

Unit Planning

Introduction

A unit plan sets out your goals and pacing for specific “slices” of the school year. It is a plan that sets out your learning goals into a coherent set of lessons.

Why a Unit Plan?

Unit planning provides you with a sense of direction and organization that helps you and your students achieve significant academic gains within a particular time period. More specifically, creating a plan to reach short-term goals has the following benefits:

- A unit plan forces you to make decisions about what to teach and how to teach it.
- After taking the time to develop a unit plan, you are less likely to be side-tracked by objectives, lessons, or activities that do not advance your ultimate quest for academic achievement.
- A unit plan keeps you on pace to reach your unit (and ultimately long-term) goals.
- Your unit plan should be referred to with almost daily. Given the limited number of weeks, days, and lessons in a unit, each moment becomes more precious, forcing you to pace yourself appropriately in order to meet your end goals.
- A unit plan provides an opportunity to stimulate student interest through overarching content that is relevant to students. When you design your unit plan, consider what content will engage your students given their interests and backgrounds.

Creating Unit Plans

To create a unit plan that meets the above purposes and provides you with daily instructional guidance, many effective teachers use the following series of eight interdependent steps:

- I. Develop your unit vision
- II. Create your summative unit assessment
- III. Translate your learning goals into lesson objectives
- IV. Sequence your content and scaffold your lesson objectives
- V. Schedule your objectives on the school calendar
- VI. Create your beginning-of-unit diagnostic tool
- VII. Create a tracking system for your objectives
- VIII. Continually adjust your plan

Note that these steps represent a backwards-planning framework. This process should not be thought of, however, as a “checklist” or as a series of discrete, linear steps to unit planning. Many of the actions are interrelated and will need to be reused or revisited at multiple stages in the planning process.

Avoid rigid adherence to each step. Such an approach may lead you to lose sight of your

underlying purpose – clearly understanding your destination and developing a plan to reach this goal.

Always reflect on the rationale for completing each stage in the process and think of the ways in which one action connects to and influences the other steps in the process.

I. Develop Your Unit Vision and Set Your PLO's

Before you determine what type of unit to create, it is necessary to develop a strong unit vision - a clear understanding of your ultimate goal for student learning. This is where your subject area PLO's come into action.

Determine what exactly your students should know or be able to do by the end of the unit if they have achieved the learning goals. This will allow you to clearly envision the unit's purpose and destination and prepare you to determine what evidence students must produce in order to demonstrate mastery.

Before you proceed, however, make sure that you can concretely describe in detail the most important things for your students to learn, and what it will look like for students to demonstrate that they have achieved the unit goals.

After developing your vision of the unit goal, you can begin to decide what type of unit you will use to present the learning goals to students. As the beginning of this section illustrates, there is a range of ways to think about creating “units” of learning. Units are often categorized as goals-based, thematic, or project-based.

Types of Units

A “*goals-based*” unit, in a way, is a misnomer because all units are rooted in goals. When we refer to goals-based units, we refer to a group of standards focused in the same content or skill area.

For example, a middle school math teacher might plan a measurement unit to teach students the skills of measuring temperature, speed, volume, mass, and the dimensions of an object. A secondary chemistry teacher might design a unit on the periodic table, teaching students the underlying concepts that govern the arrangement of the periodic table. With “goals-based” units, the teacher creates a unit directly from the content of the learning goals at issue.

Some people create their goals-based units by raising a central question that the learning goals imply – things like “what makes a story a real page-turner?” on narrative writing, or “who is a friend?” about foreign policy. Students then tie all of the content they learn during that unit to this enduring idea.

With careful thought, you may even be able to develop questions or generalizations that recur throughout the year (“the parts of a system are interdependent” in science, for example), which can serve as touchstones for the various concepts, principles, and facts your students learn.

Thematic units (probably most familiar to you from elementary school) also seek to

reach goals, but integrate standards from multiple subject areas to do so, focusing on a common theme or topic.

Thematic units are also useful at the secondary level, and sometimes teachers of different content areas or disciplines choose to collaborate. For example, a high school history teacher might focus on the development and history of the city in which students live, while the biology teacher could lead students in an environmental study of a nearby river.

Secondary teachers might also simply choose a particular field of student interest to use as a lens for studying different learning goals within their discipline, like examining the variety of physics principles through roller coaster rides or reaching various literature goals on character, plot, and setting while reading a series of books on tolerance.

Project-based units focus on producing an end product, such as a book, a play, a trip, or a presentation that serves as a rallying point for the students and motivates them to learn.

Sometimes, you will be able to choose a unit whose theme or end-project will excite and motivate you and your students. Other times, the learning goals will lend themselves to a particular type of unit. In this situation, you must determine how to best use and emphasize the particular content area to motivate students and bring them to mastery of the learning goals.

II. Create Your Summative Unit Assessment

Once you have determined your unit vision, providing you with a clear sense of what students must know and be able to do over the course of the unit, you need to consider how students will demonstrate mastery of these component skills and knowledge.

- What will count as acceptable evidence that your students have understood the unit's learning goals?
- How will you measure student mastery?
- Will there be a culminating project, writing assignment, or test?

Successful teachers create their summative assessments before they begin teaching their lessons. Doing so will greatly enhance your teaching and raise your students' achievement levels.

Teachers who clearly articulate how students will demonstrate mastery upfront have a clearer sense of where their students need to end up.

This enables them to both maintain focus on the unit goal and strategically prioritize their instructional plans to reach this goal. When teachers plan without an assessment in mind, they end up testing whatever they covered during the unit, whether or not this was sufficiently rigorous to meet their learning goals.

This approach is more likely to result in insufficiently rigorous instruction that lowers the bar for student achievement. Planning for assessment first enables you to prioritize and demand high levels of rigor and mastery and reduces the likelihood of ultimately settling for less and/or eliminating important elements from your plan.

It is a good idea to develop summative assessments that formally measure mastery after a set of learning goals rather than after each objective. While you will be checking at every step to make sure students master individual objectives through formative assessments, it is inefficient to give a formal test for each of the hundreds of objectives you will teach during the year.

Your assessment after each set of learning goals should end with a gauge of how well the student can perform each overall learning goal (for example, being able to write a paragraph with a topic sentence and supporting sentences), but should begin with individual questions for each objective (being able to identify the topic sentence in a paragraph, for one) to identify which of the learning goals' components students can and cannot accomplish along the way. Note that you haven't yet broken down your learning goals into objectives (this will occur in the next step of the unit planning process), so you aren't yet ready to create a complete assessment with detailed objective-level questions. At this stage you should identify and draft the types of general questions or prompts that are aligned to the overall learning goals of the unit. Once you create your objectives, you will be able to add the finer details to your unit assessment to align different components of the unit learning goals.

As outlined in Chapter Two, there are a number of different types of assessment questions and factors to consider when choosing an assessment. When creating your assessment, it is essential to select or design a tool that is best suited to solicit the evidence you need from students. For instance, both pencil- and-paper tests and authentic assessments can serve as reliable means of measuring achievement, depending on the learning goal. When appropriate, you may have students perform demonstrations, prepare dramatizations, create audio or video recordings, respond to journal prompts, build models, or solve novel problems, while maintaining a rubric outlining your expectations. The most important consideration is to choose an assessment type that will accurately and efficiently measure the learning goals they are intended to assess.

As you plan your assessment (and throughout the steps of the unit planning process), continually think about where students will struggle to reach the level of mastery required by your assessment questions.

To help uncover these possible areas of confusion, think about what you take for granted that may be confusing to students learning the content for the first time. Consider how and why students might have difficulty with a particular concept and consult with veteran teachers to determine common student misunderstandings. By proactively identifying these areas for potential confusion upfront, you will be able to address them in your instructional planning.

III. Translate Your Learning Goals Into Lesson Objectives

Let's take a moment to review. In the last chapter, we examined broad standards established by every state. There are typically five to twelve standards in a given subject area. Within each of these standards, we saw a similar number of learning goals, equaling dozens and dozens all together. We found commonalities between these various learning goals and grouped them into "units," which we sequenced on the calendar in a logical order. We then determined our vision for what students will be able to do at the end of

the unit and began to create our end-of-unit summative assessment.

Once you have established your unit vision and assessment, you must look at your group of learning goals and translate each one into student-achievement based, measurable, rigorous lesson objectives. The need for this step may not be obvious to a new teacher, but it is critically important. The broad standards (and even the slightly more detailed “learning goals” that some districts may provide) simply do not provide you or your students enough concrete guidance and focus from which to design specific lessons. Thus, each learning goal must be translated into discrete, specific lesson objectives that can be taught in one lesson.

Often, an ineffective lesson results from not taking this relatively simple step of carefully defining your lesson objective. If you are careful to ensure that each lesson has a good objective, you dramatically increase your ability to ensure significant academic gains for your students.

Each learning goal is too broad to reach in one lesson; objectives are the basic unit of teaching.

Learning Objective A

Objective 1

Objective 2

Objective 3

Objective 4

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Knowing this, how do you translate a general learning goal into a set of concrete lesson objectives that will actually help you design a day’s lesson? We are going to spend the next couple of pages describing this process. You can start by asking these general guiding questions:

— — —
What are the key nouns, adjectives, and verbs that describe your learning goals? What tasks and understandings are associated with the learning goals? What knowledge and skills will students need in order to master these goals?

The following are examples of learning goals translated into lesson objectives (each learning goal is just one of several from the example units above):

Goals-Based Africa History Unit

Learning Goal #4: — The student will measure distances on a variety of maps.
(translates into) Lesson Objectives: — The student will be able to use the map’s index and grid to locate two

Thematic Car Unit

geographical points. — The student will be able to accurately measure the distance between two points in inches and centimeters. — The student will be able to convert the distance on a map to the actual distance between two places using the map scale. — The student will be able to calculate distances between two points on 1) a map of Africa and 2) a map of one African nation.

Learning Goal #1: — The student will analyze energy of position, including gravitational potential energy and elastic potential energy.

(translates into) Lesson Objectives: — The student will be able to explain the

difference between gravitational

Project-Based Pen-Pal Unit

potential energy and elastic potential energy. The student will be able to solve word problems involving gravitational and

elastic potential energy. The student will be able to analyze the gravitational potential energy of real

objects at different heights. The student will be able to analyze the elastic potential energy of real

springs with different spring constants.

Learning Goal #2: The student will develop a topic sentence and supporting sentences.

(translates into) Lesson Objectives: The student will be able to identify the topic sentence and supporting

sentences in a paragraph. The student will be able to describe the purpose of a topic sentence and

supporting sentence. The student will be able to evaluate a topic sentence to ensure that it

represents its paragraph's main idea. The student will be able to evaluate supporting sentences to ensure that

they reinforce the paragraph's main idea. The student will be able to write a paragraph with a topic sentence and

supporting sentences.

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Unit Planning

To successfully translate general learning goals into more specific and useful lesson objectives you must ensure your lesson objectives meet three all-important criteria:

(1) (2) (3)

Lesson objectives must be **STUDENT-ACHIEVEMENT BASED**. Lesson objectives must be **MEASURABLE**. Lesson objectives must be **RIGOROUS**.

Creating Student-Achievement Based Lesson Objectives

When you write a lesson objective, ask yourself, "What are my students going to learn and achieve by the end of the lesson?" Some teachers fall into the trap of designing activities, creating worksheets, and giving lectures that merely "cover" material and do not focus on what students learn, achieve, and accomplish. When you translate a learning goal into a lesson objective, it should be student-achievement based.

The best way to draft objectives is to start with the phrase "The student will be able to..." (represented by the acronym "SWBAT"), and ensure that the objectives are derived from your course learning goals. If you look at your standards and learning goals (and most of the examples included in this text), you will most likely see that they are already student-achievement based. States and districts usually include the phrase "the student will..." or "the student will be able to..."

This approach to drafting objectives helps avoid some of the most common mistakes teachers make as they approach unit and lesson planning. Unfortunately, there are many classroom examples of non-student-achievement focused objectives. "Continuing to cover poetry," or "Completing the worksheet," or "Group work on African history," are not useful objectives because they offer no indication of what learning you want the students to achieve. They offer no guidance or focus in the lesson planning process and do not help you to determine when you have succeeded with your lesson. In contrast, the

objective “The student will be able to identify, describe the rhythm and rhyme structure for, and write a limerick” provides you with a specific, student-oriented focus for your lesson. By beginning every lesson objective with the phrase “The student will be able to...” you discipline yourself to ensure that you’re driving toward student achievement. Keep in mind as we discuss lesson objectives that a teacher does not always teach one unique lesson objective per class per day. While it is a helpful habit to attempt to think of objectives in such discrete pieces, the reality is that sometimes it takes more or less than one class session to master an objective. You may have a set of objectives being addressed in one class period, or you may find yourself investing a few days of class time on one objective. Either way, be sure you identify exactly what your students need to accomplish by the end of each class period and how you will know whether they have, in fact, achieved this goal.

Creating Measurable Lesson Objectives

Objectives serve as the key tool for evaluating your own and your students’ success on a daily basis. If students achieve the lesson objective, the lesson is successful; if students do not achieve the objective, you must acknowledge that there is still material to be learned and most likely you must re-teach the objective in a different way. In order to determine confidently whether students have achieved the lesson objective, the objective must be measurable.

What makes an objective measurable? In a word, the verb. By carefully choosing a verb for your objective that lends itself to assessment, you will greatly enhance your lesson’s efficacy.

For example, if an objective reads, “The student will be able to understand that bones help the body,” how would the teacher measure that understanding? If an objective reads, “The student will learn about the phases of the moon,” or “The student will enjoy food from different cultures,” how would the teacher measure achievement of those objectives?

The verbs understand, learn, and enjoy are relatively vague.

On the other hand, changing “the student will be able to understand that bones help the body,” to “the student will be able to list three ways bones help the body,” you have built into the objective a means of knowing when you have reached it. Instead of planning to help students learn about the phases of the moon, your objective could be for students to be able to explain the cause of the moon’s phases and correctly identify the different phases by name.

Let’s consider several lesson objectives and analyze them in light of the criteria we have outlined.

Creating Rigorous Lesson Objectives

For objectives to be rigorous they must connect to the big goal and be written at the appropriate cognitive level.

Before Revision

Analysis of Objective

After Revision

The student will understand the major parts of speech in a sentence.

This objective is not measurable. How will you know for certain whether students understand?

The student will be able to identify and define the major parts of speech in a sentence.
The teacher will present a lesson on ordering fractions with different denominators.
This objective is not student- achievement based.
The student will be able to order fractions with different denominators.
The student will enjoy the rhyming schemes in different types of poetry.
This objective is not measurable. How do you measure student enjoyment?
The student will be able to compare and contrast the rhyming schemes in different types of poetry.
The teacher will discuss the implications of cloning human beings.
This objective is not student- achievement based.
The student will be able to evaluate the implications of cloning human beings.
The student will learn the conditions in Europe that led to World War II.
This objective is not measurable.
The student will be able to explain the conditions in Europe that led to World War II.
The student will be able to list the phases of the water cycle.
This objective is student-achievement based and measurable.
No revisions necessary.
The student will be able to write a short biography of a famous individual based on research from multiple sources.
This objective is student-achievement based and measurable.
No revisions necessary. (This objective encompasses several lesson objectives, and might come at the end of a unit, perhaps as the end-of-unit assessment.)

Connected to the Big Goal

As you plan your objectives, you should always be thinking, “Why is this knowledge or skill important to the larger goal?” This step requires you to clearly articulate a lesson objective’s purpose in terms of how it connects to the overall big goal. Rigorous objectives should clearly relate to your unit and course goals and serve as necessary steps towards achieving those ends. Objectives that don’t have necessary, logical connections to your big goals are ineffective because they will not ultimately move your students forward in their path toward academic achievement. Tying objectives to the big goal not only provides clarity of purpose, but can also help focus and motivate students. If you ensure that students understand this connection, it will remind them of the bigger instructional picture and provide them with a concrete rationale for why they are learning this particular objective. This will help in continually reinforcing the meaning and significance behind classroom activities.

At the appropriate cognitive level

As seen above, measurable, student-achievement based objectives contain a carefully chosen verb (such as write, list, measure, evaluate, calculate, and categorize) that helps drive the objective’s focus. A teacher should be aware that the choice of verb also affects the cognitive level of the objective. That is, particular verbs address a lower level of thinking, and others address a higher level of thinking. For help in this area, see the worksheet based on “Designing Lesson Objectives That Address the Appropriate Cognitive Level” in the Instructional Planning & Delivery Toolkit (pp. 49-50); this Toolkit can be found online at the Resource Exchange on TFANet. □

Your course on Learning Theory outlines how student learning can occur at a whole range of complexity, from rote memorization to sophisticated evaluation of difficult concepts. Bloom’s Taxonomy, developed by Dr. Benjamin Bloom of the University of

Chicago, is the most commonly used hierarchy of cognitive levels. Where your lesson objectives fall on that range of complexity should be a conscious choice on your part, depending on the rigor of the learning goals you are trying to reach.

Bloom's Taxonomy

When choosing a verb at the appropriate cognitive level to include in your objective, remember to consider the following three factors:

- The age/developmental level of your students. As the Learning Theory course explains in much more detail, younger students often are still building their lower-level thinking skills and are more successful when considering concrete concepts. Of course, teachers should push young students to higher cognitive levels when they have the appropriate foundation and should always depend on a varied blend of different cognitive levels. Older students usually are able to operate at a higher level

Cognitive Level

Action Verbs

Concrete Tasks

Knowledge

List, match, tell, label, name, locate, memorize, repeat

Recall or recognize information, usually in the same way it was learned

Comprehension

Describe, explain, summarize, restate, identify, translate

Translate or interpret prior learning

Application

Solve, classify, demonstrate, dramatize, manipulate

Independently apply the knowledge or skills learned

Analysis

Debate, compare, differentiate, separate, group, research

Separate, examine, and draw conclusions from information

Synthesis

Create, produce, reconstruct, arrange, pretend, assemble, organize, blend, generate

Combine information and apply it to a new situation in order to solve a problem

Evaluation

Assess, justify, rate, revise, defend, support, prioritize

Make qualitative and quantitative assessments using specific criteria

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Higher Level

Lower Level

of thinking and can reason abstractly, so you can push them to application, analysis, synthesis, and evaluation. Remember, to help determine the level you should expect your students to reach, you can also revisit your big goal and consult the expectations at high performing schools for students in your subject and grade level.

- The cognitive level of the learning goals. As you break down your learning goals into lesson objectives, be sure that the highest cognitive level of those objectives is at least as high on Bloom's as the original learning goal. If the learning goal expects students to reach the level of synthesis, for instance, and you only ask students to describe or explain the topic (the "comprehension" level on Bloom's), then your objectives would be insufficiently rigorous to lead students to master that learning goal. At least one objective should reach the cognitive level of your learning goal in order for your objectives to be at the appropriate level of rigor.

- The academic starting point of your students: Where are your students in relation to

the cognitive level of the objective? Before you can reach high levels of Bloom's Taxonomy, you must help your students with the lower rungs. If you want your class to be able to compare and contrast different types of rocks (analysis), be sure they can first name the three types (knowledge), describe the characteristics of each in their own words (comprehension) and classify unlabeled rocks as members of one of the three groups (application). Along the same lines, students obviously can't analyze the use of adjectives in a passage if they do not know what an adjective is. And conversely, you shouldn't teach students how to find the Fahrenheit and Celsius sides of the thermometer if they already know how to read and write both types of temperatures. It is therefore important to consider your students' current achievement levels and all of the pre-requisite skills and knowledge that your goals assume when fashioning your list of lesson objectives. Your objectives will be inappropriately rigorous if they are too ambitious (i.e. students are not prepared to perform up to the objective's level) or are not ambitious enough (i.e. students have already mastered the objective). Finding the right balance is the key for providing students the appropriate level of challenge, rather than frustrating or boring them with objectives that are not of the appropriate rigor.

As this suggests, if your students already demonstrate a certain level of proficiency, keep moving them up the taxonomy. Can students already solve problems with fractions (application)? If so, you should guide them to compare fractions with different denominators to determine which is greater (analysis). Can students already reconstruct the plot of a fairy tale so that it is set in the present day (synthesis)? If so, you should ask them to judge whether the main character was justified in her actions, and defend their opinions (evaluation).

For nearly fifty years, Bloom's Taxonomy has remained the foremost classification system of cognitive levels, despite the development of alternative models since its creation. Moreover, most new research in this field has actually served to authenticate Bloom's approach. While there is some disagreement among learning theorists as to whether the order of "synthesis" and "evaluation" should be switched (based on the premise that evaluation may be easier to accomplish than synthesis), this debate reinforces the belief that the taxonomy is not to be used as an exact hierarchy. Meaning, you do not necessarily need to ask your students to perform synthesis assignments before attempting evaluation. Perhaps one contributing factor to the taxonomy's continued popularity over the years is its undeniable value to teachers. Bloom's reminds us that students need to master basic, factual knowledge before moving to more advanced cognitive demands, all while encouraging teachers to maintain high expectations and push students to these higher levels of achievement. Bloom's is applicable to all grade-levels and content areas and provides invaluable assistance in writing objectives at the appropriate cognitive 'rung' to lead students to their academic goals.

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Unit Planning

(As mentioned in the previous chapter, we also must remember that the development of lesson objectives may be somewhat different if you are teaching a class of fourth AND fifth graders, or a class of students with special needs and students for whom you are working toward several different sets of standards. You would still be responsible for drafting rigorous, measurable, student-achievement focused objectives, but you might find that you have different objectives for different students in the class. See Chapter Eight for more on "differentiated" classrooms.)

Before you move to the next step in the unit planning process, take this time to revisit the unit assessment you began to create in step two. Remember that so far you have only

drafted the overarching framework of your assessment (general, standards-aligned prompts, tasks, and/or questions) and have yet to fill in all of the details. Now that you have a clear idea of what objectives you will teach students, you can add more assessment questions that address and align to the objective-level components of your unit goal. Adding these details will be important for completing your assessment and clarifying your understanding of what evidence you will need to see from students in order to determine their level of mastery.

IV. Sequence Your Content and Scaffold Your Lesson Objectives

The fourth step of unit planning, after you have (1) developed your unit vision, (2) created your summative unit assessment, and (3) developed rigorous, measurable, student-achievement based lesson objectives for that unit, is to (4) think critically about the order in which to teach those objectives within the unit. An effective sequence is comprised of a series of scaffolded objectives that leads to the achievement of the big goal and builds on and extends student understanding, beginning with simpler, more concrete, lower-level concepts and progressing to more complex, abstract, higher-level ideas.

Keys to Effective Sequencing and Scaffolding

In sequencing the content of your unit, use the same rationale and considerations as when ordering your units during the long-term planning process (see Chapter Three). Again, you should determine how to present your unit so that topics build on one another logically and conceptually, all the while leading students to achieve their academic goals. Place prerequisite learning goals and objectives earlier in the unit to set students up for success and to prevent student misunderstandings. Also, always remember to constantly reflect on the significance and purpose of your objectives. Eliminate any particular objective, or series of objectives, that is not a necessary step toward reaching the big goal. In order to ensure that your objectives are scaffolded – starting with lower-level and moving to higher-level thinking skills and concepts – it is helpful to review each objective through the hierarchy of Bloom's Taxonomy. Consider the following sequence for a unit on cells in a seventh grade life science class.

Unit Goal:

Understand the functions of different parts of a cell and how they contribute to cell operation

Objective:

Cognitive Level:

The student will be able to label 10 major organelles in plant and animal cells.

Knowledge (lowest level)

The student will be able to explain the function of ten major organelles in plant and animal cells.

Comprehension

The student will be able to create a model of the cell.

Application

The student will be able to compare the cell to a factory, and specify which organelle parallels each component of the factory.

Analysis

The student will be able to demonstrate how multiple cells combine in form and function to create tissues.

Synthesis

The student will be able to predict how a cell's operation would change if certain parts were removed.

Evaluation (highest level)

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Notice how the objectives build on each other logically and will lead students to achieve the overarching goal. If students can't explain the function of various organelles, they are certainly not going to be able to compare those organelles to the parts of a factory. The above sequence also builds on concrete, lower-level thinking skills (such as labeling the organelles in a cell) and then moves to more abstract ideas (such as predicting how a cell's operation would change if certain parts of it were removed). Ordering the objectives in this way also gives the students a sense of momentum and builds students' confidence, as previous learning experiences serve as a foundation for the extension of student knowledge and the achievement of the big goal.

At times, sequencing objectives will be a fairly straightforward process, as in the example above. There, the cognitive level of the lesson objectives themselves facilitated the sequencing process. At other times, however, you may have several lesson objectives at the same cognitive level, and you need to consider other factors to determine the appropriate sequence. Let's consider the discrete lesson objectives drawn from the learning goal, "The student will be able to estimate and measure length, height and perimeter using cm, m, in, and feet."

- ___ The student will be able to measure the length and height of an object using inches.
- ___ The student will be able to measure the length and height of an object using feet. ___
- ___ The student will be able to measure the length and height of an object using centimeters. ___
- ___ The student will be able to measure the length and height of an object using meters. ___
- ___ The student will be able to measure the perimeter of an object using centimeters, meters, inches, and feet. ___
- ___ The student will be able to estimate the length, height, and perimeter of an object using centimeters, meters, inches, and feet.

Why is this an effective sequence? The objectives involving measurement (application) should be taught before objectives that require estimation (analysis) in order to build from concrete concepts to more abstract ideas. But now we have several objectives at the cognitive level of application. How do we create a sequence among those objectives that drives towards a clear goal, gives students a sense of where the unit is going, and reinforces previous objectives to build on and extend student understanding?

In this situation, effective sequencing requires a deeper understanding of how learners process new information, and there may be disagreement among experienced teachers about the most effective order. The objective that involves measuring the perimeter of an object should go towards the end, as that involves both teaching the concept of perimeter and the application of all of the previously learned forms of measurement. We are left with determining the order of measurement objectives that involve use of centimeters, inches, feet, and meters. Some could argue for keeping the systems of measurement separate (i.e., teaching use of inches and feet and then teaching use of the metric system). Other teachers might feel that students should work on the same scale and then increase the size of the objects they measure (i.e., teaching inches and centimeters and then teaching feet and meters). There are reasons to use either sequence. What is most important is that you constantly reflect on the effectiveness of the sequence you have chosen, and seek guidance from other sources such as veteran teachers.

When I teach my second graders double digit addition and subtraction with regrouping, I make sure I begin

the unit at a point in the year where they have a strong foundation in identifying place value. Then we spend several days just working on the concept of trading ones and tens (using base-ten manipulatives and dimes and pennies). After that, we work on building the connection between the concept and the written algorithm by drawing pictures and writing number sentences to match place value illustrations. Finally, they are ready for the algorithm alone.

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Unit Planning V. Schedule Your Objectives on the School Calendar

Once you have sequenced and scaffolded your content, you are ready to schedule instruction for the unit. Use a school calendar to plot the lesson objectives just as you plotted your units during the third step of the long-term planning process (see Chapter Three).

As with your long-term plan calendar, plot your lesson objectives recognizing the events that won't allow for regular instruction, such as school breaks, field trips, days devoted to standardized testing, and district professional development. If possible, collaborate with other teachers at your school when creating your calendar. Knowing when other teachers plan on administering major assessments may impact the schedule of your unit assessments (students won't be too happy, or effective, if they are taking several major test in the same week). Further, collaborating will allow you to understand the trajectory and demands of other teachers' classes. This may illuminate potential areas for cross-curricular connections, overlapping instruction, and other intriguing possibilities for leveraging instruction to the benefit of students in all disciplines. Consider these possibilities as you calendar your units as well. After all is said and done, you need to ensure that your lesson objective schedule fits into the time you originally allocated to the unit in the long-term planning process.

You can make a rough estimate of this schedule before you administer the diagnostic, but you will have a better sense of exactly how many days the unit will require once you determine what your students know and don't yet know. (As mentioned before, objectives should be relatively discrete building blocks of learning, lasting roughly one class period long. If you find yourself thinking you are going to need two weeks to meet one objective, it may be that you should think about breaking that objective into its component parts. At the same time, remember that you can address more than one objective in a single period if your students demonstrate mastery of particular goals quickly.)

Again, make sure that your unit plan has built in time for contingencies, enrichment, and remediation. When calendaring consider how you are going to teach skills that are prerequisite to that day's objective, and determine how you will circle back and reinforce or review objectives that you have already taught. On the flip side, determine how and when you should extend and enrich student understanding beyond your objectives, in addition to budgeting time for unexpected delays in your instruction.

Similar to the long-term plan, the unit plan will be revisited and adjusted over the course of the unit. Getting ahead or behind in your unit plan does not undermine the value of the plan. Return to the plan and look for ways to adjust it slightly, either by combining or

eliminating non-essential objectives or by extending the skills and concepts of the objective to enrich student understanding. Making these adjustments will be detailed further in Step Eight on tailoring your plan based on diagnostic data, the final step in creating your unit plan.

A Note on Scripted Curricula

Even if your school requires you to use a “scripted curriculum” that lays out what to teach and when to teach it, it is still important to understand the purpose and process of unit planning. Don’t believe that you can simply use your curriculum to lead students to achievement without understanding and adjusting it first. As mentioned in the FAQ on long-term planning, you always need to critically evaluate pre-made tools and determine how to tailor them to fit your students’ needs.

If you use a scripted curriculum in the fall, invest time in digesting the vision of your units. Evaluate the quality of the objectives and their sequencing. Think about the time allotted for different learning goals and determine where you can integrate remediation and enrichment. Making appropriate adjustments to your curriculum will ensure that it is more effectively serving your students.

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Checking for Alignment

At this point, you should reflect on your newly created unit plan to examine its alignment to the rest of your instructional tools. As you recall, you have already checked several issues of alignment at different points in the unit planning process. It will be important, though, to take extra time at this stage to review the different components of your unit plan and assessment and ensure that they are working in harmony – both with each other and with your big goal and long-term plan. To help check for alignment within and between your instructional tools, begin asking the following questions:

___ Do the assessment items test the right knowledge and skills, ask for the appropriate products, and represent the appropriate level of Bloom’s given your unit plan’s objectives?

___ Is the unit plan structured in a way that would logically lead students to perform well on the assessment and master the learning goals?

___ Does the learning from this unit flow logically from that of the previous unit? ___

Will achievement on the assessment translate to achievement of the unit goal, and will this set

your students up for success in the next unit? ___ Is the achievement of the unit goal directly connected to and a necessary step toward achieving the big goal for the year?

If any of your answers reveal an area of misalignment, congratulations! You will now be able to proactively correct this important issue before it affects your students’ learning later on. While we are highlighting the need to check for alignment at this point, remember that you should consistently prioritize this step throughout your planning.

VI. Create Your Beginning-of-Unit Diagnostic Tool

Just as important as knowing when your students will have reached your unit goals is identifying where your students are starting. You need to know whether your students have the prerequisite knowledge they need to be ready to learn grade-level content and what knowledge of unit objectives students already have. Reliable data here will greatly influence where you begin your instruction toward your unit goals. Without this starting point, even the strongest unit plans will not effectively lead students to reach their destination.

You will need to design a beginning-of-unit diagnostic after creating the main unit plan with objectives sequenced onto a calendar. This will provide you with a sense of where your class in general – and your students individually – are currently performing. Remember, developing such diagnostics:

— Allows you to know where to begin your instruction.

As described in Chapter Two, different types of diagnostic questions provide you information on where the class is in relation to your unit’s learning goals. Including diagnostic questions that assess “readiness,” for instance, will reveal which students lack the prerequisite skills to begin the unit, and including “pre- test” questions will reveal which students have already mastered some of the skills you plan to teach. Discovering that your students are in different places – a common classroom reality – will prompt you to make modifications to your unit and long-term plans (see Step

When I gave a unit pre-test and analyzed the results, I saw that everyone already had capitalization down pat. I’m so glad I learned I could concentrate my efforts on planning lessons for other skills.

Andrew Mandel, RGV ‘00
Vice President, Interactive Learning & Engagement

Teach For America

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Eight that follows). Additionally, we will discuss differentiating instruction in greater detail in Chapter Eight. Generally speaking, it is important to tailor instruction to reach students where they are currently performing; if you do not, students will become disengaged, discouraged, or frustrated. Further, you will have to spend more time re-teaching content than if you had identified which objectives needed reviewing at this stage in the planning process.

— Provides a starting point – or benchmark – against which you can measure growth. Marking the starting point of each student is an essential step of measuring student achievement. Without knowing where each student began, you will not be able to measure his or her academic growth. While the end-of-unit assessment will reveal whether or not students have met the end goals, you will also want to determine the growth that your students are making from their various starting places so that you’re sure you’re pushing everyone – both higher and lower performers – forward dramatically. Once you administer the diagnostic, don’t forget to grade and record these initial results on the progress-tracking charts you will make in the next step of the unit planning process.

Chapter Two details the ways to create valid, reliable, and efficient assessments. Take this time to review the guidance provided there, remembering that it will be important to

ensure that your assessment is scaffolded with questions progressing from lower to higher levels of cognitive demands on Bloom's taxonomy. This will allow you to pinpoint what exactly students know and at what point their understanding breaks down.

Chapter Two also includes an outline of different questions to consider when selecting the appropriate diagnostic assessment. Remember to think strategically about what information you want your diagnostic to provide and why, and how this information will be important to your instructional decision making. Specifically, determine what you need to know about students' readiness, prior knowledge, and interests regarding the content of your unit. You will then be ready to design (or select) a tool that fits your needs. Note that your diagnostic can be relatively quick and informal, if necessary. Simply recording what students already believe they know and want to learn about a topic, for instance, can provide you with valuable insights about your class prior knowledge and current level of understanding. At times, however, it may be more appropriate to administer a formal assessment that measures prerequisite skills and/or student proficiency on upcoming unit learning goals. Regardless of what type of diagnostic you use, it is vital to ensure that it is best suited to elicit the information you need to begin instruction.

As noted previously, there will be give and take between your unit plan and your diagnostic. In order to plan a unit, you need to know where your students currently perform. But to determine where your students currently perform, you need to know what skills you plan to teach them so that you can determine their mastery of those skills. Many successful teachers deal with this conundrum by basing diagnostics on initial estimates of where their students might be, and adjusting plans after the results come in.

VII. Create a Tracking System for Your Objectives

At this point, you have created your unit plan and your diagnostic and summative assessments. You are now ready to take a giant step forward in your long-term ability to make academic gains with your students; you can now create the beginnings of your progress tracking system.

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What is a tracking system? At its core, a tracking system is a chart that records students' and class' progress on the objectives you are teaching. If the teacher is like a guide leading a group of hikers to the summit of the mountain, tracking student academic progress is akin to having a Global Positioning System for each student in the class. As a student improves his or her skills in a particular area, the classroom tracking system records that growth. If Javier can now read second-grade books at 100 words per minute whereas his fluency was 90 wpm a month ago, the tracking system would chart that progress. If Sarah has demonstrated mastery of the key concepts of the Revolutionary War but has not yet shown sufficient knowledge of the French and Indian War, the tracking system would show that, too. Similarly, a quality tracking system will show the overall picture of your class' average mastery and progress toward the big goal. This allows you to clearly know where your class and students currently perform, as well as how far you need to travel in order to reach your goals. With this knowledge you will be able to make informed, data-driven adjustments to your instruction. While all of the planning actions described thus far are important for leading students to significant academic progress, none of them will be effective unless you consistently track student performance in a clear, organized tracking system.

A simplistic view of tracking would be to describe it as one form of grading – and yet they are actually distinct processes. Most often, grading is the numerical average of a series of summative assessment scores. Tracking begins with a list of objectives that a

student needs to master, and the tracking system indicates the extent to which the student and the whole class have mastered those objectives over time.

Mr. Johnston's Progress Chart Unit One: Reading and Writing Multi-Digit Numbers

Student Name Class Average Diana Sylvia Pasquale Leticia

Your tracking system can be a simple chart with students' names on one axis and the objectives you're teaching on the other (see above). In some classrooms, students also have their own progress-tracking forms.

What does this system look like? It depends. Some teachers create a separate tracking document for each student. For example, you might maintain a detailed checklist just for Tatiana, showing whether she is emergent, developing, or secure in her mastery of each of the specific writing skills expected of a first grader. Other systems break down a particular standard into its component objectives, with a place to record each student's progress (see the Progress Chart, on the previous page). In this case, you might keep a chart with columns for each discrete skill (e.g., reading two-digit numbers, representing a two-digit number with manipulatives) and a row for each student. You can make these charts in a spreadsheet, in your gradebook, in your students' folders – whatever makes most sense for you. Just make sure that your system allows you to easily and efficiently record and analyze your data.

Once you have created your tracking system, you can easily and efficiently record student performance for each objective you assess. This is exactly what Rebecca Cohen, Baltimore '00, does in her seventh

My students and I “climb the hill” to make their individual objectives the focal point of assessment and instruction. Each student has a paper hill in the classroom with pictures of themselves attached to the slope and the objective tacked at the top. As they meet the small objectives I have created on the way to the big goal, they literally move themselves up the hill of understanding. This keeps them focused and inspires them to be motivated as learners.

Anne LaTarte, New York City '03 Director of Special Projects New York City Department of Education

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Read 2-Digit Numbers Read 3-Digit Numbers Read 4-Digit Numbers Read 5-Digit Numbers Read 6-Digit Numbers Read 7-Digit Numbers

Represent a 2-Digit Number with Manipulatives

Write a 2-Digit Number in Expanded Form

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grade English classroom. After determining the objectives she will teach, she ensures that her benchmark tests contain questions measuring each of these objectives. Then, “when I get benchmark tests back and return them to my students, I say, “Put a smiley face next to numbers 1, 5, 9, and 15. If you got all those correct, you mastered objective 16c.

Highlight that on your own objectives sheet!”

Rob LoPiccolo, South Louisiana '99, says a progress tracking system has changed the instruction in his ninth grade physical science classroom:

Looking at the range of scores from the final test on Newton's Laws didn't tell me what specific objectives I had taught well and which ones I needed to re-teach. Fast forward to today: if you point to one of my objectives for the year, such as “you will be able to interpret acceleration from distance vs. time graphs,” I can tell you exactly how many students have demonstrated mastery of that objective. When students receive their assessment results back, they see that their overall grade, but more importantly they see what specific objectives they have demonstrated mastery of. They then can check off the

objective on their own tracking sheet.

At this point, you also should place the learning goals and objectives being tested by your summative and diagnostic assessments into your tracking sheet. Once you have administered and graded your assessments, you will be prepared to immediately record this data and analyze it for important instructional implications. By doing so, you will know which students need assistance with which skills – and potentially which groups you can create for remediation or enrichment in a particular area of objectives. Your students will know what they've mastered – and see where they're making progress. You can also give parents specific instructions about which skills they can reinforce at home. Both Chapter Eight on Differentiation and the Grading Supplement found at the end of this course contain more about the benefits of tracking progress and how to integrate such a system in your classroom. Determining and responding to the implications of your assessment results is an extremely important part of effectively adjusting your plans to meet the needs of your students. This is the next and final step of the unit planning process.

VIII. Continually Adjust Your Plan

After you finish administering and tracking the data, it will be important to reflect on your overall plan and make appropriate adjustments in light of this new information. This step should be familiar because it parallels the same process outlined in Chapter Three on long-term planning. To effectively adjust your unit plan, first interpret your diagnostic (or other assessment) data and then decide how to appropriately respond to this data.

Interpreting Data

Once you have collected your diagnostic data in your tracking sheet, determine what this data reveals about the relative strengths and weaknesses of your class, as well as students' readiness to learn the grade-level objectives of the course. If your students demonstrate mastery of a series of prerequisite skills, for instance, this probably means that you will not need to spend much time covering these topics later on. On the other hand, the more your students struggle with certain learning goals, the more time you will need to spend reviewing or re-teaching this material during the year. Knowing this data will allow you to make informed instructional decisions about how to adjust your plans to move students forward.

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Responding to Data

Once you have interpreted your data, you are ready to take action and adjust your plans accordingly. If you used a diagnostic that assessed student readiness, you will have to decide how to address the prerequisite skills students need while keeping pace to reach your larger goals. Find logical places to incorporate remediation or review into your unit plan, and adjust your instructional sequence to include these prerequisite objectives. If your students have a lot of remedial needs, you may feel tempted to only focus on prerequisite content without moving students forward on grade-level material. Doing so, however, will not effectively lead your students to make the academic progress they need to catch up to their peers. You can avoid this trap through a number of strategies. Finding additional instructional time during the day or before and after school, for instance, is a great way to fit in review while maintaining your unit plan pacing.

If you receive data on student mastery of unit objectives, decide which objectives you will need to review, re-teach, or possibly eliminate from your unit sequence. As discussed in Chapter Three on long-term planning, tread carefully when deciding to skip objectives, and take care not to eliminate objectives that serve as important prerequisites to content

later in your unit sequence. Lastly, think of how you will differentiate instruction for students who have yet to master content that most of the class already understands, and for students who have mastered objectives that most of the class has not. Tailoring your unit plan to meet the needs of individual students based on assessment data will enhance your instructional ability to lead students to the achievement of the unit goal.

Remember that you should perform this cycle of adjusting your plan based on interpreting and responding to data consistently throughout the year, not just at the beginning of the unit. Your diagnostic data will be supplemented by further assessments, student work, and your own observations about students' strengths and weaknesses. You need to be prepared to rethink initial conclusions, and corresponding adjustments, based on incoming data during the year. This will ensure that your instructional tools remain fine-tuned and calibrated to effectively serve the needs of your students.

At this point, you should also re-check the alignment of your tools, just as you did after scheduling your objectives (at the end of step five). Each adjustment you make to your unit plan has consequences for other instructional tools. For instance, if you eliminate an objective after analyzing your diagnostic data, it will be important to remove this from your summative unit assessment and to adjust your unit calendar accordingly. Take time to carefully determine if your adjustments affect the overall alignment of your unit plan with the unit assessment, big goal, etc.

Conclusion and Key Concepts

In Chapter Three, we took the highest-flying look at your year as we examined the long-term plan. In this chapter, we have taken a somewhat more detailed perspective, focusing on unit planning.

— Like a long-term plan, but on a smaller scale, a unit plan provides you with a sense of direction and organization. A unit plan keeps you on pace to reach your unit (and ultimately your long-term) goals. A unit plan also provides an opportunity to stimulate student interest through overarching content that is relevant to students.

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— The unit planning process involves eight steps:

I. Develop your unit vision

Unpack your standards to clearly understand what evidence you will need to see from students in order to know whether they have achieved the unit goal. Then decide among the types of units you might design: goals-based units (which revolve around the learning goals themselves for one content area), thematic units (which use a common theme to draw in various learning goals from different areas), and project-based units (which focus on an end-product, some creation or event that will serve as the vehicle for students' mastery of the learning goals).

II. Create your summative unit assessment

Successful teachers create their end-of-unit assessment tool before they begin teaching the unit. Begin to purposefully choose tasks that will allow students to demonstrate their mastery of the unit goal. This will serve as an initial framework for your assessment that will later feature questions that test each individual objective. After creating your assessment begin to anticipate potential student misunderstandings of your unit content.

III. Translate your learning goals into lesson objectives

You must translate your general learning goals into more specific lesson objectives.

These objectives should be student-achievement based, measurable, and rigorous.

Consider all of the prerequisite knowledge and skills that a child may need to perform the goals you outline.

IV. Sequence your content and scaffold your lesson objectives

The fourth step is to think critically about how you will order your content and scaffold those objectives over the course of your unit. You need to consider what order will result in the most effective sequencing of the objectives, based on Bloom's Taxonomy and level of rigor.

V. Schedule your objectives on the school calendar

Use a school calendar to plot the lesson objectives, ensuring that you have allotted enough time for the knowledge and skills you wish to teach and recognizing various days or weeks that won't allow for regular instruction. Make sure to plan for remediation, enrichment, and contingencies, and check your unit plan for alignment with other instructional tools.

VI. Create your beginning-of-unit diagnostic tool

Successful teachers also know where their students are when they begin each unit. To avoid covering material that they already know, develop a diagnostic that assesses prerequisite skills and knowledge of unit objectives at the beginning of each unit. This will also provide you with a benchmark by which to measure future growth.

VII. Create a tracking system for your objectives

Once you've determined what you're teaching, you can now begin to create your classroom tracking system, a chart listing your objectives and your students' names that will allow you to record and measure the progress of your class and students on the knowledge and skills you are teaching.

VIII. Continually adjust your plan

Adjust your plans based on assessment data, including your diagnostic. Interpret your data to determine class strengths and weaknesses and tailor your instructional plans in response to this information. Determine ways to include remediation and review of prerequisite skills into your unit calendar. Also, make sure to recheck your tools for alignment after making appropriate adjustments.

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— Unit planning is something that you may do several times during the year. And, it can involve a considerable time investment. However, the sense of direction and organization such a plan provides you and your students can be phenomenal.

In the next few chapters, we will continue to zoom in on your classroom, addressing the planning that occurs for each particular day of instruction.

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