

The following example shows how inquiry and discovery learning in a first-grade classroom fostered a high level of student involvement and thinking:

The children are gathered around a table on which a candle and jar have been placed. The teacher, Jackie Wiseman, lights the candle and, after it has burned brightly for a minute or two, covers it carefully with the jar. The candle grows dim, flickers, and goes out. Then she produces another candle and a larger jar, and the exercise is repeated. The candle goes out, but more slowly. Jackie produces two more candles and jars of different sizes, and the children light the candles, place the jars over them, and the flames slowly go out. "Now we're going to develop some ideas about what has just happened," she says. "I want you to ask me questions about those candles and jars and what you just observed." (Joyce, Weil, & Calhoun, 2009, p. 3)

Another form of inquiry learning is known as contextual teaching and learning (CTL). CTL is an approach to teaching based on the theory that students learn best in a concrete manner. They learn best when they are involved in hands-on activities and have opportunities for personal discovery within the context of relationships that are familiar to them. In a CTL environment, students construct, apply, and demonstrate knowledge in relevant contexts. They learn material that is meaningful, relevant, and vital to their futures. Students construct, apply, and demonstrate knowledge in relevant contexts.

Actually, contextual teaching and learning is not new. CTL is derived from the ideas of John Dewey. In *Democracy and Education* (1916), Dewey observed that "the great waste in school comes from ... the isolation of the school—its isolation from life." During the 1970s, contextual teaching and learning was referred to as *experiential learning* or *applied learning*. In contextual teaching and learning classrooms, "it is the major task of the teacher to broaden students' perceptions so that meaning becomes visible and the purpose of learning immediately understandable. This is not an add-on or something nice to do. It is fundamental if students are to be able to connect knowing with doing" (Parnell, 2000).

Curriculum Leadership Strategy

School leaders should provide professional development that prepares teachers to use new models of teaching to implement new curricula. The best approach is to anticipate instructional needs and address them early; minimizing anxiety goes a long way toward managing change.

Models Based on Social Interactions

As every teacher knows, student peer groups can be a deterrent to academic performance; however, they can also motivate students to excel. Because school learning occurs in a social setting, models of teaching based on social interactions—cooperative learning, for example—can provide teachers with options for increasing students' learning. A powerful model of teaching based on social interactions is group investigation, in which the teacher's role is to create an environment that allows students to