

Common Core Math Leadership Professional Development (CCMAST)

- **EI Segundo High School** Common Core Math (CCMAST) Teacher Leadership Professional Development Program: 2013-2014
- Common Core Math Leadership Certified Teacher Leader and Common Core Mathematics expert: Kathy Clemmer, ESHS teacher leader and LMU Math Education faculty
- LMU faculty coach: Mike Castiglione, LMU CMAST Education faculty

Seminar Dates	Times	Topics
<p>Note: <i>To support vertical articulation, the Teacher Leader from ESMS, Luke Olesiuk and 2 of his colleagues will join the HS PDs. Luke will be facilitating his team with support from Mike Castiglione. Luke will be leading the PLCs at his site, ESMS</i></p>	<p>All seminars are held at EI Segundo High School in Room A210</p>	<p>Focus June-December: Assessment For Learning that promotes a growth mind set</p> <p>Focus January-June: Mathematical Literacy: Creating a culture that embraces mathematical thinking, problem solving, and proof</p>
<p>PD: June 12, 2013</p>	<p>All Day at LMU (8:00 am- 3:30 pm)</p>	<p>Criteria for designing a yearlong CCSS "story" that engages students as active participants in learning Intentional curriculum design and provides the foundation for MP and DOK integration. "Story" includes 4 scenes (challenge, rising action, climax, resolution).</p> <p>Collectively design the high school Algebra 1 yearlong plan consensus around "story" design aligned to brain research recommendations that inspire students to engage in learning</p>
<p>PD: June 13</p>	<p>All Day at LMU (8:00 am- 3:30 pm)</p>	<p>Instructional design that effectively balances fluency and deep understanding (rigor)</p> <p>Designing math pathways and story outlines for teaching Common Core in Algebra 1, Geometry, Algebra 2, Pre-Calculus, Calculus</p>
<p>PD: Aug. 20</p>	<p>10:00 am- 4:00 pm at LMU</p>	<p>Assessment for Learning Growth Mind Set and the role of student driven LT logs in 21st century classroom (<i>technology expectation</i>), <i>assessment design</i>, and <i>rubrics: Assessment design that promotes MP 1** student growth mind set</i></p> <ul style="list-style-type: none"> • What are the characteristics of the ideal math student? • What fraction is achievable with the students you teach? • What is your goal?
<p>PLC: TBD</p>	<p>TBD</p>	<p>Course Syllabus with rubric, <i>grading & technology policy</i> integrated.</p>
<p>PD: Sept 3</p>	<p>3:00 pm -5:30 pm</p>	<p>Instructional design element that promotes student engagement in MP 1, 3,</p>

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		introduce MP 4, DOK 2: Error Analysis & Goal Setting, focus on simplifying a complicated situation, realizing that goals may need revision later
Instructional Rounds: September 19 (Thursday)	6:45 am- 7:40 am Observation in the morning in Clemmer's classroom De-brief and PLC in the afternoon at LMU Content focus: 1:00 pm- 3:00 pm Note: half day subs will be funded by DirecTV	Student use of LT logs for goal setting that motivate students to engage in thinking and perseverance (MP 1). Analyze integration of homework (DOK 1) & choice De-brief to analyze the "into": hook/prompt/role of homework & choice. Content focus: Sense-making in math from a physics perspective. Jeff Phillips, LMU Physics faculty
PLC: Sept 24	3:00 pm -5:30 pm	Analyzing effectiveness of Error Analysis & Goal Setting using LT log data and student evidence (analyzed achievement, DOK 1, 2, and attitudinal from ss survey for MP 1, 3, 4,)
PD: Oct 8	3:00 pm -5:30 pm	Instructional design element that promotes student engagement in MP 2, DOK 2: Concept Maps & Model Cards with technology as a tool to support student choice
PLC: Oct 22	3:00 pm -5:30 pm	Analyzing effectiveness of Concept Maps & Model Cards using LT log data and student evidence (analyzed achievement, DOK 2 and attitudinal from ss survey for MP 2) Content focus: Common student errors that continue into entry level college courses in math & physics, a dialogue with physics faculty
PD: Nov 5	3:00 pm -5:30 pm	Instructional design element that promotes student engagement in dual intensity: balance DOK 1-3 through MP 1,2,3,5,6,7): Student Action Plans, Stations, and student use of technology
PLC: Nov 19	3:00 pm -5:30 pm	Analyzing effectiveness of Student Action Plans, ss use of technology, and Stations using LT log data and student evidence (analyzed achievement, DOK 1-3 and attitudinal from ss survey for MP 1, 2, 3, 5, 6, 7)
PD: Dec 3	3:00 pm -5:30 pm	Instructional design element that promotes student engagement in MP 1, 8, DOK 2, 3: Think-a-Louds

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<p>Instructional Rounds</p> <p>December 12 (Thursday)</p>	<p>7:30 am- 3:30 pm Observation in the morning in EI Segundo (ESHS cohort)</p> <p>De-brief and PLC in the afternoon at LMU</p> <p>Content focus: 1:00 pm- 3:00 p</p> <p>Note: All day subs will be paid for by DirecTV grant</p>	<p>Analyzing Assessment For Learning Culture that promotes MPs and students as instructional drivers of learning</p> <p>Assessment for Learning System that measurably increases the number of students who are “GRASping” (ss driven assessment for learning app) a deeper learning of mathematics and learning how to apply the ACE ‘EM (Analyze, Create a Plan, Execute the Plan, Evaluate the Plan and monitor thinking through the plan) protocol</p> <p>Connected & Systematic Instructional Design, Delivery, and Assessment that promotes active learning and assessment For learning where students are the instructional drivers for MP 1, 2, 3, 5, 6, 7, 8. DOK 1, 2, 3.</p>
<p>PLC: Dec 17</p> <p>Dates for Jan-June to be determined by participating teachers</p>	<p>3:00 pm -5:30 pm</p>	<p>Analyzing effectiveness of Think-a-Louds using LT log data and student evidence (analyzed achievement (DOK 2-3, and attitudinal from ss survey for MP 1, 8)</p>
<p>PD: Jan</p>	<p>3:00 pm -5:30 pm</p>	<p>Instructional design elements that promote student engagement in MP 2, 3, 5, 6, 7, 8, DOK 3: Student Defense of Learning & Mind Maps</p>
<p>PLC: Jan</p>	<p>3:00 pm -5:30 pm</p>	<p>Analyzing effectiveness of Student Defense of Learning & Mind Maps using LT log data and student evidence (analyzed achievement, DOK 3 and attitudinal from ss survey for MP 2, 3, 5, 6, 7, 8)</p>
<p>PD: Feb</p>	<p>3:00 pm -5:30 pm</p>	<p>Motivating students to engage in learning mathematics through a <i>series of connected hooks/prompts that promote mathematical thinking (focus on “A”) & discourse (Think → Share) needed for sense-making, patterning and MP 1 & MP 8</i></p>

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PLC: Feb	3:00 pm -5:30 pm	Analyzing effectiveness of <ul style="list-style-type: none"> • student LT logs within the context of using ACE 'EM on homework & tests and tasks within a unit (student achievement evidence analyzed) • connected hooks with "Think → Share" prompt implementation, sequential photo/video evidence with student attitudinal survey results (MP 1) and ss achievement data (DOK 2 & 3)
PD: March	3:00 pm -5:30 pm	Instructional design element that promotes student engagement in Close Reading (strengthen "A") , to include digital reading that supports MP 4 & 8 and DOK 3 & 4 tasks: <i>Connected Investigation Before Explanations (IBE) using Justify-Think-Pair-Compare (JTPC) questioning techniques</i> that require close reading and mathematical thinking
PLC: March	3:00 pm -5:30 pm	Analyzing effectiveness of Connected Hooks → IBEs/JTPC's using LT log data and student evidence (analyzed achievement, DOK 3 & 4, and attitudinal from ss survey for MP 4 & 8, digital reading) Content focus: DOK 3-4 Task recommendations that emphasize ACE 'EM from Physics faculty
PD: April	3:00 pm -5:30 pm	Instructional design element that promotes student engagement in MP 2, DOK 3: Interactive notes & role of quick check, real time assessment, and modeling ACE 'EM that leads to transfer of learning to novel problems/tasks & proofs
PLC: April	3:00 pm -5:30 pm	Analyzing effectiveness of connected unit Hooks → IBEs → Notes, quick checks, & real time assessments using LT log data and student evidence of ACE 'EM implementation to justify transfer of learning (analyzed achievement, DOK 3, and attitudinal from ss survey for MP 2, 4, 8)
Instructional Rounds April	7:30 am- 3:30 pm Observation in the morning in El Segundo (ESHS cohort) De-brief and PLC in the afternoon at LMU Content focus: 1:00 pm- 3:00 p Note: All day subs will be paid for	Analyzing Systematic and Connected Instructional Design and Delivery for CCSS that deepens students' mathematical thinking, application of ACE 'EM for problem solving and proof: Hook → IBE → Notes → Leveled Active Practice/ACE 'EM practice → TASKS connected by questioning/prompts and using real-time assessment throughout. Technology integration De-brief to analyze instruction: Compare to current instruction: analyzed achievement, DOK 3/4 , and attitudinal from ss survey for MP 1, 2, 4, 8 (ss defense of instruction)

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PD: May	3:00 pm -5:30 pm	Instructional design element that promotes student engagement in MP 4, DOK 4 : Gamified & Active Practice that levels up problem solving within performance tasks, and provides customized choice for practice and problem solving beyond the book (technology integration) that leads to long term retention and transfer of learning
PLC: May	3:00 pm -5:30 pm	Instructional design element that promotes student articulation and defense of rigorous mathematics through problem solving by using MP 1-8 at the DOK 1-4 levels: Error Analysis & Goal Setting, focus on simplifying a complicated situation, realizing that goals may need revision later
PLC: June	3:00 pm -5:30 pm	Instructional design element that promotes student engagement in MP 4, DOK 4: Connected & Interactive written justification and proof that promotes transfer of learning
PLC: June	3:00 pm -5:30 pm	A collaboration between secondary and college faculty: Expectations of students: describe the ideal math/physics student in entry level STEM courses and compare to ideal student in CCMAST system

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