



NGSS in a Blended Classroom
A Workshop for Elementary Teachers
Workshop Agenda

Monday, February 1, 2021

Join Zoom Meeting

<https://us02web.zoom.us/j/89067269453?pwd=Qm1QakZJby9ZRitmQm5HZTQ3dDlhZz09>

Meeting ID: 890 6726 9453

Passcode: 395754

Time (HST)	Activities	Resources and Links
3:00pm-4:50pm <i>template/preview</i>	Introduction NGSS in a Blended Model Sustainable Systems Developing and Using Models - Ahupua'a: Sustainable Systems Planning and Carrying Out Investigations Fair Test Mini-Lesson - Kalo: A Living System (Breakout) Resource Adaptation (Breakouts) Share-Out (Teachers) Helpful Links - Crosscutting Concepts - Mini-Lessons - 3D Performance Assessment (grade level) - Phenomena by Standard and Google Doc	Practice Slide Deck Breakout Roles Breakout Slides - Investigations Resources Inquiry Google Slidedeck
4:50pm-5:00pm	Wrapup and Next Steps Q&A	Small Whiteboard Printouts (that Paul put on magnetic blocks) Sheet 1, Sheet 2, Sheet 3, Sheet 4

Breakout Group Roles

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Description: You will be assigned to a breakout group. Your breakout group will work together to explain the phenomenon. All of your work should be organized on your Breakout Google Slides so it can be shared with other breakout groups.

Role	Description
Manager	Make sure all directions are followed. Make sure all voices in the team are heard. Shares the screen in Zoom.
Reporter	Keeps track of group discussions. Summarizes group work to class.
Time Keeper	Takes care of time management.

Breakout Slides

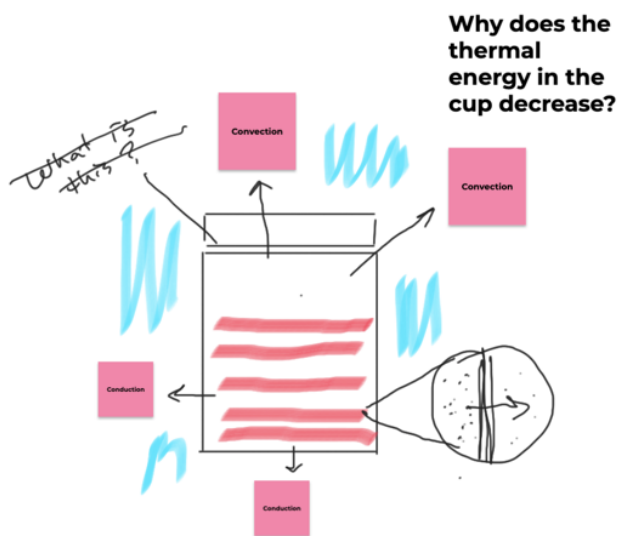
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Coming soon...

MARK Protocol (adapted from Ambitious Science Teaching)

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Original Model



After Investigations and/or Simulations

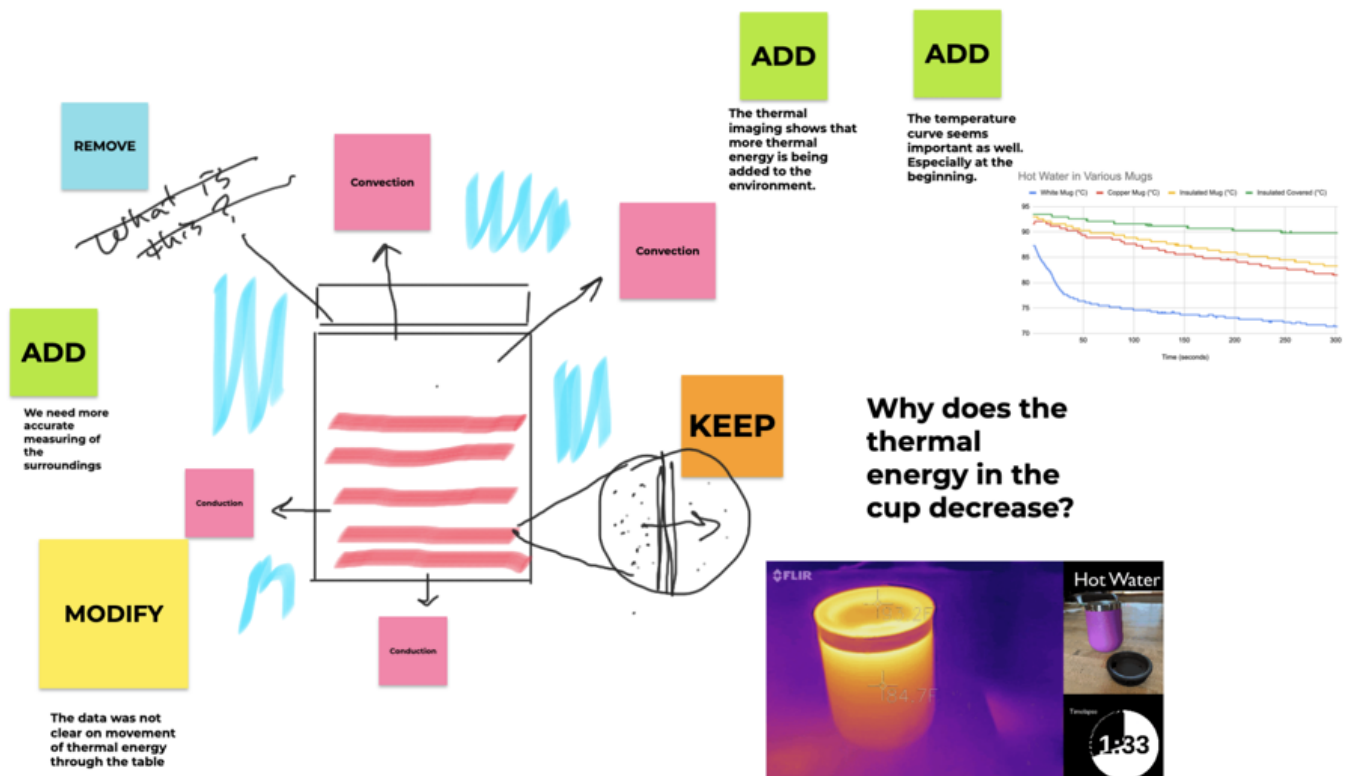
Modify - What elements of your model will you change? Include evidence.

Add - What additional elements will you add to your model? Include evidence.

Remove - What elements will you remove from your model? Include evidence.

Keep - What important elements will you keep? Include evidence.

MARKED Model



Resource List

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Paul's Resources

[My Learning Spot](#) - Sign-up for more Zoom training this summer

[Bozeman Science](#) - Paul's YouTube Channel

Inquiry Cards - [Cards](#) and [Posters](#)

[How I'm Teaching Remotely](#) - Paul's latest video on his methods of teaching remotely

[How I Make My Screencasts](#) - Technology and Software updated for 2020

[The Wonder of Science Resources](#) - Inquiry cards, posters and graphic organizers

[The Wonder of Science Assessments](#) - Performance assessments aligned to all the standards

[Mini Lessons on Concepts and Practices](#) - a work in progress (Fall 2020)

Paul's Hardware and Software

Microphone - [Samson GoMic](#)

Webcam - [Logitech C920](#)

Phone to Document Camera software - [iDocCam](#)

Phone holder - [Tripod](#) and [Cell Phone adapter](#)

Document Camera - [iPevo VZ-R](#)

Computer - iMac

iPad and Apple Pencil

[Sidecar](#) - Allows me to use iPad as an additional monitor

[Deskscribble](#) - Allows me to write on my computer screen (Mac)

Digital Microscope - [Pluggable 250x](#) (I ordered mine on Amazon)

[Sidecar](#) for Mac Catalina - Allows me to use my iPad as a second monitor

[Keynote](#) - Presentation software for Mac (like Powerpoint or Google slides)

[Screenflow 9](#) - Screen recording software (Mac)

[Jamboard](#) - Poster replacement for breakout groups

[Fuzion Digital Portable Scale](#)

Other Resources

[Ambitious Science Teaching](#) - A community with a shared vision of excellence in science education

[AMTA](#) - American Modeling Teachers Association

[ADI](#) - Argument Driven Inquiry

- Peer Review Guides ([Elementary](#)) ([Middle School](#)) ([High School](#))

[Bio Box Project](#) - Mark Peterson's individual boxes to students with experimental material

[CD pencil document camera hack](#)

[Data Nuggets](#) - free classroom activities, co-designed by scientists and teachers.

[Information is Beautiful](#) - Data, information and knowledge

[InsightMaker](#) - Free simulation and modeling in your browser

[Jon Darkow](#) - a collection of computational models for biology and ecology

[Kami](#) - PDF and Document Annotation

[NetLogo](#) - multi-agent programmable modeling environment

[PhET](#) - Fun, interactive, research-based simulations of physical phenomena from the PhET™ project

Java compatible [using CheerPJ](#)

[POGIL](#) - Process Oriented Guided Inquiry Learning

[QFT](#) - Question Formulation Technique

[Skype A Scientist](#) - Connecting scientists with classrooms

[Stanford NGSS Assessment Project](#) - high-quality performance assessments that can support NGSS

[Stella Online](#) - modeling and diagramming capabilities on any web browser

[STEM Teaching Tools](#) - teaching tools for STEM Education

[Uncovering Student Ideas](#) - Page Keeley's prompts for science

Curriculum

[Illinois Storyline Working Group](#) - Working group of educators writing curriculum and giving PD

[Inquiry Hub](#) - A 3-Dimensional high school biology curriculum

[New Visions Science Curriculum](#) - NYSSLS/NGSS-Aligned, Full-Course Materials for High School Science

[Next Generation Science Storylines](#) - strongly aligned NGSS materials in classrooms

[OpenSciEd](#) - High-quality, open-source, full-course science instructional materials

[Stanford NGSS Integrated Curriculum](#) - A middle school integrated science curriculum

[SCALE Curriculum](#) - Integrated, NGSS-designed, project-based curriculum for 6th, 7th, and 8th grades.

Breakout Google Slide Templates

Secondary - Monarch Phenomenon

Elementary - Ecosphere Phenomenon

Jamboard Templates

[Practice Jamboard Template](#)

[Driving Question Board - Crosscutting Concepts](#)

[Driving Question Board - Test Tube Template](#)

[Breakout Jamboard 1 - Test Tube Template](#)