EXPLICIT DIRECT INSTRUCTION

Methods That Matter
www.videoconferencing.kings.k12.ca.us

click “Methods That Matter”
Effective Instruction

- Effective – research based proven strategies
- Efficient – maximizing learning in the shortest amount of time.
  - Provides an emphasis on making sense
- Relevant – Connected to real life applications
Critical Elements for Effective Instruction

- Grade Level Curriculum, Aligned with State Standards
- Instructional Strategies
- Instructional Design
- Assessment
Teach Grade Level Content

- The higher the grade, the greater the disparity
  - Test Scores go up when students are taught grade level content.
  - Students perform no higher than the assignments given
  - Students cannot learn what they are not taught.
Instructional Strategies
Overview
(use during instruction)

- Cognitive Strategies: REO
- Delivery Strategies: MED
- Checking for Understanding: TAPPLE
Cognitive Strategies: REO

Rehearsal
Elaboration
Organization
Cognitive Learning Strategies

- **Rehearsal**
  - Simple repetition, rhymes, rhythms
  - Cumulative repetition
  - Copying material
  - Note taking
  - Underlining text
  - Guided practice
  - Independent practice
Cognitive Learning Strategies

- Elaboration Strategies
  - Mnemonics
  - Imagery
  - Paraphrasing
  - Predicting
  - Summarizing
  - Creating metaphors, analogies or similes
  - Asking and answering questions
Cognitive Learning Strategies

- Organizational Strategies
  - Clustering
  - Mnemonics
  - Selecting Main Idea
  - Outlining
  - Mapping
  - Frayer Model (shown)
  - Concept Learning Strategy (shown)
Delivery Strategies: MED

Modeling
Explaining
Demonstrating
Modeling

- Teacher as expert
  - Modeling is a powerful method of instruction
  - Teacher provides inner thoughts – think alouds
    - This is how I do it – first I ....
    - Strategic solutions
  
- Modeling is important because students are seeing and hearing how experts solve problems – strategies, methods of remembering, how decisions are made...
Explanation

Teacher explains:

- What it is – makes sense or connections – presents the big idea or concept – the pattern
  - Definition, rules
  - Examples and non-examples are provided
- Share declarative knowledge
  - facts and knowledge (explain, compare, describe)
  - understanding and remembering information
  - usually spoken in the 2nd person (you)

OR

- Share procedural knowledge
  - how it is done (analyze, evaluate, calculate)
  - steps that are taken
  - usually spoken in 1st person (we)

NOTE: Teach procedural knowledge whenever possible
Demonstration

- **Big Idea**
  - Physical demonstration or showing how to do something.
  - Teacher explains what, why or how while using a physical object.
  - For maximum benefit – students also have objects
  - Not practical for every lesson

- **Why Important**
  - Accommodates visual and kinesthetic learners
  - Visual – 46%
  - Auditory – 19%
  - Kinesthetic – 35%
Madeline Hunter defined teaching as:

* A conscious stream of decisions before, during and after instruction to maximize the probability of learning taking place...
Checking for Understanding (CFU)

- Provides the earliest measure of whether students are learning the content.
  - Continuous CFU is the backbone of Effective teaching

- Feedback from CFU allows the teacher to make instructional decisions during the lesson.
CFU Elements

- CFU – on what was just taught
- CFU – interspersed continually throughout lessons
- Go Kinetic – white boards – all students show answers at the same time.
- Random – non-volunteers
- Popsicle sticks – numbering systems, etc.
- Think time to find an answer
- Paraphrase – higher level
- Comprehension is proven
CFU Method: TAPPLE (DataWORKS©)

- Teach
- Ask – the question to the entire class
- Pause (8-10 seconds is best)
- Pick – a non-volunteer (use sticks or the whiteboards)
- Listen
- Encourage or Elaborate if necessary

REMEMBER: Verify student learning during each component of your EDI lesson; CFU every 2 to 3 minutes; Teach and Check, teach and check, teach and check…
Instructional Design Components
Instructional Design Overview

1. Learning Objective Stated (CFU)
2. Prior Knowledge Activated or Sub-Skill Taught (CFU)
3. Concept Defined (CFU)
4. Importance Determined (CFU)
5. Model, Explain & Demonstrate Skill (CFU)
6. Practice is Guided (CFU)
7. Lesson is Closed (CFU)
8. Independent Practice Distributed
Learning Objectives: Attributes

- What the student will be able to do as a result of instruction
- Must align to the independent practice
- Why are objectives important?
  - Ensures students are taught concepts and skills
  - Instructional purpose is clear since *concepts* and *skills* are focused
  - Outcome of student achievement is measurable
  - Expectations are clear for students
  - Ensures grade-level instruction
Learning Objectives: Critical Elements

- Must include a concept, skill, and context
- Must deconstruct the content standards
  - Concept (Main Idea): usually a noun
  - Skill (Measurable Behavior): usually a verb; language must be precise
    - To write
    - To list
    - To analyze
    - To solve
  - Context: resource
- Use cognitive and delivery strategies whenever possible
- Don’t forget to CFU!
Activating Prior Knowledge: Attributes

- Purpose is to tap into prior knowledge
- Don’t assess prior knowledge; do not begin by asking questions, you must activate by telling
- APK by explicitly telling students how new information relates to prior information
- All new learning is based upon prior learning – the brain transfers information from the working memory into the long term memory by categorizing and filing it into pre-existing files of knowledge
APK: Critical Elements

- Student’s prior knowledge activated
- Pertinent sub skill taught
- Students are told the connection to the new material to be taught.
  - The idea is to make the learning of the new content easier for the students by connecting to something they already know.
- Use cognitive and delivery strategies whenever possible
- CFU
APK Strategy: Preview - Review

- Preview
  - New material to be presented by activating - connecting to prior knowledge or experiences
    - Persuasive – trying to convince your mom to let you stay up later – real life experience

- Review
  - Material that has been presented previously that deals with the lesson – reviews content students have already been taught – makes explicit connections
    - This past week we have been studying about settings. The critical elements of a setting include....
Concept Development: Attributes

- Content presentation section
  - Always establishing a big idea, generalization
  - Usually defining a noun
  - Potentially presenting a rule (grammar)
- Must define what will be taught *before* it is taught
- Skills are lost if not tied to a concept
- Must explicitly define concept and provide concrete examples and non-examples
Concept Development: Critical Elements

- Identify the concept from the learning objective
- Provide a concrete definition or rule, including specific attributes
- Provide relevant non-examples and then examples that show specific attributes
- Try these cognitive strategies:
  - Frayer Model
  - Word/Concept Learning Strategy
- Teach concepts by Explaining, Modeling, and Demonstrating (refer to previous slides)
- CFU using higher order thinking
  - Restate: What is _______?
  - Apply: Which is an example?
    a. b.
  - Justify: Why did you choose your answer?
Cognitive Strategy: Frayer Model

**Definition**
All of the whole numbers positive whole numbers and all their opposites

**Characteristics**
- negative whole numbers
- zero
- move on a number line

**Integers**

**Examples**
-7
5
7
0

**Non-Examples**
-1/2
1/2
3/4
5/8
Cognitive Strategy: Concept Learning Strategy

A _______ (concept) is ____________________________ (definition).
Some attributes are ________________________________
__________________________________________________________________.
Some examples are ________________________________
__________________________________________________________________.
Some non-examples are ____________________________
__________________________________________________________________.
Three Reasons of Importance:

- Good foundation at the conceptual level means students can apply concepts to new situations.
- Generalizations are internalized through concept development-students learn to categorize rather than memorize all instances.
- State test is just as much concept based as it is skill based; concepts need to transfer for students to perform well.
Importance: Attributes

- Concept development precedes importance; ineffective to share importance without understanding concept
- Must explicitly teach students why new content is important
- Provides motivation, increases engagement, and allows brain to make sense and file away new information
- 3 Categories of importance
  - Personal
  - Academic
  - Real-life
Importance: Critical Elements

Teacher Provides Reasoning
(use cognitive and delivery strategies whenever possible)

- **Personal Importance**
  - relate concept to student’s personal needs, wants
  - Ask students why it is personally important to them

- **Academic Importance**
  - relate concept to student’s academic needs
  - relate to previous concepts/skills
  - relate to state test

- **Real-Life Importance**
  - relate concept to the real world
  - provide scenario or analogy
  - relate to occupations or society
Skill Development: Attributes

- Teacher will model and explain while demonstrating a skill
- Students will learn declarative or procedural knowledge
- Students will learn how to interact with the concept in a measurable way
- Student participation occurs during guided practice
- Use cognitive and delivery strategies whenever possible
Skill Development: Modeling

- Teacher as expert
  - Modeling is a powerful method of instruction
  - Teacher provides inner thoughts by thinking aloud
    - This is how I do it – first I ....
    - Strategic solutions
    - Potential problems and thinking through them

- Modeling is important because students are seeing and hearing how experts solve problems – strategies, methods of remembering, how decisions are made...
Skill Development: Explanation

Connect the skill to the concept

- Share procedural knowledge
  - how it is done (analyze, evaluate, calculate)
  - steps that are taken
  - usually spoken in 1st person (we)

OR

- Share declarative knowledge
  - facts and knowledge (explain, compare, describe)
  - understanding and remembering information
  - usually spoken in the 2nd person (you)

NOTE: Teach procedural knowledge whenever possible
Skill Development: Critical Elements
Modeling, Explaining, Demonstrating

- Identify the skill in the Learning Objective
- Demonstrate a step-by-step process, method or approach for students to use
- Think aloud and explain the steps while solving real problems
- Provide CFU questions that will demonstrate student’s procedural knowledge; ask students to describe the concept and how you executed the skill; what were the steps?
- Be sure that students are relating the skill back to the concept
Guided Practice: Attributes

- **Purpose**
  - Provide practice – rehearsal for procedural learning to occur
  - Provide immediate feedback – ensure correct thinking
  - Determine if additional teaching is needed
  - Ensure student comprehension prior to assigning independent practice
Guided Practice: Critical Elements

- Works problems with the students at the same time. Important for students to use whiteboards to work each step of the problem or task to ensure accuracy.
  - Students are directly supervised by the teacher – who can correct misunderstanding quickly and efficiently.
  - The best way is to begin working through problems slowly – for example a three step problem
    - CFU after each step

- Works every type of problem that the students will be asked to do independently

- Provides many examples and non-examples
Closure

- Prime instructional time
  - Students show what they have learned
  - Closure is not a summary by the teacher
  - Closure is a final checking for understanding
  - Did the students master the objective?
  - Is more guided practice needed?
  - Is more teaching needed – altered instructional strategy?
Independent Practice

- Massed practice for efficient learning
  - Short intense practice sessions produce more learning than fewer but longer sessions.

- Distributed Practice
  - Multiple practice sessions spread out over a period of time
  - Increases probability that the learning is stored in long term memory
  - Revisit on day 1-2-6-15
Assessment

- Formative – influence instructional decisions
- Accountability – identify students for interventions
  - Strategic intervention
  - Intensive intervention