PTMT Workshop Schedule

Monday, June 7th

Session	Time	Offerings		
Opening Session	**11:00 – 12:00 EST** *10:00 – 11:00 Central* *9:00 – 10:00 Mountain* *8:00 – 9:00 Pacific*	**PTMT Workshop Day 1 Kickoff** *In this session, we will welcome you to the Workshop on Undergraduate Teaching with Mathematics and Statistics Action Tools! This will include an overview of the workshop goals and structure, pointers for navigating our Canvas site, and answers to any of your lingering questions.*		
Session 1	**12:30 – 1:30 EST** *11:30 – 12:30 Central* *10:30 – 11:30 Mountain* *9:30 – 10:30 Pacific*	**Building the Desmos Foundation: An Introduction to the Desmos Calculator** *This first session will focus on the many representation capabilities of the Desmos calculator. Participants will explore how to use Desmos to graph functions, inequalities, and other mathematical relations. This exploration will also include the use of Desmos to display statistical relations through tables and graphs of distributions.*	**Getting to Know GeoGebra** *In this session we will explore what it means to be "dynamic" in the context of GeoGebra sketches. Specifically, we will use GeoGebra's polygon and midpoint tools and "drag testing" to develop and test conjectures. As you construct your first sketches in a collaborative setting, you will modify the look of objects (e.g., color, size, labeling), modify graphics view options (e.g., toggle grid, snap, axes), and learn how to change GeoGebra's default settings.*	**Introduction to CODAP** *In this session you will be introduced to the basics of CODAP including basic functionality, importing data, creating graphs, and saving and sharing files. You will learn these features by engaging in a guided data exploration in CODAP.*
Session 2	**2:00 – 3:00 EST** *1:00 – 2:00 Central* *12:00 – 1:00 Mountain* *11:00 – 12:00 Pacific*	**Building the Desmos Foundation: An Introduction to the Desmos Calculator** *This first session will focus on the many representation capabilities of the Desmos calculator. Participants will explore how to use Desmos to graph functions, inequalities, and other mathematical relations. This exploration will also include the use of Desmos to display statistical relations through tables and graphs of distributions.*	**Getting to Know GeoGebra** *In this session we will explore what it means to be "dynamic" in the context of GeoGebra sketches. Specifically, we will use GeoGebra's polygon and midpoint tools and "drag testing" to develop and test conjectures. As you construct your first sketches in a collaborative setting, you will modify the look of objects (e.g., color, size, labeling), modify graphics view options (e.g., toggle grid, snap, axes), and learn how to change GeoGebra's default settings.*	**Introduction to CODAP** *In this session you will be introduced to the basics of CODAP including basic functionality, importing data, creating graphs, and saving and sharing files. You will learn these features by engaging in a guided data exploration in CODAP.*

PTMT Workshop Schedule

Monday, June 7th

Session 3	**3:30 – 4:30 EST** *2:30 – 3:30 Central* *1:30 – 2:30 Mountain* *12:30 – 1:30 Pacific*	**Building the Desmos Foundation: An Introduction to the Desmos Calculator**	**Getting to Know GeoGebra**	**Introduction to CODAP**
		This first session will focus on the many representation capabilities of the Desmos calculator. Participants will explore how to use Desmos to graph functions, inequalities, and other mathematical relations. This exploration will also include the use of Desmos to display statistical relations through tables and graphs of distributions.	*In this session we will explore what it means to be "dynamic" in the context of GeoGebra sketches. Specifically, we will use GeoGebra's polygon and midpoint tools and "drag testing" to develop and test conjectures. As you construct your first sketches in a collaborative setting, you will modify the look of objects (e.g., color, size, labeling), modify graphics view options (e.g., toggle grid, snap, axes), and learn how to change GeoGebra's default settings.*	*In this session you will be introduced to the basics of CODAP including basic functionality, importing data, creating graphs, and saving and sharing files. You will learn these features by engaging in a guided data exploration in CODAP.*
Closing Session	**4:30 – 5:00 EST**	**PTMT Workshop June Day 1 Closing Session**		
		In this session, we will conclude Day 1 of the workshop by answering questions and discussing the plan for the next Day's Sessions.		

PTMT Workshop Strands	Desmos	Geogebra	CODAP	Special Sessions	Teaching Interest Groups

PTMT Workshop Schedule

Tuesday June 8th

Session	Time	Offerings		
Opening Session	**11:00 – 11:15 EST**	**PTMT Workshop Day 2 Kickoff** *In this session, we will welcome you to Day 2 of the workshop by providing an overview of the day's sessions, answer questions, and provide pointers for navigating the day.*		
Session 1	**11:15 – 12:45 EST** *10:15 – 11:45 Central* *9:15 – 10:45 Mountain* *8:15 – 9:45 Pacific*	**Using Desmos to Create Static Images** *Representations can be powerful tools in communicating mathematical, statistical, and geometric concepts. In this session participants will begin with the creation of high quality, static representations. We will be using the graphing calculator tool and the geometry tool.*	**Geogebra: Quadrilaterals from Quadrilaterals** *In this session we will use triangle centers to create quadrilaterals from other quadrilaterals and explore conjectures that result from observing how these mathematical objects behave. As you construct your sketches, you will use multiple linked representations (graphics view, algebra view, input bar, and spreadsheet) to informally confirm your own conjectures.*	**CODAP: Exploratory Data Analysis** *In this session you will engage in a statistical investigation designed to engage in exploratory data analysis (EDA) practices in the CODAP environment. Using a large data set, you will learn about the range of data visualizations that CODAP can create as well as the descriptive statistics that can be measured. We will also model and discuss some pedagogical strategies for teaching students with CODAP.*
Session 2	**1:15 – 2:45 EST** *12:15 – 1:45 Central* *11:15 – 12:45 Mountain* *10:15 – 11:45 Pacific*	**Using Desmos to Spice Up Static Images** *Representations can be powerful tools in communicating mathematical, statistical, and geometric concepts. In this session participants will explore ways of using Desmos to turn a static image into a dynamic, interactive representation by using sliders and general parameterization. We will be using the graphing calculator tool and the geometry tool.*	**Geogebra: Measure – Trace – Algebratize** *In this session, you will be introduced to the Measure-Trace-Algebratize (MTA) framework for motivating mathematical model building. As you explore a pre-constructed sketch and drag points, an ordered pair derived from measurements in the sketch is traced in a second window. You'll use GeoGebra's CAS tools and simple algebra to derive a model that fits the plotted points as you learn more about restricting object views to specific graphics windows, altering ZOOM settings in GeoGebra graphics view, tracing points, and restricting domains of graphs from the input bar.*	**CODAP: Multivariate and Hierarchical Exploratory Data Analysis** *In this session you will explore some of the advanced features of CODAP for exploring multivariate relationships such as nested data structures, multivariate data visualizations, and modeling with functions.*

PTMT Workshop Schedule

Tuesday June 8th

Session 3	**3:15 – 4:45 EST** *2:15 – 3:45 Central* *1:15 – 2:45 Mountain* *12:15 – 1:45 Pacific*	**Using Desmos to Create Static Images** *Representations can be powerful tools in communicating mathematical, statistical, and geometric concepts. In this session participants will begin with the creation of high quality, static representations. We will be using the graphing calculator tool and the geometry tool.*	**Geogebra: Quadrilaterals from Quadrilaterals** *In this session we will use triangle centers to create quadrilaterals from other quadrilaterals and explore conjectures that result from observing how these mathematical objects behave. As you construct your sketches, you will use multiple linked representations (graphics view, algebra view, input bar, and spreadsheet) to informally confirm your own conjectures.*	**CODAP: Exploratory Data Analysis** *In this session you will engage in a statistical investigation designed to engage in exploratory data analysis (EDA) practices in the CODAP environment. Using a large data set, you will learn about the range of data visualizations that CODAP can create as well as the descriptive statistics that can be measured. We will also model and discuss some pedagogical strategies for teaching students with CODAP.*
Closing Session	**4:45 – 5:00 EST**	**PTMT Workshop June Day 2 Closing Session** *In this session, we will conclude Day 2 of the workshop by answering questions and discussing the plan for the next Day's Sessions.*		

PTMT Workshop Strands	Desmos	Geogebra	CODAP	Special Sessions	Teaching Interest Groups

PTMT Workshop Schedule

Wednesday, June 9th

Session	Time Slot	Offerings			
Session 1	**11:00 – 12:30 EST** *10:00 – 11:30 Central* *9:00 – 10:30 Mountain* *8:00 – 9:30 Pacific*	**Using Desmos to Spice Up Static Images** *Representations can be powerful tools in communicating mathematical, statistical, and geometric concepts. In this session participants will explore ways of using Desmos to turn a static image into a dynamic, interactive representation by using sliders and general parameterization. We will be using the graphing calculator tool and the geometry tool.*	**Geogebra: Measure – Trace – Algebratize** *In this session, you will be introduced to the Measure-Trace-Algebratize (MTA) framework for motivating mathematical model building. As you explore a pre-constructed sketch and drag points, an ordered pair derived from measurements in the sketch is traced in a second window. You'll use GeoGebra's CAS tools and simple algebra to derive a model that fits the plotted points as you learn more about restricting object views to specific graphics windows, altering ZOOM settings in GeoGebra graphics view, tracing points, and restricting domains of graphs from the input bar.*	**CODAP: Multivariate and Hierarchical Exploratory Data Analysis** *In this session you will explore some of the advanced features of CODAP for exploring multivariate relationships such as nested data structures, multivariate data visualizations, and modeling with functions.*	
Session 2	**1:00 – 2:30 EST** *12:00 – 1:30 Central* *11:00 – 12:30 Mountain* *10:00 – 11:30 Pacific*	**Using Desmos to Create Static Images** *Representations can be powerful tools in communicating mathematical, statistical, and geometric concepts. In this session participants will begin with the creation of high quality, static representations. We will be using the graphing calculator tool and the geometry tool.*	**Geogebra: Quadrilaterals from Quadrilaterals** *In this session we will use triangle centers to create quadrilaterals from other quadrilaterals and explore conjectures that result from observing how these mathematical objects behave. As you construct your sketches, you will use multiple linked representations (graphics view, algebra view, input bar, and spreadsheet) to informally confirm your own conjectures.*	**CODAP: Exploratory Data Analysis** *In this session you will engage in a statistical investigation designed to engage in exploratory data analysis (EDA) practices in the CODAP environment. Using a large data set, you will learn about the range of data visualizations that CODAP can create as well as the descriptive statistics that can be measured. We will also model and discuss some pedagogical*	**Open Swim** *This room is open for anyone who needs recreational time to play with the technology, practice their learning, or ask for support.*

PTMT Workshop Schedule

Wednesday, June 9th

				strategies for teaching students with CODAP.	
Session 3	**3:00 – 4:30 EST** *2:00 – 3:30 Central* *1:00 – 2:30 Mountain* *12:00 – 1:30 Pacific*	**Using Desmos to Spice Up Static Images** *Representations can be powerful tools in communicating mathematical, statistical, and geometric concepts. In this session participants will explore ways of using Desmos to turn a static image into a dynamic, interactive representation by using sliders and general parameterization. We will be using the graphing calculator tool and the geometry tool.*	**Geogebra: Measure – Trace – Algebratize** *In this session, you will be introduced to the Measure-Trace-Algebratize (MTA) framework for motivating mathematical model building. As you explore a pre-constructed sketch and drag points, an ordered pair derived from measurements in the sketch is traced in a second window. You'll use GeoGebra's CAS tools and simple algebra to derive a model that fits the plotted points as you learn more about restricting object views to specific graphics windows, altering ZOOM settings in GeoGebra graphics view, tracing points, and restricting domains of graphs from the input bar.*	**CODAP: Multivariate and Hierarchical Exploratory Data Analysis** *In this session you will explore some of the advanced features of CODAP for exploring multivariate relationships such as nested data structures, multivariate data visualizations, and modeling with functions.*	**Open Swim** *This room is open for anyone who needs recreational time to play with the technology, practice their learning, or ask for support.*
Closing Session	**4:30 – 5:00 EST** *3:30 – 4:00 Central* *2:30 – 3:00 Mountain* *1:30 – 2:00 Pacific*	**Teaching Interest Group Kick Off** *To facilitate conversations and collaborations around using what you are learning about various technology tools in the Workshop sessions we have organized everyone into Teaching Interest Groups, or TIGs. We did the best we could to match you with others that teach similar courses. However, we expect to need to make some adjustments. The first TIG session will be a brief time to get to know your group and see if you have been matched appropriately. After adjustments have been made, there will be multiple sessions for meeting together. In addition, all TIGs are welcome to use the Open Swim sessions and Discussion Boards for collaboration time as well.*			

PTMT Workshop Schedule

Wednesday, June 9th

PTMT Workshop Strands	Desmos	Geogebra	CODAP	Special Sessions	Teaching Interest Groups

PTMT Workshop Schedule

Wednesday, June 16th

Session	Time	Offerings
Opening Session	**11:00 – 11:30 EST** *10:00 – 10:30 Central* *9:00 – 9:30 Mountain* *8:00 – 8:30 Pacific*	**PTMT Workshop Week 2 Kickoff** *In this session, we will welcome you to Week 2 of the workshop by providing an overview of the day's sessions, answer questions, and provide pointers for navigating the second week.*
Session 1	**11:30 – 12:30 EST** *10:30 – 11:30 Central* *9:30 – 10:30 Mountain* *8:30 – 9:30 Pacific*	**Pixels are Pedagogy** **Dan Meyer** *Two common ideas — (1) that mathematics is a purely objective discipline (2) that digital technology is a morally neutral actor — have entwined over the last several decades and resulted in catastrophe for mathematics learning. Our decisions about pixels in our math education software are simultaneously decisions about pedagogy, the nature of mathematics, and the value of students. We will explore the implications of those decisions.*
Session 2	**1:00 – 2:30 EST** *12:00 – 1:30 Central* *11:00 – 12:30 Mountain* *10:00 – 11:30 Pacific*	**Teaching Interest Group Time** *To facilitate conversations and collaborations around using what you are learning about various technology tools in the Workshop sessions we have organized everyone into Teaching Interest Groups, or TIGs. We did the best we could to match you with others that teach similar courses. However, we expect to need to make some adjustments. The first TIG session will be a brief time to get to know your group and see if you have been matched appropriately. After adjustments have been made, there will be multiple sessions for meeting together. In addition, all TIGs are welcome to use the Open Swim sessions and Discussion Boards for collaboration time as well. ,*

PTMT Workshop Schedule

Wednesday, June 16th

Session 3	**3:30 – 4:30 EST** *2:30 – 3:30 Central* *1:30 – 2:30 Mountain* *12:30 – 1:30 Pacific*	**Utilizing the Activity Builder to Access and Reveal Student Thinking**	**Geogebra: Geometric Probability**	**Exploring Data with Desmos' Statistical Functions**	**CODAP: Probability Modeling**	**Open Swim**
		Participants will be guided through an introduction to the Desmos Activity Builder. Using the dynamic representations built by workshop participants, this exploration will involve building a task through which students engage with these representations and teachers gather responses from students that reveal student thinking.	*In this session, you will explore a number of interesting probability scenarios generated within GeoGebra (e.g., plotting random points along a circle or in a square), then use knowledge of school geometry and algebra to derive theoretical probabilities for various events. During an extended explore phase, you will learn more about tracing points and clearing traces, defining functions and restricting domains, and GeoGebra groups as you uncover a number of surprising connections between algebra, geometry, and probability---ultimately reporting findings and posting questions for further exploration on the GeoGebra Groups blog.*	*In this session you will analyze univariate data by creating graphs (e.g., histogram, boxplot) and using Desmos' descriptive statistics functions (e.g., mean, median, standard deviation). In doing so, you will see the power of the dynamic capabilities to help students to compare and contrast data display and reduction of graphical displays, such as boxplots and histograms. You will then learn how to perform a one-sample and two-sample hypothesis test for the mean in Desmos.*	*In this session you will be introduced to the basics of CODAP including basic functionality, importing data, creating graphs, and saving and sharing files. You will learn these features by engaging in a guided data exploration in CODAP.*	*This room is open for anyone who needs recreational time to play with the technology, practice their learning, or ask for support.*
Closing Session	**4:30 – 5:00 EST**	**Desmos Listening Session**				
		In this session, MTEs will have an opportunity to have an open discussion with Dan Meyer of Desmos about ways Demsos could further support our work with future teachers				

PTMT Workshop Strands	Desmos	Geogebra	CODAP	Special Sessions	Teaching Interest Groups

PTMT Workshop Schedule

Thursday, June 17th

Session	Time	Offerings				
Session 1	**11:00 – 11:30 EST** *10:00 – 10:30 Central* *9:00 – 9:30 Mountain* *8:00 – 8:30 Pacific*	**Introduction to Web Sketchpad** *In this session you will explore the next generation of The Geometers' Sketchpad in this free online environment where you can create, save, and view the work of multiple students at once. Come see what this exciting new platform has to offer!* ,				
Session 2	**11:45 – 1:15 EST** *10:45 – 12:15 Central* *9:45 – 11:15 Mountain* *8:45 – 10:15 Pacific*	**Web Sketchpad: Exploring the Tool Library and Sketch Viewer** *In this session you will explore the next generation of The Geometers' Sketchpad in this free online environment where you can create, save, and view the work of multiple students at once. You will get a chance to create your own sketches and learn how the environment can be customized to meet you and your students' needs.*	**Geogebra: Geometric Probability** *In this session, you will explore a number of interesting probability scenarios generated within GeoGebra (e.g., plotting random points along a circle or in a square), then use knowledge of school geometry and algebra to derive theoretical probabilities for various events. During an extended explore phase, you will learn more about tracing points and clearing traces, defining functions and restricting domains, and GeoGebra groups as you uncover a number of surprising connections between algebra, geometry, and probability---ultimately reporting findings and posting questions for further*	**Utilizing the Activity Builder to Access and Reveal Student Thinking** *Participants will be guided through an introduction to the Desmos Activity Builder. Using the dynamic representations built by workshop participants, this exploration will involve building a task through which students engage with these representations and teachers gather responses from students that reveal student thinking.*	**CODAP: Probability Modeling** *In this session you will be introduced to the basics of CODAP including basic functionality, importing data, creating graphs, and saving and sharing files. You will learn these features by engaging in a guided data exploration in CODAP.*	**Open Swim** *This room is open for anyone who needs recreational time to play with the technology, practice their learning, or ask for support.*

PTMT Workshop Schedule

Thursday, June 17th

			exploration on the GeoGebra Groups blog.			
Session 3	**1:45 - 3:15 EST** *12:45 – 2:15 Central* *11:45 – 1:15 Mountain* *10:45 – 12:15 Pacific*	**Teaching with Technology Curriculum Round Table** *Today we are featuring a collection of NSF funded projects that have developed curriculum materials for various types of courses for preservice secondary mathematics teachers that feature mathematics or statistics action technologies in their work. During the round table sessions you are invited to "drop in" and visit with the various project teams to learn about their curriculum materials, including how to access them for use in your courses. A brief description of each project is included below.*	**Geogebra: Using Simulations to Foster Mathematical Reasoning** *In this session, you will be introduced to the ways that GeoGebra simulations can be utilized to foster mathematical reasoning. You will use animation tools, variables, 2-D and 3-D views, sliders, etc. to create sketches that simulate real world phenomena (e.g., Ferris Wheels).*	**Desmos at the Ready: Building Templates in Activity Builder** *A Desmos lesson template is a framework for a teacher to fill on the spot with whatever content is the topic for the day. Participants will be guided through examples of lesson templates created in Desmos, before building templates of their own. By the end of this session participants will have access to a gallery of Desmos lesson templates. We will be using the graphing calculator tool and the graphing calculator tool, within Activity Builder.*	**CODAP: Designing Data Investigation Activities** *In this session you will learn how to design activities in CODAP. We will discuss design features to support student learning through data investigation activities. Participants will design an activity and leave with the activities produced in the session.*	**Open Swim** *This room is open for anyone who needs recreational time to play with the technology, practice their learning, or ask for support.*
Session 4	**3:30 – 5:00 EST** *2:30 – 4:00 Central* *1:30 – 3:00 Mountain* *12:30 – 2:00 Pacific*	**Utilizing the Activity Builder to Access and Reveal Student Thinking** *Today we are featuring a collection of NSF funded projects that have developed curriculum materials for various types of courses for preservice secondary mathematics teachers that feature mathematics or statistics*	**Geogebra: Exploratory Data Analysis** *In this session you will encounter GeoGebra tools available for displaying and summarizing data sets. Exploring several different contexts, you will discover and share multiple ways to display data, analyze data, and draw conclusions from data. As you*	**Desmos at the Ready: Building Templates in Activity Builder** *A Desmos lesson template is a framework for a teacher to fill on the spot with whatever content is the topic for the day. Participants will be guided through examples of lesson templates created in Desmos, before building*	**CODAP: Designing Data Investigation Activities** *In this session you will learn how to design activities in CODAP. We will discuss design features to support student learning through data investigation activities. Participants will design an activity and leave*	**Open Swim**

PTMT Workshop Schedule

Thursday, June 17th

		action technologies in their work. During the round table sessions you are invited to "drop in" and visit with the various project teams to learn about their curriculum materials, including how to access them for use in your courses. A brief description of each project is included below.	*work in GeoGebra sketches, you will create stem-and-leaf plots, histograms, dotplots, pie charts, box plots, etc, and you will encounter the possibilities of dynamic linking in statistics settings.*	*templates of their own. By the end of this session participants will have access to a gallery of Desmos lesson templates. We will be using the graphing calculator tool and the graphing calculator tool, within Activity Builder.*	*with the activities produced in the session.*	

PTMT Workshop Strands	Desmos	Geogebra	CODAP	Special Sessions	Teaching Interest Groups

PTMT Workshop Schedule

Friday, June 18th

Session	Time	Offerings				
Session 1	**11:00 – 12:00 EST** *10:00 – 11:00 Central* *9:00 – 10:00 Mountain* *8:00 – 9:00 Pacific*	**Teaching Interest Group Time** *In this session you have an opportunity to have small group discussions with your TIG about ways in which you might incorporate the technologies you have been learning about into your instruction.*				
Session 2	**12:30 – 2:00 EST** *11:30 – 1:00 Central* *10:30 – 12:00 Mountain* *9:30 – 11:00 Pacific*	**Exploring Data with Desmos' Statistical Functions** *In this session you will analyze univariate data by creating graphs (e.g., histogram, boxplot) and using Desmos' descriptive statistics functions (e.g., mean, median, standard deviation). In doing so, you will see the power of the dynamic capabilities to help students to compare and contrast data display and reduction of graphical displays, such as boxplots and histograms. You will then learn how to perform a one-sample and two-sample hypothesis test for the mean in Desmos.*	**Geogebra: Using Simulations to Foster Mathematical Reasoning** *In this session, you will be introduced to the ways that GeoGebra simulations can be utilized to foster mathematical reasoning. You will use animation tools, variables, 2-D and 3-D views, sliders, etc. to create sketches that simulate real world phenomena (e.g., Ferris Wheels).*	**Using Activity Builder to Capture Student Data and Provide Feedback** *The feedback that supports student learning informs students about how their thinking relates to the mathematics. In this session participants will expand their expertise in Activity Builder by taking a critical look at existing tasks in order to improve the feedback that is provided within the tasks. We will be using the graphing calculator, geometry, and other prompts within Activity Builder.*	**CODAP: Advanced Features** *In this session will engage you with advanced features of CODAP, such as formulas and plugins. The session will support you to better understand how CODAP supports users to develop innovative data tools in the software, and an overview of how to partner with CODAP in grant funded projects.*	**Open Swim** *This room is open for anyone who needs recreational time to play with the technology, practice their learning, or ask for support.*

PTMT Workshop Schedule

Friday, June 18th

Session	Time Slot	Offerings			
Session 3	**2:30 – 4:00 EST** *1:30 – 3:00 Central* *12:30 – 2:00 Mountain* *11:30 – 1:00 Pacific*	**Geogebra: Exploratory Data Analysis** *In this session you will encounter GeoGebra tools available for displaying and summarizing data sets. Exploring several different contexts, you will discover and share multiple ways to display data, analyze data, and draw conclusions from data. As you work in GeoGebra sketches, you will create stem-and-leaf plots, histograms, dotplots, pie charts, box plots, etc, and you will encounter the possibilities of dynamic linking in statistics settings.*	**Making Your Favorite Task a Desmos Task** *Participants should come to this session with a favorite lesson and be ready to build independently within Activity Builder. Participants will then be guided in their work of enhancing their favorite lesson with Desmos, possibly making it a Desmos task.*	**TUVA: What is it and how can it support K-5 learners?** *In this session you will engage in a statistical investigation designed to engage in exploratory data analysis (EDA) practices in the TUVA Labs environment. Using a large data set, you will learn about the range of data visualizations that TUVA can create as well as the descriptive statistics that can be measured. We will also model and discuss some pedagogical strategies for teaching students with TUVA.*	**Open Swim** *This room is open for anyone who needs recreational time to play with the technology, practice their learning, or ask for support.*
Session 4	**4:15 – 5:00 EST** *3:15 – 4:00 Central* *2:15 – 3:00 Mountain* *1:15 – 2:00 Pacific*	**PTMT Workshop Closing Session** *In this final session we will be sharing plans for supports moving into the fall semester, suggestions for continued collaboration with your TIGs and with the community broadly, and what to expect from the PTMT Workshop team going forward.*			

PTMT Workshop Strands	Desmos	Geogebra	CODAP	Special Sessions	Teaching Interest Groups