Integrated ELD/Math Resources to Support ELs with Problem Solving and Math Discourse

1. Integrated ELD Lesson Components

INTEGRATED ELD LESSON COMPONENTS

- CA ELD Standards in Tandem with Content Standards
- Content and Language Objective (Integrated ELD)
- Scaffolds
- Strategic Grouping
- Formative Assessment
- High Impact Essential Practices

2. Model Lesson At-A-Glance

MMED

3. Model Lessons Gr. K-6 One Per Grade Level

Integrated ELD/Mathematics Three Phase Lesson

4. Five Online PD Modules

Module 1: Integrated ELD/Math
Module 2: Constructive Conversation Skills & Mathematical Discourse
Module 3: Three Reads Protocol
Module 4: Math Interview Protocol
Module 5: Math Summit Protocol

5. Posters & Companion Cards For Protocols

6. Video of Gr. K Lesson Gr. 3 & Gr. 4 Coming Soon
1. EXPECTATIONS FOR INTEGRATED ELD/MATH

The goal of Integrated ELD is for EL students to learn and apply content knowledge, the purposes for using language, and how English works. (Ch. 2 p. 109)

The following is a list of essential components of Integrated ELD instruction:

- CA ELD Standards working in tandem with the CA Common Core State Standards for Mathematics (CA CCSSM)
- Content & Language Objectives aligned to the language demands of the task
- Appropriate scaffolds to support math discourse (Model Constructive Conversations, Prompt & Response Starters, etc.)
- Strategic Grouping
- Formative Assessment (SPF-CCLS)
- High Impact Essential Practices
  - Using Complex Text (Three Reads Protocol)
  - Fostering Academic Interactions (Math Interview Protocol)
  - Fortifying Complex Text (Math Summit Protocol)

2. INTEGRATED ELD/MATH THREE PHASE LESSON AT-A-GLANCE

The At-A-Glance resource was developed to provide an overview listing all components featured in the Integrated ELD/Math Three Phase model lessons.

3. INTEGRATED ELD/MATH THREE PHASE MODEL LESSONS

The model lessons, one per grade level (K-6), were designed and vetted by elementary teachers who participated in the 2016 Integrated ELD/Math Elementary Teacher Fellowship. Each lesson includes the essential components of Integrated ELD in order to meet the needs of ELs in math. Each lesson follows an inquiry-based model using the Three Phase lesson structure and includes protocols that support ELs as they engage in problem solving and mathematical discourse.

Three Phase math lessons are a district-wide initiative that engage students in the Mathematical Practices and foster critical thinking skills. The district goal is to teach one Three Phase math lesson per week. Lessons are available for downloading and printing on our MMED website, under the Integrated ELD/Math tab.

4. FIVE ONLINE PROFESSIONAL DEVELOPMENT MODULES

Each of the five PD Modules was developed to support school sites with school-wide implementation of Integrated ELD/Math instruction and the accompanying resources. The modules are designed to be delivered individually or as a series and are available for downloading on our MMED website, under the Integrated ELD/Math tab.

5. POSTERS & COMPANION CARDS FOR EACH PROTOCOL

Each of the protocols—Three Reads, Math Interview, and Math Summit—can stand on its own and should be introduced to students one at a time. Once students are familiar with all three protocols, they may be combined to orchestrate a full Integrated ELD/Math Three Phase lesson. The posters and companion cards were designed to support implementation of the protocols and Integrated ELD/Math instruction focused on problem solving, developing mathematical thinking, conceptual understanding, and mathematical discourse. Each poster highlights a specific protocol that supports students with applying Constructive Conversation Skills as they navigate each phase of a problem solving lesson. The companion cards provide teachers with a Model Constructive Conversation on the front and a description of the protocol on the back along with connections to the TLF, Mathematical Practices, and ELD Standards.

6. VIDEOS OF MODEL LESSONS

Videos of the Integrated ELD/Math Model lessons for Kindergarten, Grade 3, and Grade 4 are also available to support teachers of ELs with implementation of Integrated ELD/Math instruction. Each video features a classroom teacher who completed the MMED 2016 Integrated ELD/Math Elementary Teacher Fellowship. The videos highlight the essential components of an Integrated ELD/Math Three Phase lesson in addition to three protocols—Three Reads, Math Interview, and Math Summit—designed to support ELs with problem solving and math discourse.