take her weekly essay exams on the computer. Mr. Manning believed all of his students could benefit from learning how to take notes and to self-monitor their homework completion. He, therefore, taught these skills to all the students in Tiffany’s special education class. Adaptations and goals for Tiffany appear in Table 6.

9. Use effective teaching principles to teach goals. If the student is to be taught new skills, teachers need to ensure that they implement effective teaching principles while teaching those skills. Space does not allow an extensive discussion of these principles. Elements of effective teaching are outlined in Table 7. Readers who wish to learn more are referred to Mastropieri and Scruggs (2000) and Olson and Platt (2000).

10. Collaborate with others as needed. Collaboration is a critical element to the process of modifying curriculum, instruction, and/or the learning environment. According to Friend and Cook (1996, p. 6), collaboration is “a style for direct interaction between at least two coequal parties voluntarily engaged in shared decision making as they work toward a common goal.”

The manner in which Mr. Manning and Ms. Uyehara worked

<table>
<thead>
<tr>
<th>Categories</th>
<th>Examples</th>
</tr>
</thead>
</table>
| Curriculum | • Eliminate less critical elements of the curriculum  
|           | • Modify individual work to group work  
|           | • Modify written assignments or exams to oral reports  
|           | • Integrate learning strategies as part of curriculum |
| Rules     | • Make implicit rules explicit  
|           | • Reduce the number or complexity of classroom rules  
|           | • Enforce consequences consistently |
| Instruction | • Modify lectures to class discussions  
|           | • Incorporate more modeling in instruction of new content  
|           | • Allow students to read content together  
|           | • Use varied audiovisuals during instruction  
|           | • Assign a notetaker during lecture  
|           | • Use peer tutoring and/or cooperative learning groups  
|           | • Assign different roles during cooperative learning  
|           | • Modify pace of instruction  
|           | • Teach specific learning strategies |
| Materials | • Use a calculator  
|           | • Use a computer with a spelling checker  
|           | • Create a self-monitoring checklist  
|           | • Write assignments with due dates on blackboard daily  
|           | • Create graphic organizers for student use during reading or group instruction |
| Environment | • Rearrange furniture to accommodate student’s needs  
|           | • Place student closer to teacher  
|           | • Eliminate or lessen the impact of auditory and visual distracters |

| Table 5. CRIME Examples: Potential Classroom Adaptations |

<table>
<thead>
<tr>
<th>Categories</th>
<th>Examples</th>
</tr>
</thead>
</table>
| Curriculum | • Eliminate less critical elements of the curriculum  
|           | • Modify individual work to group work  
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|           | • Reduce the number or complexity of classroom rules  
|           | • Enforce consequences consistently |
| Instruction | • Modify lectures to class discussions  
|           | • Incorporate more modeling in instruction of new content  
|           | • Allow students to read content together  
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| Materials | • Use a calculator  
|           | • Use a computer with a spelling checker  
|           | • Create a self-monitoring checklist  
|           | • Write assignments with due dates on blackboard daily  
|           | • Create graphic organizers for student use during reading or group instruction |
| Environment | • Rearrange furniture to accommodate student’s needs  
|           | • Place student closer to teacher  
|           | • Eliminate or lessen the impact of auditory and visual distracters |

| Table 6. Adaptations and Goals for Tiffany |

<table>
<thead>
<tr>
<th>Adaptations and Goals</th>
<th>Teaches a New Skill</th>
<th>Enhances a Facilitator</th>
<th>Reduces a Barrier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ms. Uyehara will:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Arrange for Tiffany to tape-record the lectures.</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>• Allow Tiffany to use a computer when taking weekly essay exams.</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>• Modify the term project into a cooperative learning group assignment.</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Mr. Manning will:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Teach note-taking skills in the study skills class.</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Create and teach Tiffany how to use a self-monitoring checklist to help her complete and return her homework.</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

You may decide to make adjustments that affect all students or make modifications for the individual student only.
Table 7. Basic Elements of Effective Teaching

| Lesson Introduction | • Gain student attention  
|                     | • Review previously learned content and ensure students have the prerequisite knowledge and skills  
|                     | • Provide students a purpose for learning the new content  
| Instruction and Modeling | • Provide accurate, clear, complete, and concise instruction  
|                       | • Model the lesson objective  
|                       | • Ask frequent and appropriate questions  
|                       | • Include correct and incorrect examples  
| Guided Practice | • Provide all students the opportunity to demonstrate lesson objective with assistance  
|                   | • Monitor student performance closely  
|                   | • Apply appropriate error correction procedures when needed  
| Independent Practice | • Provide all students the opportunity to demonstrate lesson objective independently  
| Closure | • Review and summarize  

...together met this definition of collaboration. They had equal status with one another and readily accepted each others' ideas and suggestions. Although Ms. Uyehara initially felt uncertain about how to help Tiffany, Mr. Manning found that she had excellent ideas; through their brainstorming together, they generated a useful plan for Tiffany. They kept in mind that the common goal for both of them was Tiffany's success in their classrooms. They also consulted with Tiffany throughout the course of this process to gain her perspective and to solicit her willingness to participate.

...During this time, Ms. Uyehara and Mr. Manning decided that Tiffany decided to continue the program if she was successful and, if not, make the necessary adjustments. They would repeat the steps, focusing on the same “barrier for learning” mismatch between teacher and student; or they may select a different barrier, depending on the needs of the student.

...After proceeding for a month, both teachers felt that time set aside within the school day would be needed to continue the process for Tiffany and for other students...
special needs. Needham Heights, MA: Allyn & Bacon.*


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TEACHING Exceptional Children, Vol. 35, No. 5, pp. 58-64.

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