

Less than a week before the school year begins, Ms. Steinbach receives a telephone call from Ms. Rocco, the principal at Oceanside Middle School. "I'd like to offer you a job teaching social studies," Ms. Rocco tells her. "Are you interested?" "Why, yes, I am," Ms. Steinbach answers, trying to keep her excitement from being too obvious in her voice.

"That's wonderful news," Ms. Rocco responds. "I was very impressed when I interviewed you last spring, but at the time I didn't think we'd be needing another social studies teacher. As it turns out, Mr. Richardson, whom I believe you met during your interview, has just resigned to take a job in another district."

The two women meet the same afternoon so that Ms. Steinbach can sign her contract and learn about the responsibilities of her new position. Ms. Rocco tells Ms. Steinbach that, among other things, she will be teaching two sessions of geography every morning. "Mr. Richardson ordered new geography textbooks for this year. I believe that there are two boxes of them stacked beside the door in your classroom." Ms. Steinbach thanks her new principal and hurries to her classroom, well aware that she has many hours of planning and preparation ahead of her over the next few days. The two boxes of geography texts are exactly where Ms. Rocco had said they would be. Opening one of the boxes, she finds a teacher's manual resting on top of about 20 textbooks.

Sitting at her new desk, Ms. Steinbach grabs a copy of the textbook. As she flips through the pages, she is chagrined at what she sees. Each chapter seems to be mostly a collection of facts listed one after another in rapid succession. New concepts-plateau, **tundra, the Continental Divide-are** briefly defined but rarely explained in any detail. Little attempt is made to pull all the facts and concepts together into a coherent whole.

When Ms. Steinbach opens the teacher's manual, she is even more discouraged. The classroom activities it describes focus on basic skills-identifying cardinal directions (north, southeast, etc.), interpreting simple bar graphs, using scales to estimate distance-that she suspects her students have probably already mastered. The homework assignments that the manual provides are fill-in-the-blank exercises based on word-for-word excerpts from the textbook. And the quizzes for each chapter include only true-false and multiple choice items.

Having taken several geography courses in her undergraduate program, Ms. Steinbach knows perfectly well that geography is much more than facts and figures. She wants her students to learn broad geographic principles-principles that they can use to make better sense of the world around them. The textbook and teacher's manual aren't going to help her meet her objective, so she had better get busy developing alternative lessons and activities.

Throughout the fall, Ms. Steinbach tries a number of different strategies to make geographic principles come alive for her students. For example, when teaching

67

68 Case21

students about topography, she brings in several raised relief maps and gives the class a scavenger hunt" list of landforms (mountain ranges, plateaus, river valleys, foothills, and so on) to locate on the maps. When teaching her class about volcanic activity, she borrows a series of slides from the local university's geography department to depict what Mount St. Helens looked like before and after its eruption in 1980. During hurricane season, Ms. Steinbach uses the Internet to locate the National Weather Services daily updates regarding the location and status of current tropical storms and hurricanes and then has her students plot the course of each weather system on a large map of the Atlantic Ocean and eastern seaboard states. On another occasion, after puzzling for several days about how she can make

the effects of elevation on rainfall more concrete than the textbooks explanation, Ms. Steinbach conducts a rather unusual activity. "Okay, class," she begins, "I need five volunteers to help us learn why the western side of a mountain usually gets more rainfall than the eastern side."

Many hands go up. Ms. Steinbach selects several of the more reserved students in her class—Angela, Miguel, Raymond, Tara, and Dee.

As the five volunteers walk to the front of the room, Ms. Steinbach places a bowl full of water on the floor. "Okay, Angela, this bowl is the Pacific Ocean. Now your name is perfect for what you need to do, because I want you to be Los Angeles. Lie down just to the right of the bowl, please, because Los Angeles is a city that lies just to the east of the Pacific Ocean." The class snickers a bit as Angela obligingly lies on the floor beside the bowl.

"Now, Miguel," Ms. Steinbach continues, "I'd like you to be the San Gabriel Mountains that rise up just to the northeast of Los Angeles." She gently moves Miguel so that he is standing to the right of Angela. "There, that's good. Just be careful that you don't step on Los Angeles." Again the class giggles.

Next, Ms. Steinbach looks at her third volunteer. "Okay, Raymond, I'd like you to be Barstow, a town that lies in the flatlands to the east of the San Gabriel Mountains." Catching on immediately to the nature of her request, Raymond lies down to the right of where Miguel is standing.

"Perfect!" Ms. Steinbach exclaims. "Okay, class, here we have southern California. You see before you the Pacific Ocean—the bowl of water—then Los Angeles, the San Gabriel Mountains, and the town of Barstow on the other side." She looks quickly at her students and notes that their eyes are all focused on the front of the room in eager anticipation of what will happen next in this rather unusual scenario.

"So now we need a cloud and some wind. Tara, let's make you the wind. Stand over to the left of the bowl there, somewhere out in the middle of the ocean. And Dee, I'd like you to be a cloud." Ms. Steinbach hands Dee a sponge and nudges her to a spot directly in front of the bowl. "As a cloud, you hold quite a bit of the water vapor that's evaporated from the Pacific Ocean. So take your sponge and suck up some of the ocean from the bowl there." Dee stoops down, places the sponge in the bowl, and then stands up with the sponge dripping with water.

Topography 69

"Excellent. So then, here we have an air mass full of water—a cloud—just hanging out over the Pacific Ocean. And then along comes the prevailing wind, the wind from the west, to move the cloud eastward. Okay, wind, blow away!" Tara dutifully blows on Dee's shoulder, and Dee walks slowly to the "east," holding the sponge over "Los Angeles" as she does so. Angela grimaces as a few drops of water land on her face, but says nothing. Just before Dee reaches the "San Gabriel Mountains" that are Miguel, Ms. Steinbach stops her.

"Now here's where things get interesting, folks. Notice that the cloud has to rise as it travels over the mountains. As it does so, it's going to get **cooler** and **smaller**, and it won't be able to hold as much water. So what happens now?"

"It'll start to rain!" Luke shouts out.

"Good, Luke. So, Tara, let's get the wind going again. And Dee, let's make that cloud smaller and smaller as it starts to go over the San Gabriel mountains." Tara resumes her blowing, and Dee slowly moves to the right once again, squeezing the sponge harder and harder as she does so. Angela and Miguel are being "rained" on in **the** process, but they are clearly enjoying the attention they are getting from their classmates as a result of their predicament.

"Now, then, the cloud starts going back down on the east side of the San Gabriel mountains and gets warmer again. What happens to the rain?"

"It stops!" Kathleen calls out.

"Right!" Picking up on her cue, Dee stops squeezing the sponge as Tara "blows

her” to where Raymond is lying. “So look at poor Barstow. It’s dry as a bone. Has anyone here ever been to Barstow, California?”

“I have,” Kenneth responds. “My dad and I go there sometimes for the all-terrain vehicle races.”

“So what’s it like in Barstow, Kenneth?”

“Well, there’s lots of sand and gravel, and hardly any trees. Like you just said, Ms. Steinbach, it’s dry as a bone.”

“Exactly.” Ms. Steinbach looks pointedly at Raymond, who is still lying on the floor to the right of Miguel. “Mr. ‘Barstow’ here is smack-dab in the middle of the Mojave Desert.”

Possible questions for “Topography”:

- 1. Why is Ms. Steinbach so discouraged when she looks at the textbooks and teacher’s manual that Mr. Richardson ordered?***
- 2. What strategies does Ms. Steinbach use to help her students learn effectively?***
- 3. What strategies does Ms. Steinbach use to motivate her students and keep their attention?***
- 4. Ms. Steinbach intentionally chooses some of the more reserved students to participate in the rainfall demonstration. What might be her rationale for doing so ?***

70 Case21

- 5. Ms. Steinbach uses some rather creative strategies for making geography “come alive” for her students. What resources might you use to identify y and develop equally creative strategies for teaching your own students?***