**Project assessment:**

Success of this lesson will be demonstrated by student responses to the assignment which reasonably identify examples of correct deductive reasoning and examples of fallacious deductive reasoning.

GAME INSTRUCTIONS: PICO, FERMI, BAGELS

(from the book "Family Math" by Jean Kerr Stenmark, Virginia Thompson, and Ruth Cossey)

Goal of the game: Guess the leader's secret 3-digit number.

1. Choose a leader; the leader picks a secret 3-digit number, whose digits are all different (for example 121, 442, 666 are not allowed). The leader writes the secret number on a slip of paper to refer to as the game progresses.
2. Players take turns making guesses; for each guess, the leader responds with the following clues:

BAGELS means none of the digits is correct

PICO means one of the digits is correct, but it is in the wrong place

FERMI means one of the digits is correct and in the correct place

Note that two or more correct digits requires several words:

"PICO PICO" means 2 digits are correct but neither is in the correct place.

"FERMI FERMI FERMI" means you have guessed the secret number.

1. Choose a new leader and play again.

Pico is a metric prefix meaning one trillionth or 10-12

Fermi was a famous nuclear physicist.

Bagel is a hard roll with a center hole.