

# Increase Complexity

The second way to enhance rigor in your classroom is to increase the complexity of your assignments. To do so, we need to shift our attention from isolated facts to application of knowledge. We often spend too much time on recitation of facts and figures or repetitious practice. Students need to learn facts, and they need to practice using that information. However, memorization and rote practice do not lead to higher levels of comprehension. Increasing complexity means moving beyond activities that require students to recall information to asking students to apply that knowledge in multifaceted ways. We will look at five specific ways to increase complexity in your instruction.

## Complexity in Writing

Perhaps you would like your students to write a paragraph about the topic you have been teaching in class, such as the solar system. That is a standard, low-level assignment that requires students to restate or summarize the information covered. Even if you ask students to elaborate in greater detail, it's likely that the responses are fairly basic. Instead, let's ratchet up the rigor using the RAFT strategy (Santa et al., 1996). RAFT stands for Role/Audience/Format/Topic. Using this strategy, students would assume a role (such as an astronaut, in this case) and write from that perspective to a more authentic audience, such as people reading his/her online blog. With a slight shift in the assignment details, students are required to understand the topic at a higher level in order to complete the task. Additionally, when students are asked to write for a genuine purpose and audience, they tend to complete the assignment more effectively. As you can see from the examples, you can tailor this task to your specific needs. Younger students can draw rather than write their RAFTs. Also, choose roles and formats that interest them.

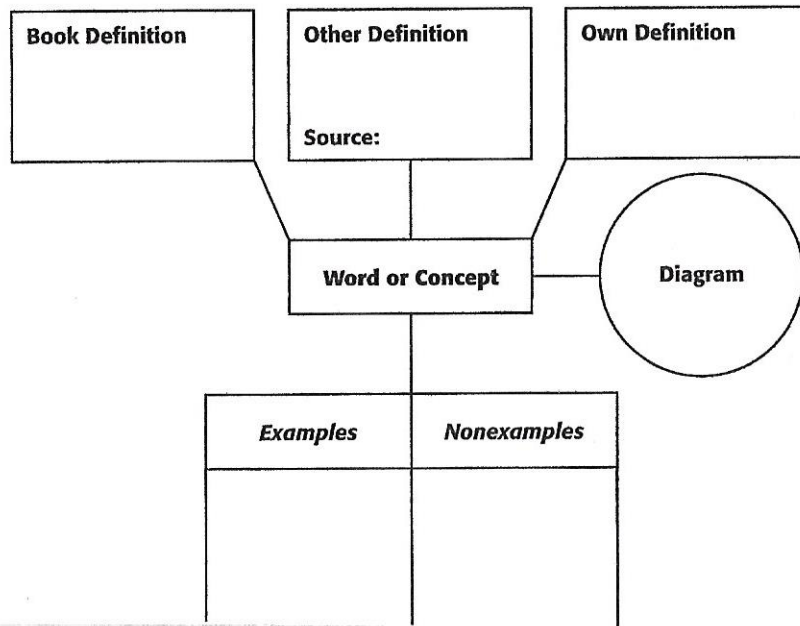
| <i>Rigor in Writing</i> |                             |               |   |
|-------------------------|-----------------------------|---------------|---|
| <i>Role</i>             | <i>Audience</i>             | <i>Format</i> | <i>Topic</i>                                      |
| Host Ole Winfrey        | Television viewing audience | Talk show     | Interviewing Aztecs about their culture           |
| Word problem            | Student                     | Directions    | How to solve the equation embedded in the problem |

## Complexity With Vocabulary

How many of your students struggle with understanding new vocabulary terms? My students did, particularly in social studies. It's difficult to understand the specialized vocabulary found in some content area courses. Words that may seem familiar have a different meaning in the new context. For example, I was in a ninth grade physical science classroom, and Tyler was sure he knew the definition of the term "grounded." As he explained that he was grounded for two weeks because of a low grade on a test, the other students laughed. The teacher was looking for an answer about the grounding of electricity, which is quite different. However, it provided an important lesson for the students and for us, reminding us of the ease with which words can be confusing.

When I was a student, the model for teaching vocabulary was simple. The teacher gave the class a list of words. We copied the words and definitions,

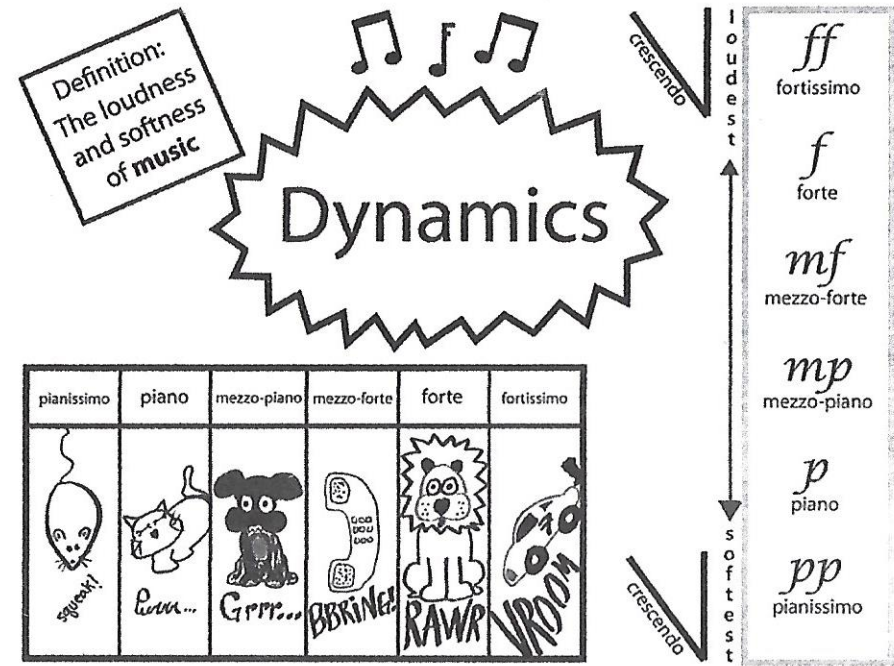
## Vocabulary Graphic Organizer



then wrote a sentence using each term. Finally, we took a test. This model provides routine for students, but it rarely leads to a deep comprehension of the meanings of concepts. Students tend to memorize what they wrote and simply restate it on the test. One of my students just rearranged the words from a textbook definition and said it was her own. In a rigorous classroom, you are looking for your students to demonstrate they understand what a vocabulary word means, usually through an explanation with details, examples, and elaboration. My initial method for pushing students past memorization was requiring students to write an extended response of at least a paragraph explaining the word or concept. However, that backfired on me. My students wrote everything they knew about the topic, hoping I would find the correct portion of the answer and accept it. They equated length with quality while I was looking for depth of understanding.

I learned to create opportunities for students to demonstrate their understanding in ways that required them to synthesize information about a term or concept and refine it down to the key points. Using a graphic organizer, students discuss different elements of a particular vocabulary term (see template above and example on the right).

You can customize the headings on the organizer to match your specific subject area. The key to this process is that as students explore multiple



definitions, examples and nonexamples, and characteristics or functions, they develop a fuller grasp of the concept.

As the culminating activity, rather than writing a definition in their own words, ask students to write a "What Am I?" riddle. When I was at Loris High School, teachers adapted this idea. Their students created "Who Am I?" and "What Am I?" raps to review content.

### Sample "What Am I?" Riddles

- ◆ My end is not like my beginning.
- ◆ I get bound up for change.
- ◆ I start low and end up high.

What am I?

*A butterfly*

- ◆ Prices go up.
- ◆ Your wallet is thinner.
- ◆ You pay twice as much to provide family dinner.

What am I?

*A Inflation*