Welcome to the Trellis Education Mentoring Community!

This document provides an overview of your commitment to mentoring for equity in the Trellis Education community and our commitment to you. This handbook has been designed to align with standards and expectations outlined by all of our partners and by the state of California¹ for preparing and supporting pre-service and early in-service teachers. However, the responsibilities and timelines outlined by your mentee's credentialing organization (i.e. university, residency, or district), induction program, and/or school district related to the nature and frequency of clinical and mentoring work should be prioritized.

Our Mission and Commitment to Social Justice

The mission of Trellis Education is to ensure all students in California – and eventually across the U.S. – have exceptional middle and high school STEM teachers and experiences that propel them into college and beyond. Toward this mission, we view and represent STEM teaching and learning, and thus STEM teacher mentoring, as sociopolitical acts of social justice. We expect all members of our community to be actively engaged in work to become better activists for social justice through teaching all the time.

¹ Aligned with the California Commission on Teacher Credentialing (CTC) Single-Subject Credential Program Standards (2016), Teaching Performance Expectations (TPEs) (2016), Induction Program Preconditions and Program Standards (2015), Standards for the Teaching Profession (2010), and with the program requirements of all partner teacher preparation and residency programs. We will ensure the handbook is aligned to content-specific standards for teacher preparation as well, such as the developing Standards for Mathematics Teacher Preparation being drafted by the Association of Mathematics Teacher Educators (AMTE).

Our Commitments

Commitments of our Mentoring Community

- 1. To support one another in <u>learning and enacting core STEM teacher mentoring practice for equity</u>, <u>core STEM teaching practice for equity</u>, and to be activists for social justice.
- 2. To support our Teacher Scholars to learn and enact core STEM teaching practice for equity and to become activists for social justice.
- 3. To ensure the students we and the Teacher Scholars we support serve have access to high-quality STEM teaching and learning opportunities and to powerful 6th-12th grade STEM pathways.
- 4. To reflect the Teacher Scholars and students we serve with respect to critical identities.

These commitments mean Trellis expects each mentor to:

- Engage in full co-teaching with your mentee over the 2019-20 academic year, including weekly co-planning, co-teaching, observation and debrief of teaching for equity practice (Pre-service mentoring only)
- Co-create multi-year Individualized Learning Plans with your mentee(s) and facilitate, monitor and document their progress (Years 0-2 only)
- Use Trellis tools to support and track the growth of your mentee(s)
- Participate in all relevant workshops and meetings of the professional mentoring community and track and work actively to improve upon the effectiveness and impact of your mentoring work
- Align mentoring work with school, district, university, and induction program expectations and requirements
- Secure full, written support of your administration for co-teaching and/or mentoring for equity work
- Engage in sustained, critical analysis and action related to how the intersections among your personal and professional identities support or interfere with your expertise mentoring and teaching for equity

These commitments mean you can expect Trellis to:

- Provide access to an accomplished, professional community of other mentors working with beginning teachers in diverse, California public schools and breaking new ground in teacher education
- Provide training in content-agnostic and STEM-specific mentoring for equity
- Provide ongoing support for mentoring for equity work, including the protection of affinity group spaces that support your work as mentors and professional educators
- Provide opportunities to assess the effectiveness of your mentoring practice and push your mentoring and teaching practice forward
- Provide opportunities to collaborate with and learn from teacher educators and faculty from partner universities and residencies (e.g., co-teaching a university-based methods course)
- Provide an annual stipend, in partnership with your school district

Our Community

A majority of our community identify as People of Color, as LGBTQ+, as first-generation college graduates, and as immigrants. We are committed to being more and more reflective of the specific teachers and students we serve over time.

People of Color in Trellis collectively commit to:

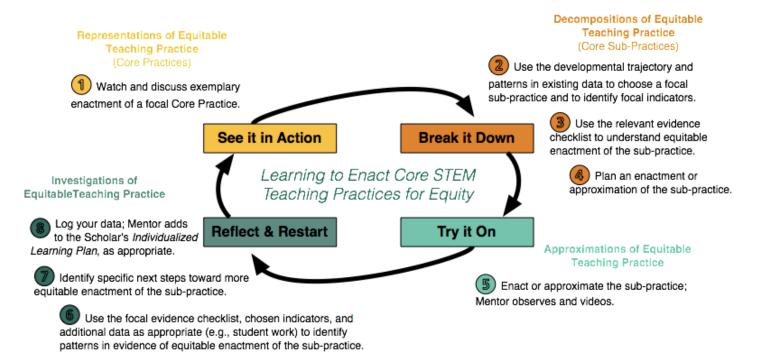
- Protect spaces for teachers of color to have open dialogue about our unique, but also diverse experiences when navigating race and its intersection with our other critical identities in education.
- Empower each other to cultivate school environments where students of color thrive because they are seen, have a voice, and feel like they belong.

White folks in Trellis work consistently and actively together to:

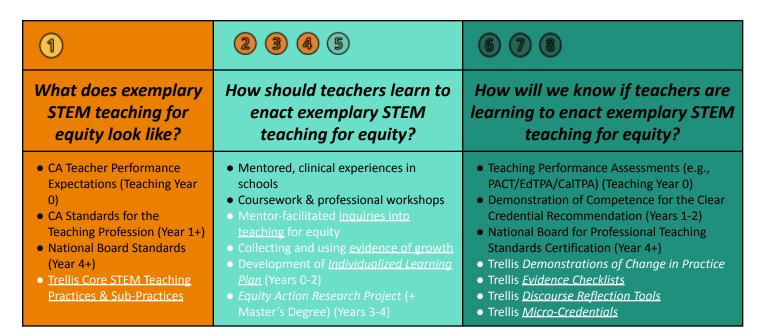
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- Deeply understand and own the unique role and power of whiteness in the perpetuation of a racist, oppressive public education system and to work actively from a place of white privilege to dismantle it in measurable ways.
- Develop each others' ability to enact core STEM teaching practice for equity and to develop as STEM educators for social justice.
- Understand and leverage the intersections of their identities as shared with their mentees or not and power as STEM educators to better serve all students.

Quick-Start Guide!



Modified from: McDonald, Kazemi, & Kavanagh (2013) and Grossman, Hammerness, & McDonald (2009)



Trellis Core STEM Teaching Practices

Core Practice What do accomplished STEM teachers DO to facilitate student learning?	Decompositions of Practice ("Sub-Practices") What bite-size chunks of practice make up what accomplished STEM teachers do (with fluency and automaticity) in each activity?
1. Facilitate productive STEM discourse (CA TPE 4, 5) (CA STP 2, 3, 4, 5) (NBPTS AYA Math I, V, VI and Science III, V)	 Support students drawing conclusions from given data, models and explanations (Y0)* Support students articulating, justifying, evaluating, and revising models, arguments, and ideas (Y1-2) Press students for evidence-based explanations (Y0) Facilitate productive whole class discussions (Y3-4) Facilitate productive small group work (Y1-2)
2. Develop distinct classroom community and culture (CA TPE 1, 2, 4) (CA STP 1, 2, 3, 4) (NBPTS AYA Math I, II, III, IV, V, VI and Science I, III, V, VIII)	 Choose tasks and activity structures to position all students as competent scientific/mathematical thinkers (Y3-4) Establish and maintain norms for students to: Articulate, justify, evaluate, and revise models, arguments, and ideas (Y0)* Struggle, be wrong, and persevere (Y1-2)* Participate equitably in whole class discussions (Y3-4) Participate equitably in small group work (Y1-2)
3. Elicit, represent, and capitalize on students' ideas (CA TPE 1, 2, 4, 5) (CA STP 1, 2, 3, 4) (NBPTS AYA Math I, III, IV, VI and Science III, IV, V, VIII)	 Construct and organize a variety of public records of student thinking (Y0) Predict and capitalize on students' errors and misconceptions (Y3-4) Facilitate productive struggle (Y1-2)* Support students making connections across models, arguments, and ideas (Y1-2) Pose purposeful questions (Y0)* Use student ideas to make strategic decisions about next instructional steps (Y3-4)
4. Plan for engagement with important STEM ideas (CA TPE 1, 2, 3, 4, 5) (CA STP 1, 2, 3, 4, 5) (NBPTS AYA Math I, II, IV, VII and Science I, II, III, IV, VIII)	 Unpack curricula and standards to establish meaningful learning goals (Y3-4) Anchor instruction in complex and puzzling natural events (Y3-4) Analyze, choose, and modify tasks for specific learning goals (Y1-2) Anticipate a wide variety of student strategies and thinking (Y0) Organize sequence(s) of learning experiences (Y1-2)
5. Collect, make sense of, and respond to evidence of student learning (CA TPE 1, 2, 3, 4, 5) (CA STP 1, 2, 3, 4, 5) (NBPTS AYA Math I, III, IV, VII and Science IV, VIII)	 Collect and use diverse evidence of student learning (Y3-4) Check for understanding in multiple, strategic forms (Y0-3) Make sense of student thinking to inform instruction (Y1-2) Provide targeted oral and written feedback (Y3-4)
6. Use STEM content knowledge strategically (CA TPE 1, 3, 4) (CA STP 1, 2, 3, 4) (NBPTS AYA Math I, II, III, IV and Science I, II, III, IV, VIII)	 Offer detailed, relatable explanations (Y1-2) Develop models, analogies, and examples (Y1-2) Recognize and respond to common patterns in student thinking (Y3-4) Connect multiple representations to one another (Y3-4)

KEY:

(Y#) = Year(s) in which the sub-practice is the focus of mentoring work

* Focal sub-practices

Developing as a Teacher

What do I focus on with my Teacher Scholar?

All Pre-Service (Y0) Teachers should be supported to:

All Year (once a month)	August to December	January to June
Core Practice: Elicit, represent, and capitalize on students' ideas	Core Practice: Develop distinct classroom community and culture	Core Practice: Facilitate productive STEM discourse
Sub Practice: Pose purposeful questions	Sub Practice: Establish and maintain norms for students to articulate, justify, evaluate, and revise models, arguments, and ideas	Sub Practice: Support students drawing conclusions from given data, models, and explanations

Focal Indicators:

- -Ask probing questions and follow-up questions of all students (T5)
- -Provide students with time to think or write carefully about a posed question before engaging with others' ideas (T119) 🗘
- -Ask questions they don't know the students' answer to (e.g., "how do you know your answer is right?") (T10)

And to see a diverse range of students:

- -Spontaneously asking questions about and building on each others' ideas (S37)
- -Naming or trying to name things they understand and do not understand (S52)

Δ

Focal Indicators:

- Provide language support structures (e.g., sentence stems, word lists, etc.) (T66) ❖ △
- Make clear that all student ideas are "fair game" for examination
- Invite and expect all students to ask questions about each others' ideas (T78) **♦** Δ
- Create and protect space for students to articulate, justify, evaluate, and revise their ideas (T107) **♦** Δ

And to see a diverse range of students:

- Using scientific and mathematical language (S42) **☼** ∆
- Clearly expecting and ready to be asked questions about their thinking (S45)
- Being willing to put ideas on the table regardless of whether they are correct or fleshed-out (S62)
- Participating actively and equitably in classroom work (S32)

Focal Indicators:

- Provide language support structures (e.g., sentence stems, word lists, etc.) (T66) \bullet
- Provide students with time to think or write carefully about a posed question before engaging with others' ideas (T119)
- Pose questions, puzzling events, tasks, and activities that have multiple methods for making sense of or solving them (T99)
- Take all student ideas and contributions seriously (T82) 3
- Assign competence to students

And to see a diverse range of students:

- Spontaneously volunteering ideas without prompting from the teacher (S39) 😂
- Using language support structures (e.g., sentence stems, word lists, etc.) to start and participate in small group conversation (S40) Δ

High Leverage Equity Indicators

Revised: July 2019

 Δ High Leverage Growth indicators that appear across all 6 years of Trellis

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What do I focus on with my Teacher Scholar?

All Novice (Y1-2) Teachers should be supported to:		
All Year (once a month)	August to December	January to June
Core Practice: Facilitate productive STEM discourse	Core Practice: Develop distinct classroom community and culture	Core Practice: Elicit, represent, and capitalize on students' ideas
Sub Practice: Support students articulating, justifying, evaluating, and revising models, arguments, and ideas	Sub Practice: Establish and maintain norms for students to: Struggle, be wrong, and persevere	Sub Practice: facilitate productive struggle

Focal Indicators:

-Invite and expect all students to share developing and incomplete ideas (T80)

C

- -Position students (instead of themselves) as the authorities on and evaluators of developing ideas (T91)

\mathbf{O} Δ

-Ensure all students have multiple opportunities to share, critique, and revise ideas (T111) ❖

And to see a diverse range of students:
-Actively evaluating the reasonableness of their conclusions and the conclusions of others (S18) ❖

- -Defending and justifying their answers with little or no prompting from the teacher (S26) ❖
- -Clarifying and building on their and other students' ideas (\$23)
- -Using non-judgemental language (i.e. focusing on ideas, not people sharing them) (S41) Δ

Focal Indicators:

- Actively foster a growth mindset (T32) **②**
- Pause classroom work to name instances in which valued norms are being upheld appropriately (T71) Δ

And to see a diverse range of students:

- Being willing to put ideas on the table regardless of whether they are correct or fleshed-out (S62)
 - lacktriangle
- Actively using mistakes as learning opportunities (S8) •
- Demonstrating a growth mindset and belief that learning often requires hard work (\$43)
- Using non-judgemental language (i.e. focusing on ideas, not people sharing them) (S41) Δ

Focal Indicators:

- Invite and expect all students to share developing and incomplete ideas (T80) **3**
- Avoid explaining or evaluating models, arguments, and ideas for students (T23) Δ
- Create and protect space for incorrect or incomplete ideas to be examined and discussed (T106)
- Circle back to students who made errors or held misconceptions to assess how their thinking has changed (T20)

And to see a diverse range of students:

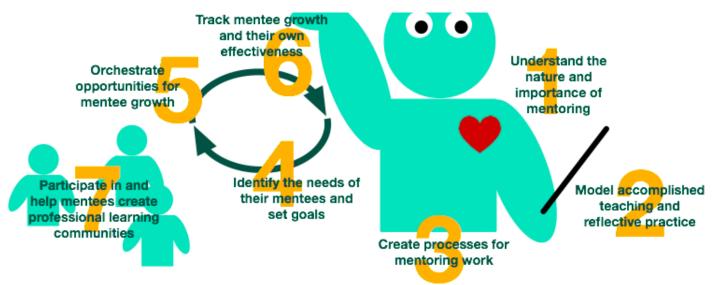
- Continuing to engage with the given task(s) even when feeling stuck, frustrated, and/or on the wrong track (S63)
- Demonstrating a growth mindset and belief that learning often requires hard work (\$43) ♀

• High Leverage Equity Indicators

 Δ High Leverage Growth indicators that appear across all 6 years of Trellis

Developing as a Mentor

What do I focus on with my mentoring colleagues?



Effective STEM Mentors...

- 1 Understand the nature and importance of mentoring
- · develop contentagnostic and STEMspecific mentoring expertise · actively participate in mentoring
- community · induct and support new mentors
- 2 Model accomplished teaching and reflective practice
- · model critical competencies (e.g., core STEM teaching practices, culturallyresponsive teaching) provide exemplars of accomplished teaching · model personal cycles of inquiry
- 3 Create processes for mentoring work
- · build relationship(s) · clarify roles, expectations · create and revise structures and timelines for engagement, communication · use a formative

assessment system.

incl. cycles of inquiry

- 4 Identify the needs of their mentees and set goals
- · identify immediate, short- and longterm teaching, leadership, mentoring goals
- · engage in cycles of inquiry around role of mentoring in achieving goals
- 5 Orchestrate 6 Track mentee growth and their opportunities for mentee own effectiveness arowth
- · collect, share, and use data toward support mentees specific goals breaking down, · employ effective rehearsing, strategies and tools enacting, and for observation. reflecting on assessment, teaching practice feedback · participate in/co-· use cycles of teach STEM inquiry around data

methods courses

- 7 Participate in and help mentees create professional communities
- support mentee engaging in new teacher. department, school, district, communities

Compiled and adapted from the work of the New Teacher Center and of leading mentoring research from scholars including Achinstein & Athanases (2005), Cornu & Ewing (2008), Fulton, Yoon, & Lee (2005), Moir (2008), Hudson, Hudson, Gray, & Bloxham (2013), and Wray (2006). Rev. Oct. 2016.

Focal Sub-Practice 1: Facilitate your mentee's self-examination of their understandings of the culture and diversity of the school and community.

Focal Sub-Practice 2: Facilitate your mentee's analysis of student data to plan and differentiate instruction.

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Trellis Mentoring Nuts & Bolts

5+ Year Trajectory of Trellis Core STEM Teaching Practices

Core Practice	Pre-Service Teacher Year 0	Novice Teacher Years 1-2	Professional Teacher Years 3-4	Beyond Year 5+
Core Practice	By the end of the pre-service year teachers should be able to	By the end of year 2 of full-time teaching teachers should be able to	By the end of year 4 of full-time teaching teachers should be able to	
1. Facilitate productive STEM discourse (Aligned with CA TPE ¹ 4, 5) (Aligned with CA STP ¹ 2, 3, 4, 5) (Aligned with NBPTS AYA Math I, IV, VI and Science III, V)	Support students drawing conclusions from given data, models and explanations Press students for evidence-based explanations	Support students articulating, justifying, evaluating, and revising models, arguments, and ideas Facilitate productive small group work	Facilitate productive whole class discussions	
2. Develop distinct classroom community and culture (CATPE 1, 2, 4) (CASTP 1, 2, 3, 4) (NBPTS AYA Math I, III, III, IV, V, VI and Science I, III, V, VIII)	Establish and maintain norms for students to articulate, justify, evaluate, and revise models, arguments, and ideas	Establish and maintain norms for students to struggle, be wrong, and persevere Establish and maintain norms for students to participate equitably in small group work	Choose tasks and activity structures to position all students as competent scientific/mathematical thinkers Establish and maintain norms for students to participate equitably in whole class discussions	
3. Elicit, represent, and capitalize on students' ideas (CA TPE 1, 2, 4, 5) (CA STP 1, 2, 3, 4) (NBBTS AYA Math I, III, IV, VI and Science III, IV, V, VIII)	Construct and organize a variety of public records of student thinking Pose purposeful questions	Support students making connections across models, arguments, and ideas Facilitate productive struggle	Predict and capitalize on students' errors and misconceptions Use student ideas to make strategic decisions about next instructional steps	
4. Plan for engagement with important STEM ideas (CATPE 1, 2, 3, 4, 5) (CASTP, 1, 2, 3, 4, 5) (NBPTS AYA Math I, II, IV, VII and Science I, II, III, VI, VIII)	Anticipate a wide variety of student strategies and thinking	Organize sequence(s) of learning experiences Analyze, choose, and modify tasks for specific learning goals	Unpack curricula and standards to establish meaningful learning goals Anchor instruction in complex and puzzling natural events	
5. Collect, make sense of, and respond to evidence of student learning (CA TPE 1, 2, 3, 4, 5)	Check for understanding in multiple, strategic forms Collect and use diverse evidence of student learning Provide targeted oral and written feedback		rning	
(CA STP 1, 2, 3, 4, 5) (NBPTS AYA Math I, III, IV, VII and Science IV, VIII)		Make sense of student thinking to inform instruction		
6. Use STEM content knowledge strategically (CATPE 1, 3, 4) (CATPE 1, 2, 3, 4) (NBPTS AYA Math I, II, III, IV and Science I, II, III, V, VIII)		Offer detailed, relatable explanations Develop models, analogies, and examples	Connect multiple representations to one anoth Recognize and respond to common patterns in	
	Meet or exceed all CTC requirements for earning a probationary single-subject teaching credential in a STEM discipline.	Meet or exceed all CTC requirements for clearing a probationary single-subject teaching credential in a STEM discipline.	Earn a Master's Degree in a STEM or STEM Education field.	Effectively mentor a pre-service teacher to develop expertise in the six, core practices for ambitious STEM teaching. Begin National Board Certification.

Mentoring a Pre-Service Teacher

(Mentors of Year 0 Trellis Teacher Scholars)

Phase I: Classroom Observation/Participation Co-Teaching in Mentor Teacher's Classroom

- 5+ hrs./week² co-teaching with mentor in 2-3 classes
- Mentoring work may include: Co-planning, facilitating rehearsals of teaching, modeling teaching, debriefing and reflecting on teaching, and facilitating the PST having interactions with students as appropriate
- 6+ visits by supervisor other than mentor

Phase II: Student Teaching

Co-Teaching in Mentor Teacher's Classroom

- Daily co-teaching with mentor in 2-3 classes
- Mentoring work may include: Co-planning, facilitating rehearsals of teaching, co-teaching, modeling teaching, debriefing and reflecting on teaching, assessment & grading, observing solo teaching, and facilitating the PST having other, consistent interactions with students
- 4+ weeks of full-time co-teaching OR PST teaching full-time with mentor providing consistent planning, observational, and reflective support
- 6+ visits by supervisor other than mentor

Opportunities for Pre-Service Teachers to Engage in the Learning Cycle

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BREAK DOWN Practice TRY ON Practice REFLECT ON Practice SEE Practice Modeling Planning to **Observing** Reflecting on **Assessing Practice Approximating Practice Practice Practice Enact Practice Practice** 1+ per week 2+ per week 1+ per month 1+ per week Phase I: 2+ **Variable Evidence Checklists** As much as possible Mentor Opportunity for Scheduled, per month Interaction Logs PST to rehearse formally consistent following modeling models specific practice with co-planning for Phase II: of practice by 10+ per year core STEM mentor, mentor or PST to 2+ per week mentor or PST colleagues, etc. teaching enact practice approximating practice or (NOT with with students Mentor practice, and always sub-practice students) observes PST following a PST enacting enacting practice 2+ per year practice with with Analysis of Change in Practice students students or any **Performance Assessments** videoed practice (e.g., DoCP, CalTPA)

Revised: July 2019

² 600+ hours over Phases I and II

Mentoring a Novice Teacher

(Mentors of Year 1-2 Trellis Teacher Scholars)

Meeting or exceeding all requirements defined by the CTC for clearing a single-subject teaching credential over two-years, including:

- 1+ hours a week of in-person or virtual contact with Teacher Scholar (180+ min. per month)
- Mentoring work may include: Co-planning, providing feedback on planning, facilitating rehearsals
 of teaching, modeling teaching, observing a video of the Teacher Scholar teaching, observing or
 watching video of other Teacher Scholars teaching, collaborative and asynchronous debriefing and
 reflecting on planning, teaching, assessment and grading
- Co-creation of, and monitoring and documenting progress related to, an *Individualized Learning Plan* (ILP); goals of the ILP and progress toward goals are related to demonstrating growth in
 meeting or exceeding all *California Standards for the Teaching Profession* and targeted core STEM
 teaching practices
- 1+ times a month of written (in addition to oral) feedback regarding the Teacher Scholar's progress toward a recommendation for a clear credential

Meeting or exceeding additional Trellis Education and local induction program guidelines for STEM teacher mentoring, including:

- Support for Teacher Scholar's full participation in their <u>CLEAR professional learning community</u>, including coordination of mentoring work with CLEAR mentors in affinity spaces
- Facilitation of opportunities as needed for Teacher Scholars to observe Trellis mentors enacting core practices, through video or in-person observation
- Facilitation of opportunities for Teacher Scholars to approximate core practices as needed
- Documentation and tracking of Teacher Scholar growth in STEM core practices using Trellis tools
 - 2+ times a month <u>viewing and tagging Teacher Scholar videos of practice</u> for evidence of core practice(s), submit data using on-line evidence checklist form
 - 2+ times a month document mentoring conversations, co-planning, and student data analysis using the Collaborative Assessment Log
 - 2+ times a semester use of discourse reflection tools to collaboratively assess practice and determine focus of next enactment
 - 1+ Inquiry Action Plan
- 1+ hours a month of facilitated in-person or virtual contact with other Teacher Scholars focusing on equitable teaching practice, including watching and discussing videos of each others' teaching

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⁴ We continuously work to understand and align these requirements to the specific activities, tools, and requirements of the CTC-accredited induction programs of our partner IHEs/LEAs, and work closely with the *New Teacher Center* to do this work well.

Opportunities for Novice Teachers to Engage in the Learning Cycle

BREAK DOWN Practice SEE Practice TRY ON Practice REFLECT ON Practice **Approximating** Reflecting on Modeling Planning to Observing Assessing **Practice Practice Enact Practice Practice Practice** Practice 1+ start of year 1+ per month Recurrent 2+ per month 1+ per month 2+ per month Mentor Mentor Mentor involved Teacher scholars Mentor facilitates facilitates in and observe each Reflect on documents observation of a documents other, via shared evidence from observed opportunities for the Teacher co-planning video 2+ per year 0 with evidence of specific core month Mentor STEM teaching Scholar to and/or mentor to practice growth feedback on observes the using evidence practice or rehearse co-develop a sub-practice in a practice with planning with Teacher scholar learning map checklists, Trellis Mentor's mentor, the Teacher via shared video, discourse classroom or Scholar to enact or in person 2+ per month reflection tools colleagues, etc. shares video (NOT with practice with Guided and exemplifying the students), as students documented 2+ per month needed reflection with Mentor and practice 1+ per month mentor based Teacher Scholar Videos capture Teacher the Teacher on video of debrief video of Scholars and **Teacher Scholar** Scholar enacting Teacher Scholar mentor analyze practice with enacting a enacting student data to practice with practice students; plan for includes Students 1+ over 2 years increasing co-planning and debrief Earn equity Frequently discussion of The Teacher micro-credential s practice Scholar reflects enactment with individually: following mentor modeling, approximation, and observation

of practice

Mentoring Activities & Tools

Trellis Evidence Checklists can be found <u>here</u>. They should be used as frequently as possibly by the mentee observing your practice and by you observing the mentee's practice. After any observation, a formal conversation should take place about the observation, using one or more evidence checklists. <u>All data from</u> evidence checklists should be logged.

Cycles of Observation should happen once per week in virtual or face-to-face form. An observation must include the collaborative selection of a sub-practice to focus the observation on, the use of an evidence checklist during the observation or watching of video of the observation, and a debrief of the data collected using the evidence checklist.

2019-20 Novice Teacher (Induction) Mentoring Calendar

Mentors are encouraged to use or adapt this calendar as they see fit. The specific district and/or county induction program requirements and deadlines must be considered alongside this timeline.

Launch of Mentoring Work

- Review the existing <u>Individualized Learning Plan</u> for the Teacher Scholar and <u>continued/additional foci for the year</u> (Core Practices Pre-Assessment).
- Engage in the Knowing Teachers protocol together.
- Review the Trellis Mentor Handbook together and calendar ongoing time to work together and critical milestones.

Milestones in Mentoring Work:

EVERY MONTH:

- 4+ Interaction Logs (completed each WEEK by the mentor) reflecting how Scholar and Mentor have worked together
- 4+ <u>Learning Cycles</u>: With respect to one sub-practice identified in the ILP Growth Goals, see the sub practice in action (via the Mentor, a video, etc.) and discuss it, co-plan a lesson or learning segment with a focus on enacting some or all indicators of the sub-practice, discuss the enactment using the appropriate evidence checklist, and <u>log the Scholar's data</u>. Document <u>Learning Cycle</u> work using the <u>Collaborative Assessment Log</u> template.

Add to Scholar's portfolio by **OCTOBER 31**

- <u>Co-Assessment of Growth #1 (Core Practices Pre-Assessment):</u> Mentor and Scholar pre-assess the Scholar on all six Core STEM Teaching Practices and <u>review the two</u> <u>practices to focus on this year (ILP Growth Goals).</u>
- Consultation with Site Administrator: Mentor and Scholar consult with an administrator about the Scholar's goal(s).

Add to Scholar's portfolio by **NOVEMBER 30**

<u>Inquiry Action Plan (Part I):</u> Mentor and Scholar identify a student-focused problem
of practice related to the Scholar's ILP Growth Goals and co-design a long-term
inquiry project to explore it (IAP Steps 1-6).

December

<u>Demonstration of Change in Teaching Practice</u> (Fall): With other Teacher Scholars, the primary Mentor, and other Mentor Fellows, the Scholar will share evidence of change in their enactment of one core STEM teaching sub-practice.

Add to Scholar's portfolio by **FEBRUARY 28**

- <u>Co-Assessment #2 (*Mid-Year Review*)</u>: Mentor and Scholar reflect on the Scholar's ILP Growth Goals and modify as needed.
- <u>Inquiry Action Plan (Part II)</u>: Execute, reflect, iterate on, and ultimately, distill key take-aways from the IAP (Steps 7-10).

Add to Scholar's portfolio by **APRIL 30**

- Co-Assessment #3 (<u>End-of-Year Review</u>)
- At least 10 logged evidence checklists for EACH sub-practice identified as an ILP Growth Goal

June

<u>Demonstration of Change in Teaching Practice (Spring)</u>

Guidelines for Collecting & Using Videos of Novice Teachers' Practice

Frequency of Videos:

Teacher Scholars will record biweekly videos of practice

Subject of Videos:

- The Core STEM Teaching Sub-Practice the Teacher Scholar will enact and capture on each video will be determined by the individual coaching conversation between the Teacher Scholar and the mentor, based on:
 - Individualized Learning Plan goals
 - Previous STEM core teaching practice evidence checklists
 - Analyses of student work
 - Planning conversation(s)
- o Each video will be part of a documented Learning Cycle
- Video length will typically be between 10 -15 minutes

Collecting & Sharing Video:

- Teacher Scholars will record video using their own internet-connected device, while logged in to their mentor's Swivl account (login provided by mentor)
- Video upload must occur during the upload window following their individual coaching conversation
- Video will upload automatically to the mentor's account

• Use of Video:

- Mentor views the video and tags the video with comments to document where they observe evidence of practice, including what specific evidence they observed of the focal core STEM teaching practice or sub-practice(s)
- Mentor tagging will be complete within the video review and tagging window
- The appropriate STEM Core Sub-Practice evidence checklist will also be completed for the Teacher Scholar, using the appropriate digital form, to be trackable by the mentor and Teacher Scholar
- Teacher Scholar will review the video and evidence tags and comment with reflections before the next individual coaching conversation

Mentoring a Professional Teacher

(Mentors of Year 3-4 Trellis Teacher Scholars)

- 3+ hour/month of in-person or virtual contact with mentor and/or other Teacher Scholars
- Mentoring work may include: Co-planning, providing feedback on planning, facilitating rehearsals
 of teaching, modeling teaching, observing or watching video of the Teacher Scholar teaching,
 observing or watching video of other Teacher Scholars teaching, collaborative and asynchronous
 debriefing and reflecting on planning, teaching, assessment & grading, providing professional
 resources
- Revision of and monitoring and documenting progress related to an *Individualized Learning Plan*(ILP); goals of the ILP and progress toward goals are related to demonstrating growth in meeting or
 exceeding all content-specific standards from the *National Board for Professional Teaching*Standards and targeted core STEM teaching practices
- Support Teacher Scholars completing a Master's Degree targeted to inquiry related to the ILP
- Support Year 4 Teacher Scholars beginning training to join the Mentoring PLC in Year 5
- Support for Teacher Scholar's full participation in their <u>CLEAR professional learning community</u>, including coordination of mentoring work with CLEAR mentors in affinity spaces

Opportunities for Professional Teachers to Engage in the Learning Cycle

BREAK DOWN Pr	actice				
SEE Practice	TRY ON Practice			REFLECT ON Prac	tice
Modeling Practice	Approximating Practice	Planning to Enact Practice	Observing Practice	Reflecting on Practice	Assessing Practice
Variable Mentor formally models specific core STEM teaching practice or sub-practice in his or her classroom or in the Teacher Scholar's classroom, or shares a video exemplifying the practice	Variable Opportunity for Teacher Scholar to rehearse practice with mentor, colleagues, etc. (NOT with students)	Variable Co-planning or feedback on planning for Teacher Scholar to enact practice with students or	In person or Via shared video: 6+ per year Mentor and/or other Teacher Scholars observe(s) teacher enacting practice with students; includes co-planning or discussion of planned enactment and debrief	Variable As much as possible following modeling of practice by mentor or Teacher Scholar approximating practice, and always following a Teacher Scholar enacting practice with students or any videoed practice	2+ per month Evidence Checklists Discourse Reflection Tools 6+ per year Video of Teacher Scholar approximating or enacting practice

Professional Teacher Mentoring Calendar

Mentors are encouraged to use or adapt this calendar as they see fit.

Launch of Mentoring Work

- Review the existing <u>Individualized Learning Plan</u> for the Teacher Scholar identify foci for the year (Core Practices Pre-Assessment).
- Engage in the **Knowing Teachers** protocol together.
- Review the Trellis Mentor Handbook together and calendar ongoing time to work together and critical milestones,
- Support TS in scheduling a review of core STEM Mentoring practices with Professional Teacher/Apprentice Mentor Buddy.

Milestones in Mentoring Work:

EVERY MONTH:

- 2+ <u>Learning Cycles</u>: (With Mentor Buddy) With respect to one sub-practice identified in the ILP Growth Goals, see the sub practice in action (via the Mentor, a video, etc.) and discuss it, co-plan a lesson or learning segment with a focus on enacting some or all indicators of the sub-practice, discuss the enactment using the appropriate evidence checklist. Document <u>Learning Cycle</u> work using the *Collaborative Assessment Log* template.
- Monthly meeting with mentor buddy and Mentor to review goal and ILP progress
- Participate in/and or co-facilitate CLEAR group.

Add to Scholar's portfolio by OCTOBER 31

 <u>Co-Assessment of Growth #1</u> (<u>Core Practices Pre-Assessment</u>): Mentor and Scholar pre-assess the Scholar on all six Core STEM Teaching Practices and choose two practices to focus on this year (<u>ILP Growth Goals</u>).

Add to Scholar's portfolio by

- Reflect on co-facilitation of CLEAR group with Mentor. Establish Mentoring goals and next steps.
- **NOVEMBER 30** With Mentor Buddy and Mentor, plan to attend to a CLE and run a rehearsal

December

<u>Demonstration of Change in Teaching Practice</u> (Fall): With other Teacher Scholars, the primary Mentor, and other Mentor Fellows, the Scholar will share evidence of change in their enactment of one core STEM teaching sub-practice.

Add to Scholar's portfolio by FEBRUARY 28

- <u>Co-Assessment #2 (*Mid-Year Review*)</u>: Mentor and Scholar reflect on the Scholar's ILP Growth Goals and modify as needed.
- Reflect on co-facilitation of CLEAR group with Mentor. Establish Mentoring goals and next steps.

Add to Scholar's portfolio by APRIL 30

- Co-Assessment #3 (<u>End-of-Year Review</u>)
- At least 10 logged evidence checklists for EACH sub-practice identified as an ILP Growth Goal

June

<u>Demonstration of Change in Teaching Practice (Spring)</u>
Participate in Mentor Summer Institute

Cross-Cohort Learning, Equity, Activism, & Resilience (CLEAR)

About All Year 1-2 Teacher Scholars participate in a virtual, collaborative affinity space with Teacher Scholars from their and other cohorts co-facilitated by a Trellis Mentor Fellow, member of the Trellis leadership team, Apprentice Mentor, and/or a Year 3-4 Teacher Scholar.

Purpose The purpose of the CLEAR work is to provide a cross-cohort and cross-context collaborative space – in addition to the critical, one-on-one mentoring – for members of the Trellis community to:

- Support each others' ability to enact core STEM teaching practice for equity
- Consider and leverage the intersections of our identities (including as shared or not with our mentees/mentors) and our power as STEM educators to better serve all of our students
- Engage in individual and collective equity work to better serve all of our students
- Articulate, iterate on, and activate around one or more personal commitment to equity
- For white facilitators and Teacher Scholars: Consider the unique role and power of whiteness in the perpetuation of a racist, oppressive public education system and work actively from a place of white privilege to dismantle it in measurable ways

Structure Each CLEAR group meets virtually at a time chosen and committed to by all members, once per month (at least 8 times per year). While each meeting will and must flex to the particular needs of the group, all meetings will include - minimally - the following components:

- Strategic engagement in the Learning Cycle, especially as connected to the use of the Learning Cycle in mentor affinity spaces and in one-on-one mentoring work
- Consistent collective viewing and reflection on videos of classroom teaching from Teacher Scholars
- Strategic use of evidence checklists and priority indicators
- Formal iteration on personal commitment(s) to equity
- Opportunities for Year 3-4 Teacher Scholars to develop their mentoring "muscles"
- Use of CLEAR protocols across all groups as decided by CLEAR facilitators

CLEAR facilitators participate actively in all, relevant affinity-group work and meet virtually to coordinate nature of CLEAR group work in ways that prioritize both alignment across CLEAR groups but also the specific needs of each affinity group and each CLEAR group.

	Teacher Scholars of Color	LGBQT+ Teacher Scholars	White Teacher Scholars
Launch of CLEAR Work (at Summer Institute)	 Creating a space to allow scholars to explore their own racial identity and how that plays out in a white supremacist society. Looking at and focusing on student indicators that reflect high-leverage practices for equity 	 Creating a space to allow scholars to explore their own LGBTQI+ identity as well as their racial identity and how that plays out in a white supremacist, heteronormative schools. Explore ways to use our identity to create inclusive, honoring spaces for all students. 	 Defining of White Privilege and Supremacy Definition of action work to disrupt racism and oppression and naming of first steps Drafting of Commitment to Equity as a White Teacher
Milestones i	n CLEAR Mentoring Work:		
<u>EVERY</u> MONTH:	 checklists and high-levera Collective viewing of one Looking at and focusing or 	he Learning Cycle, including the uge equity indicators or more video(s) of TTS' teaching n student indicators that reflect hall commitment(s) to equity and	igh-leverage practices for equity
			Development of Commitment to Equity as a White Teacher
September	_	•	s within the class.
October	 Supporting focus students Looking at Classroom Data Watching a video of Schol 		upt or interrupt social status.
November	supports your growth as a Check-in Survey	I monstration of Change in Teaching a teacher for equity and as an acti ar and complete checklist (?)	

Revised: July 2019

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December	Demonstration of Change in Teaching Practice (Fall)
January	 Watching a video of Scholar and complete checklist Looking at student work (?) Looking at TS Checklist Data (?)
February	 Watching a video of Scholar and complete checklist. Looking at student work (?) Looking at TS Checklist Data (?)
March	 Watching a video of Scholar and complete checklist Looking at student work (?) Looking at TS Checklist Data (?)
April	 Watching a video of Scholar and complete checklist. Looking at student work (?) Looking at TS Checklist Data (?)
May	 Support for preparing Demonstration of Change in Teaching Practice: What evidence supports your growth as a teacher for equity and as an activist for social justice? Check-in Survey
June	Demonstration of Change in Teaching Practice (Spring)

Important Links & Resources

Mentoring & Teaching for Equity

- Trellis Vision for Ambitious STEM Teaching (VAST)
- UnboundEd Toolkit Disrupting Inequity: Having Brave Conversations About Bias
- Teaching Tolerance <u>Social Justice Standards</u>
- <u>Teaching for Robust Understanding (TRU) Observation Guide</u>, V4 (From the <u>Mathematics Assessment Project</u> and Algebra Teaching Study)

California Department of Education (CDE) and California Commission on Teacher Credentialing (CTC) Documents

- Requirements for a Single Subject Teaching Credential (April 2016)
- Single Subject Credential Program Standards (December 2015)
 - <u>Mathematics Teacher Preparation in California: Standards of Quality and Effectiveness for Subject Matter Programs (November 2009)</u>
 - <u>Science Teacher Preparation in California: Standards of Quality and Effectiveness for Subject Matter Programs (September 2010)</u>
- Teacher Performance Expectations (TPEs) (<u>June 2016</u>; <u>March 2013</u>)
- General Education Induction Program Preconditions and Program Standards (December 2015)
- California Standards for the Teaching Profession (October 2009)

National Teacher Preparation and Development Standards

- National Board for Professional Teaching Standards (NBPTS)
 - AYA Mathematics (For Teachers of Students Age 11-18+)
 - AYA Science (For Teachers of Students Age 11-18+)
- Content-Specific Standards for Teacher Preparation
 - AMTE Standards for Mathematics Teacher Preparation (Draft: November 2016)
 - NSTA Standards for Science Teacher Preparation (2003)

Partner Teacher Preparation Programs

- U.C. Berkeley Educators for Equity and Excellence (BE3) program
- San Francisco State University Single-Subject Credential Program
- Sonoma State University Single-Subject Credential Program
- CSU East Bay Single-Subject Credential Program

Partner School Districts and/or Districts of Partner Schools

- Santa Rosa City Schools
- Napa Valley Unified School District
- Sonoma Valley Unified School District
- San Francisco Unified School District
- Oakland Unified School District
- Berkeley Unified School District
- West Contra Costa County Unified School District
- San Lorenzo Unified School District

Appendix A: Video Consent Form

Note: <u>Downloadable PDF version available here</u>. Also available in Spanish.



Dear Student and Parent and/or Guardian,

Your district, school and/or teacher are participating in work with Trellis Education, in partnership with local universities, to support teacher learning. The mission of Trellis Education is to ensure every student in California— especially those who have traditionally been underserved or not served by public education— has exceptional middle and high school math and science teachers and experiences that propel them into college and beyond. To do this, Trellis focuses on supporting teachers becoming great at helping students learn and thrive, and this involves teachers watching each other teach and thinking carefully together about how different teaching practices help students learn best. Bringing teachers into classrooms, in vivo and via video of classroom work, is critical to this effort.

Although your teacher and school have agreed to allow us observe teaching practice, we may also photograph, audiotape or videotape parts of your classroom work. We will use these digital recordings with other educators to focus on developing teacher practice, and will share the videos in private and public professional settings for the purpose of teacher learning. You may opt out of photographs, audio, or video of you to be used by teachers in this way now or at any time in the future without consequences.

Please return the attached consent form at your earliest convenience. We are happy to answer any questions you have about the purpose or use of these classroom artifacts. Feel free to email me directly at megan@trelliseducation.org.

Sincerely,

Megan W. Taylor, Founder & CEO,

Trellis Education

Student and Parent/Guardian Informed Consent

* Dear Student, please return this form to your teacher after you and your parents have signed it. *

I, the undersigned, understand and acknowledge that Trellis Education intends to include audio and video recordings of my child in one or more audio-visual works currently being produced for professional development and promotional purposes.

In consideration of my child's appearance in the videos and photographs, I hereby consent to him/her being photographed and/or recorded on behalf of Trellis Education, by those authorized by Trellis Education, and grant, without any payment, to Trellis Education and their partner, full permission to use footage of my child for this purpose. I release Trellis Education, its agents, employees, licensees and assigns from and against any and all claims which I have or may have for invasion of privacy, defamation or any other cause of action arising out of production, distribution, broadcast or exhibition of this footage.

Check one of the following:

___ I have read this form and YES, I agree for photographs, audio, and video of my classroom work to be used by Trellis Education and shared publicly and anonymously for the purpose of supporting teacher growth.

___ I have read this form and YES, I agree for photographs, audio, and video of my classroom work to be used by Trellis Education in private professional settings for the purpose of supporting teacher growth.

___ I have read this form and NO, I do not wish for photographs, audio, and video of my classroom work to be used by teachers.

Your Name (Student):

___ Your Signature (Student):

___ Teacher Name:

___ School:

Parent/Guardian Name:

Parent/Guardian Signature:

Date:

Consentimiento de información para estudiante y padre/tutor

* Estimado Estudiante, por favor regresa este formulario a tu maestra después de que tus padres lo firman.. *

Hemos leído este formulario y entendemos que maestros trabajando con <u>Trellis Education</u> (<u>www.trelliseducation.org</u>) pueden estar visitando los salones en nuestra escuela y colectando fotografías, audio y videos de trabajos en la clase. Nosotros entendemos que los estudiantes pueden elegir que sus trabajos sean usados por los maestros en ambientes profesionales y privados, o puede ser que no se usen. Nosotros entendemos que los estudiantes pueden optar de no dar permiso que sus trabajos sean usados en cualquier momento sin que sean penalizados.

Marca uno de los siguientes:
He leído este formulario y SI, estoy de acuerdo que fotografías, audio y videos de mis trabajos sean usados por los maestros.
He leído este formulario y SI, estoy de acuerdo que videos de mis trabajos sean usados por los maestros, pero no fotografías ni audio.
He leído este formulario y NO, estoy de acuerdo que fotografías, audio y videos de mis trabajos sean usados por los maestros.
Tu nombre (Estudiante):
Tu Firma (Estudiante):
Nombre del maestro:
Escuela:
Nombre del padre/tutor:
Firma del padre/tutor:
Fecha: