6 Designing the Curriculum: Steps 4 and 5

In this chapter we will work through the process of writing strong generalizations and guiding questions. Most concept-based curriculum units include five to eight powerful generalizations that we want students to understand by the end of the unit. You may wish to use the segment of your planning template shown on page 45.

Most concept-based curriculum units include five to eight powerful generalizations that we want students to understand by the end of the unit.

THINKING AND UNDERSTANDING

If understanding is a product of thinking (Perkins, 1992), then teachers need to be clear on the expected, transferable understandings that they wish students to attain from each lesson they design. Deeper understanding of complex ideas transfers at the *conceptual level*, so the role of generalizations in concept-based curriculum is to make the expected understandings *apparent to teachers.*

For example, an English language arts curriculum unit at the secondary level may include the generalization "Propaganda exerts a powerful influence on the actions and opinions of others when not consciously observed." This is the understanding that teachers want students to realize by the end of the unit of study. When planning a lesson, teachers will use this unit generalization (and the others within the unit) to help make decisions about which texts to include and the type of work to assign with the goal of leading students to this understanding.

Erickson (2008, pp. 28–32) references the work of Hilda Taba (1966) who advocated that generalizations should determine the direction and

depth for instruction. Taba believed that specific content should be sampled rather than covered. The unit generalizations play a critical role in concept-based curriculum because they enable us to make informed decisions about how much content to include in a unit.

STEP 4: WRITING GENERALIZATIONS

In Chapter 2, generalizations were defined as the clear, compelling statements of understanding that will direct instruction and assessments. A generalization includes two or more concepts (selected from the unit web—this is where all that web work pays off!) stated in a relationship that uses a strong verb. Weak verbs (*affect, impact, influence, is, have, are*) are labeled no-no verbs because they result in broad surface-level statements that lack clarity and do not express the desired depth of understanding (Erickson, 2008).

Generalizations are clear, compelling statements of understanding that will direct instruction and assessments.

Concept 1 + Strong Verb + Concept 2 = Generalization
(More Concepts Optional)

This is also a good time to review additional criteria for recognizing a quality generalization (Erickson, 2008). Generalizations are

- broad and abstract (to varying degrees);
- universal in application;
- generally timeless (they may need a qualifier if the ideas do not hold up through time in all cases);
- represented by different examples, which support the generalization; and
- two or more concepts, stated in a relationship.

When writing generalizations,

- Be sure two or more separate ideas are not being pushed together in one statement. When a generalization ends up several lines long, it becomes very confusing to understand and is a good indication there may be multiple ideas strung together.
- Make the language as cogent and precise as possible and the statement clear. Instruction in a concept-based curriculum is designed so that students independently realize the idea through inductive teaching.
- Avoid proper nouns, or pronouns, in generalizations and use no past-tense and/or future-tense verbs (so that the generalization is transferable through time and situations).

- Avoid passive voice. A helpful remedy is to flip the sentence from passive voice to active voice. For example, "The moral of the fable was revealed by the characters' interactions" (passive voice) becomes "Characters' interactions reveal the moral of a fable" (active voice). The reordering makes the idea more precise and clear.
- Avoid overusing qualifiers. As mentioned in the definition above, sometimes a qualifier (*may, often, can, frequently,* etc.) is necessary because although the generalization is important to the unit study, it but may not hold true across all situations. Beware of falling into the trap of overusing qualifiers, however!
- Finally, do not write a generalization that reflects a value statement. Beliefs and values are not universal.

Assessing Your Prior Knowledge

Here is a little assessment of your understanding of generalizations. This "quiz" is inserted to help correct any misunderstandings and to provide feedback that may help you as you continue to learn more about generalizations. See how you do before continuing on in the chapter! The answers are on page 79.

Quiz: Do the following statements represent strong, quality English language arts curriculum generalizations? Why or why not?

1. Research helps historical fiction writers authentically portray the time period and characters of their story.
2. A well-informed citizen should read widely.
3. Grammar and sentence construction affect the clarity of a writer's message.
4. Argument may transform attitudes by breaking down intolerance.
5. Authors use stories and pictures to share their experiences and ideas.

Now we are ready to examine some of the finer points of writing generalizations that support "quality control" of the work.

Kick-Starting Generalization Writing

In Chapter 2, Erickson's (2008) structure for writing quality generalizations was introduced. She suggests starting with the sentence stem "Students will understand that . . ." This stem is then later dropped off when the generalization is written in the curriculum unit. This sentence

starter launches the crafting of a generalization statement so that it reflects an important, transferable understanding. Table 6.1 lists sample generalizations that represent both process (comprehension and production) and knowledge.

Table 6.1 Sample Generalizations

Generalization *By the end of the unit, students will understand that . . .*	*Represents understanding of . . .*
1. Hard choices in life can make people stronger.	Knowledge (from text)
2. Poetry often calls upon readers to utilize background knowledge and inference to discover meaning.	Comprehension Process
3. Poetic devices (metaphors, personification, alliteration, similes, onomatopoeia) help convey a message and ignite a reader's emotions and imagination.	Production Process

Aligning Generalizations to the Unit Web

Generalizations frame the learning experiences teachers will develop when implementing the unit. Because generalizations play such a central role in concept-based curriculum and instruction, the unit generalizations, as a whole, need to address all the strands of the web to provide assurance that the unit represents a comprehensive, balanced literacy curriculum.

As curriculum writers, you will now review the concepts identified in the unit web and begin to consider relationships among them. You will begin by brainstorming some of the generalizations that students will be expected to derive throughout this unit of study. As concepts are joined to make statements of transferable understanding—generalizations—they become the rationale for studying the unit topic and provide *relevance* to the facts and skills.

Sometimes generalizations are written to articulate important ideas of individual strands of the web. At other times generalizations may represent ideas that are important to multiple strands of the English language arts unit web. The reciprocity among English language arts processes encourages this interplay. This is further explained in Table 6.2 from a short stories unit.

In Table 6.2, the generalizations support teaching to these transferable understandings across different processes. Let's examine the first generalization:

Table 6.2 Sample Generalizations From a Grade 6 Short Stories Unit

1. A realistic fiction short story usually delves deeply into one incident or experience from life. (*Understanding text, producing text, responding to text)*
2. Short stories often follow a tight story line with a few central character(s) involved in swift rising action and an abrupt ending. (*Critiquing text, understanding text, producing text*)
3. The style of short story writing requires readers to make quick and accurate inferences and personal connections within a short amount of text. (*Understanding text, responding to text*)
4. Short story themes reflect individuals caught in a struggle within themselves, with another character or with the world around them. (*Understanding text, critiquing text, producing text*)
5. Short story authors carefully craft language to concisely convey a message through the use of symbolism and figurative language. (*Understanding text, producing text, critiquing text*)

Source: Pomperaug Regional School District 15, Middlebury/Southbury, CT

A realistic fiction short story usually delves deeply into one incident or experience from life.

1. Think about the various lessons the teacher might develop when teaching toward this generalization that would support students' *comprehension* of how short stories are constructed (*understanding text*).
2. Think about how the generalization will also guide lessons about writing short stories (*producing text*).
3. Consider *questions* the teacher might pose around this generalization along with opportunities for students to share and discuss their responses to texts (*responding to text*).

The learning experiences should be designed to nudge students' thinking so they arrive at the conclusion "A realistic fiction short story usually delves deeply into one incident or experience from life." When students have many occasions (across text examples and across learning situations) to discover the generalization, conceptual patterns begin to emerge, and the transferable idea (generalization) begins to be realized.

These aha moments are what we live for in teaching and are what make learning memorable to students.

Generalizations represent different levels of abstractness, generalizability, and complexity. When students first encounter new learning, the conceptual load of the generalization will be more limited. For example, the generalization "*People* write to share a *message* with a *reader*" is a simple statement of conceptual relationship that would be appropriate for kindergarten students. The understanding grows in sophistication as more concepts are added in the next grade level, making the generalization more specific. "*Punctuation, capitalization,* and *interesting words* help make *writing* clear and appealing to a *reader.*" How specific or broad a generalization should be is in part driven by developmental appropriateness.

The level of sophistication is also determined by the strength of the verb representing the relationship among the concepts in the generalization. Remember the no-no verbs (*affect, impact, influence, is, have, are*)? The use of a verb from this no-no list typically results in a lower-level, or Level 1, generalization. Often Level 1 generalizations are the product of trying to capture an idea during the brainstorming phase of writing generalizations. This is fine because once the idea is drafted, there is a method for moving the generalization to a more sophisticated level. The method is scaffolding.

Avoid these verbs, which create weak generalizations:

- affect
- impact
- influence
- is
- have
- are

Scaffolding Generalizations

Erickson (2008) devised a few simple questions to bring lower-level generalizations to more complex levels of thinking. For example, after brainstorming generalizations for a curriculum unit, the team of teachers noticed several were written using no-no verbs. These Level 1 generalizations are fixed by asking, "How?" or "Why?" As teachers discuss possible answers to the question, new concepts are heard in the answer. Try it! The weak, no-no verb is changed to a stronger verb as more precise concepts are added to the generalization. This revision process makes the statement grow in sophistication and clarity. Here is an example:

Level 1 Generalization: A character's conflicts influence the message of a story.

Scaffolding Questions: *How* do a character's conflicts influence the message of a story?

Level 2 Generalization: A character's internal and external conflicts imply a deeper message about life or human nature.

Most concept-based curriculum units include five to eight powerful generalizations that we want students to understand by the end of the unit. Almost all of those generalizations will be Level 2; however, the unit may include a couple of Level 3 generalizations. How do we take an idea to Level 3? Again, Erickson (2008) suggests we answer a simple question to trigger our thinking. To move a generalization from Level 2 to Level 3, ask, "So what is the significance (or effect)?"

Below, I extend the example from above to create a Level 3 generalization:

Level 1 Generalization: A character's conflicts influence the message of a story.

Scaffolding Question: *How* do a character's conflicts influence the message of a story?

Level 2 Generalization: A character's internal and external conflicts may imply a deeper message about life or human nature.

Scaffolding Question: *So what?*

Level 3 Generalization: Writers layer a character's personality to sharpen the contrast between internal and external conflict.

You may have noticed that when the generalization was moved to Level 3, it became a *new idea* that explained the significance of the Level 2 generalization. As curriculum writers, you may come up with as many Level 3 generalizations as there are people in your group because each person's mind goes to a different place in thinking about the significance of the Level 2 idea. Answering the "So what?" question takes thinking "out of the box." Coming to consensus on a great Level 3 generalization is the fun part.

Teaching With Generalizations

When you begin teaching units based on generalizations, it is worth remembering several things:

- If the generalization is declared by the teacher at the beginning of the lesson (deductive teaching), the opportunity is lost for students to think, arrive at a conclusion, and ultimately express their personal understanding.
- Although the students' conclusions or assertions may not be stated in exactly the same language as the curriculum generalization, the idea is typically explained in similar terms.
- Students may also arrive at generalizations that were not identified in the unit plan but are valid. These are indicators that you have conceptually minded students, so applaud your concept-based teaching!

Summary of Step 4

It takes practice to write generalization statements that express the powerful, transferable ideas we want students to understand by the end of the curriculum unit. Initially, writing generalizations is challenging for teachers because we are not often pushed to think at the conceptual level. The return is well worth the effort, however. Learning to extrapolate transferable understandings from content and process and to express ideas with precise language brings clarity to instruction. Generalizations make the goals of student understanding visible to teachers.

In the beginning, students also find the expectation to articulate a generalization challenging. Curriculum and instruction have a long history of focusing on the facts and skills with little emphasis on conceptual thinking. As a result, students spend most of their energy searching for "the right answer" (that is already in the teacher's head) for the assignment at hand. They become afraid to take risks and be "wrong." Concept-based curriculum and instruction teaches both teachers and students how to use a thinking process to reach a conceptual level of understanding. As students begin to realize the ideas represented by their classroom learning experiences, they may offer generalizations (and validate them with specific evidence, of course) that are not listed in the curriculum unit. This is truly something to celebrate!

Scaffolding techniques serve as quality controls when writing generalizations. With the effort and resources expended in developing a curriculum, you want assurance that the final product represents and supports excellence! Scaffolding is also a way to differentiate instruction for students who demonstrate they are ready for the more challenging thinking required in a Level 3 version of the generalization. We are now ready to move on to Step 5.

STEP 5: WRITING GUIDING QUESTIONS

After the unit generalizations are written, it is time to plan the questioning path that will be used to guide students' thinking to discover the generalizations. Guiding questions are written for *each* unit generalization. Through inquiry-based, inductive teaching, we keep pressing students closer to constructing their understanding of the idea (generalization) through various lesson examples, modeling, and questioning.

Guiding questions are written for *each* unit generalization.

"Only a small percentage of teaching-learning experiences include explicit attention to the strategic dimension," Perkins (2009 p. 139) tells us. Discovering and explaining the hidden understandings (generalizations) behind facts, processes, assignments, and so on is not a practice common in all classrooms.

Strategic questioning is an important instructional technique used in concept-based instruction. Most of us in education were not taught about the importance of different types of questions and when to use them in our teaching. Including a range of guiding questions in the curriculum unit serves not only as an instructional resource but also as a springboard for additional questions teachers might generate.

Erickson (2007, 2008) explains questioning in the teaching-learning process. In a concept-based curriculum, guiding questions create the bridge between learning experiences and deeper understandings. Questions help students notice patterns in knowledge.

Guiding questions create the bridge between learning experiences and deeper understandings.

Questions are motivational tools because they promote active, intellectual engagement on the part of the learner rather than the simple regurgitation of presented information. Guiding questions are written for each unit generalization for a specific reason. By aligning questions with generalizations, the questions are targeted at the generalization under study. Big, broad questions may take students' minds off in many different directions. Good guiding questions keep the thinking and discussions focused.

Questions help students notice patterns in knowledge.

To do this well, Erickson (2007, 2008) explains, we must understand how to distinguish among question types (factual, conceptual, and provocative). *All three* types are critical to a concept-based unit. Here is an example of questions that might be written to unpack a generalization from an English language arts unit:

Generalization: Unique traits distinguish one character from another.

Factual Questions:

- Factual questions are important to ensure the foundation of knowledge is in place.
- Factual knowledge provides the evidence for explaining understanding.

Factual questions for the generalization above might include:

What are character traits?

How does the author of your book communicate the main character's traits?

In the story "Cinderella," what are some examples of the traits of the different characters?

Conceptual Questions:

- Open-ended, conceptual questions challenge students' thinking beyond the facts.
- The response to a conceptual question will reflect an *understanding that is transferable* across situations and examples.
- Conceptual questions are similar to generalizations: There can be no proper nouns, no past-tense or passive verbs, no pronouns, and so on.

Conceptual questions for the generalization above might include:

How does an author make characters believable?

How do character traits help readers identify with characters?

How do character traits help readers better understand the story?

Provocative Questions:

- Provocative questions provoke great debates.
- There are no right or wrong answers, but these questions keep learning interesting and push thinking outside of the box as students listen to each other's perspectives.
- A unit may have two to four provocative questions but not so many that there is not time for rich discussion.

A provocative question for the generalization above might include:

How do you think the story would be different if Cinderella's character traits were changed? (Notice that proper nouns and pronouns may be used in a provocative question although this doesn't have to be the case.)

The strategic use of these questions helps ensure instruction is not overwhelming the learner with too much too fast. Jean Shoemaker and Larry Lewin (1993, p. 55) describe the role of questions in concept-based teaching like this:

> Such questions are posted in the classroom for the duration of the unit to provide structure for the unit and create clear linkages between the day-to-day activities and the major concepts. Further, in requiring students to pursue answers, the questions call upon students to produce, rather than just consume, knowledge. And, as individuals construct meaning and answers to questions, they naturally come to understand the subjective nature of knowledge.
>
> Students demonstrate their conceptual understanding by constructing personally meaningful yet plausible answers to the key questions. The answers may be expressed in a variety of forms, including personal interviews, the creation of graphic representations (such as models and concept maps), the generation of metaphorical images, and of course written essay tests.

A sample page of generalizations and guiding questions can be found in Table 6.3. This example will help you better understand the role of guiding questions in a concept-based unit.

Table 6.3 Sample Generalizations and Guiding Questions From a Concept-Based English Language Arts Unit

Grade Level: 3 **Unit Title: Whodunit? Reading and Solving Mysteries**	
Generalizations	*Guiding Questions* *(F = factual; C = conceptual; P = provocative)*
1. Authors use clues to build suspense or solve a problem in a mystery.	1a. Which clues helped lead you to predicting a solution? (F) 1b. How did the setting affect the mood of your mystery? (F) 1c. How do authors build suspense? (C) 1d. Why are clues important in solving a mystery? (C) 1e. Can you have mystery without suspense? (P)
2. Readers identify and connect clues to solve a mystery.	2a. What is an inference? (F) 2b. How do readers identify clues? (C) 2c. How does a prediction differ from an inference? (C) 2d. How do readers connect clues throughout a text? What happens when they don't? (C)

(Continued)

(Continued)

3. Readers gather relevant information from the text to confirm or revise predictions.	3a. What is relevant information? (F) 3b. How do readers separate relevant from irrelevant information? (C) 3c. Why is it important to revise predictions? (C)
4. Respectful consideration for the ideas of others can provide new insights and extend thinking.	4a. What does respectful conversation look like/sound like? (F) 4b. What happens when the ideas of others are not respected? (C) 4c. Do we always have to accept the ideas of others? (P) 4d. How can consideration of another person's ideas help you solve problems? (P)
5. Mysteries share common elements yet also include unique characteristics.	5a. What are the elements of mystery? (F) 5b. How are the characteristics of the mystery you are reading similar to and different from those of other mysteries? (F) 5c. Why are mysteries so popular? (P) 5d. Why are solutions so satisfying? (P)
6. Characters within a mystery may include suspect, detective, sleuth, sidekick, witness, investigator, villain, victim, criminal, or accomplice.	6a. How do you define suspect? Detective? Sleuth (etc.)? (F) 6b. Which characters are essential to your mystery? Why? (F) 6c. How do different characters contribute to a mystery? (C)

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Source: Newtown Public Schools, Newtown, CT

Summary of Step 5

Strategic questioning means more than pulling questions out of our back pocket on the spot. Curriculum writers think through the types of guiding questions that will best support inductive teaching toward the generalization. Spending time to strategically develop examples of the three different types of questions within the unit provides teachers with suggestions for activating and guiding students' thinking. If we are not

deliberate about the distinctions among different types of guiding questions, problems may occur. One problem is that the questions posed during instruction become overly fact-based and all about text or procedures. Another problem occurs when all the questions we pose to students are conceptual in our fervor to emphasize conceptual understanding. The problem here is that students need to know some factual information in order to cite specific evidence of their conceptual understanding.

Guiding questions are not a script to follow in a rote fashion. Guiding questions provide teachers with a means to advance students' thinking about ideas that lead to understanding. Questioning is a powerful instructional technique. When students' thinking is made more public, teachers can better assess whether or not students are on their way to realizing important generalizations. Balancing the types of guiding questions helps uncover misconceptions as well as extend students' thinking.

Guiding questions are not a script to follow in a rote fashion.

In Chapter 7, the next steps of unit development are explained: identifying the critical content that students are expected to know and key skills that students are expected to be able to demonstrate by the end of the unit.

How did you do?

Answers to Generalization Quiz (see page 69)

1. Yes, this is an excellent generalization. It is a clear and important statement that transfers across all historical fiction writing. When fifth-grade students arrive at this generalization as a result of their learning experiences and teacher modeling and questioning, they will better comprehend and appreciate how the genre is constructed. Students will also utilize this understanding as they critique works of historical fiction currently and in the future.
2. No, this is not a quality generalization. Why? It is a value statement. Although we may believe this and want it to be true, it does not qualify as an appropriate generalization.
3. No, this does not represent a strong generalization because it uses the no-no verb *affect.* Later in this chapter you will learn how to fix this problem.
4. Yes, we support this as a quality generalization! The idea is important, and the qualifier *may* represents the recognition that it may not be true across all situations.
5. Another yes! The statement is an important understanding at the kindergarten level and is written in a manner that represents grade-appropriate language.