

FIGURE 6.1 A long-term plan for a marking period in which two elementary science units will be taught.

Unit 1. The Water Cycle	
General learning target:	Understanding what the water cycle is, how it works, and how it helps living things. Ability to explain the water cycle and apply it to real life.
Time frame:	It will take 2 weeks to complete.
Formative assessment:	(a) Three homework assignments (taken from Chapter 8) (b) Condensation demonstrations (Group activity; I will ask students to explain what they are doing, how it relates to the water cycle, and how it relates to real life.) (c) Short quiz on the basic concepts at the end of Week 1
Summative assessment:	Brief essay after condensation demonstration A written test at the end of the unit (short-answer and an essay)
Weights:	(a) Brief essay 20% (b) End-of-unit test 80%
Unit 2. Weather Systems and Predicting Weather	
General learning target:	Understanding basic weather patterns, their movements, and their influence on local climate. Ability to understand weather maps, weather forecasts; ability to collect weather data and use them to make simple predictions.
Time frame:	It will take 7 weeks to complete.
Formative assessment:	(a) Seven homework assignments (taken from Chapter 9 and my own) (b) Seatwork on drawing a simple weather map with symbols (I will circulate among students and ask questions to check their understanding.) (c) Correct use of simple instruments to gather weather-related data (I will have each student demonstrate each instrument's use and give them feedback when necessary) (d) Collection of weather maps and forecasts (I will discuss with students what the maps and forecasts mean and be sure they understand them.) (e) Four quizzes on the major concepts and a performance activity (Week 1, Week 3, Week 4, and Week 5)
Summative assessment:	(a) Map drawing (I will provide weather information; students will draw corresponding maps independently. This will be Quiz 4.) (b) End-of-unit test (short-answer, matching, map identification, essay question) (c) Independent investigation (Collect weather data for 2 weeks and make daily 2 day weather predictions. I will structure this activity. It will be done toward the end of the unit.)
Weights:	(a) Independent investigation 40% (b) Map drawing 20% (c) End-of-unit test 40%
Marking Period Grade	
Unit 1 marks count 30%	
Unit 2 marks count 70%	

ASSESSMENT PLANNING FOR ONE UNIT OF INSTRUCTION

Assessment planning for a unit of instruction should be based on learning goals and objectives and detail the instructional and assessment strategies you will use. You should be able to explain why you need to use each assessment strategy, how the assessments are related to the learning objectives and the lessons, and what actions you

will take once you have information about the students' achievement.

Example of an Assessment Plan for One Unit

Figure 6.2 shows an example of an assessment plan for one of the science units in Figure 6.1. It shows the thinking a teacher might use when deciding what assessments to conduct. The

FIGURE 6.2 An assessment activity plan for one unit of instruction.

Assessment techniques	Description of assessment purpose, activity, and follow-up action (use)							
Pretest	About a week before beginning this unit, I will give a very brief pretest to get a sense of students' attitudes, experiences, knowledge, and beliefs about weather. (See Figure 6.4.) <i>Action:</i> I will use this information to help me develop discussions in class, to develop lessons that overcome students' misconceptions and fears about the weather, and to build on what students already know.							
More Formative in Nature	Lesson 1 Comprehending basic weather concepts	Lesson 2 Distinguishing weather patterns and systems	Lesson 3 Identifying local weather conditions and patterns	Lesson 4 Using basic tools for measuring weather	Lesson 5 Understanding and making weather maps	Lesson 6 Collecting and recording local weather data	Lesson 7 Using data to predict local weather	
Observation and oral questioning	In every lesson, I will observe students and ask questions during the lesson to assess how well they are responding to the material, how well they seem to understand the daily activities and assignments, and whether they have any misconceptions about the weather concepts we are studying. <i>Action:</i> I'll adjust my teaching if most of the class is having difficulty. If only a few are experiencing difficulty, I'll work with them individually, in small groups, or ask another student to teach the concept.							
Homework	I will assign homework after every lesson. Homework activities will focus on observing and discovering real-world examples of the weather concepts we learn in class. Students will record their observations and write explanations of them using proper scientific language learned in the unit. <i>Action:</i> As I read students' homework responses, I will note for each student how accurately and fluently the student uses scientific language to discuss the weather. I will also evaluate their observational and recording skills. I will reteach those materials for which many students experience difficulty. If only a few are having difficulty, I will work with them individually.							
Quizzes	Quiz 1 (covers Lesson 1): Short-answer questions testing basic vocabulary <i>Action:</i> Students not mastering the basic concepts will be retaught.	Quiz 2 (covers Lessons 2 and 3): Short-answer questions with some diagrams. Focuses on weather patterns: local, national, and international. <i>Action:</i> I will use this quiz to monitor students' understanding of weather patterns and systems. I'll reteach or move on, depending on the outcomes.	Quiz 3 (covers Lesson 4): This will be a performance activity. I want to be sure each student can use with accuracy the weather-measuring tools and can record data properly. <i>Action:</i> I will correct errors on the spot.	Quiz 4 (covers Lesson 5): I want students to read, interpret, and draw simple weather maps. I will give weather data to the students and ask them to draw an appropriate map using the weather data. I will also give maps already drawn and ask students to interpret them. <i>Action:</i> I will reteach if there are problems.				
Independent investigation (performance assessment)	Predicting the Weather (begins after Lesson 4, and includes Lessons 5 and 6): This performance assessment will help me evaluate whether students can apply the concepts from the lessons to the real world. It will help me evaluate whether they can synthesize and use criteria to evaluate the data they collect. Students will collect and measure weather data, record it, and use it to predict the local weather for two days in advance. They will repeat the exercise every day for at least 2 weeks. They will work independently. They will prepare a report describing what they did and evaluating their investigation and its accuracy. <i>Action:</i> This is a type of summative evaluation. I will use the exercise to help me decide how well the students have learned the concepts and principles in this unit. I should have a pretty good idea whether students can apply what they learned in class.							
End-of-unit test	Unit Test (covers all lessons): This will come at the end of all the lessons. It will be a paper-and-pencil test given in class. (I may give it over 2 days.) It will be comprehensive, covering most of the important learning targets in the unit.) <i>Action:</i> I will use the results of this test along with the results from the drawing and the independent investigation to assign a grade to the students for the unit. (Weights are given in Figure 6.1.)							
More Summative in Nature								