

Mathematics/Instructional Strategies
LEVELS OF COGNITIVE DEMAND

COMPETENCE	SKILLS DEMONSTRATED	QUESTION CUES
Level 1 Knowledge Comprehension	Make observations Recall information Recognize formulas, properties, processes Know vocabulary, definitions Know basic concepts Perform one-step processes Interpret facts Compare or contrast simple Translate from one representation Identify relationships	Tell what...when...where Find List Define Identify; labels; name Choose; select Compute; estimate Compare; contrast Express as Read from data displays Order
Level 2 Application Analysis	Apply learned information to abstract and real life situations Use methods, concepts, theories in abstract and real life situations Perform multi-step processes Solve problems using required skills or knowledge (requires more than habitual response) Make a decision about how to proceed Identify and organize components of a whole Extend patterns Identify/describe cause and effect Recognize unstated assumptions, make inferences	Apply Calculate; solve Complete Describe Explain how; demonstrate Construct data displays Construct; draw Analyze Extend Connect Classify Arrange
Level 3 Synthesis Evaluation	Solve an open-ended problem with more than one correct answer Create a pattern Generalize from given facts Relate knowledge from several source Draw conclusions Make predictions Translate knowledge into new context Compare and discriminate between ideas Assess value of methods, concepts, theories, processes, formulas Make choices based on reasoned argument Verify the value of evidence, information, number, data	Plan; prepare Predict Create; design Ask "what if?" questions Generalize Justify; explain why; support; convince Assess Rank; grade Test; judge Recommend Select Conclude