



# Integrating Energy, Equity, and Place in High School Physics

## Introduction

Day 1 | Mon July 24, 2023 | 9-11 PT / 12-2 ET

## Agenda

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## Purpose of this session

In this session we will

- **Meet one another**
- **Share and discuss learning goals for this workshop**
- **Make community agreements for our work together**

## Welcome and Learning and Teaching goals

Facilitator: Tali

Format: Whole Group

Time: 15 minutes

## Logistics

1. Project Team introductions
2. Session Docs posted on Portal
3. Zoom for now; will switch to Gathertown later

## Breakout room groups

<b>Group 1</b> Facilitator: Jim Participants: Jack, Erin, Diane	<b>Group 2</b> Facilitator: Jaime/Rachel Participants: Daniel, Deborah, Mike
<b>Group 3</b> Facilitator: Nora/Rosemary Participants: Kevin, Megan, Golsin	<b>Group 4</b> Facilitator: Heena Participants: Sabrina, Ellen, Rebecca

## Role of breakout room facilitators

Breakout room facilitators will typically have the following roles:

- Video recorder
- Timekeeper
- Manager: keep the group on task, help troubleshoot

Facilitators may or may not have expertise in the material being presented, so they won't be "instructors."

Learning and Teaching Goals
<p><b>1. LEARNING GOALS</b></p> <p>A. POSITIONALITY. Teachers will articulate their own positionality within energy and equity instruction.</p> <p>B. ENERGY VALUES. Teachers will recognize the sociopolitical values embedded in physics concepts related to energy.</p> <p>C. ENERGY IN PLACE. Teachers will connect energy phenomena to their particular location, including its impacts on the land and people in their location.</p> <p>D. ENERGY JUSTICE. Teachers will identify ways to use science/energy expertise in the service of social justice efforts.</p>
<p><b>2. TEACHING GOALS</b></p> <p>A. QUESTIONS. Teachers will have a repertoire of habitual questions that can raise awareness of social justice in any topic, such as: Where/when did this arise? Who is this for / what is its purpose? Who does this affect? Who is left out?</p> <p>B. ACTIVITIES. Teachers will be ready to use a variety of activities with various levels of commitment to integrate equity issues throughout their instruction, and reflect on the outcomes.</p>

### Breakout Room Introductions and Learning Goals Discussions

Facilitator: Tali  
 Format: Breakout Rooms  
 Time: 30 minutes

**Instructions:**

- In your breakout groups, discuss the following prompts:
  - Introduce yourself - Where, what, who do you teach?
  - Discuss learning goals - What excites about these learning and teaching goals? Where do you see yourself within/along the learning goals? What concerns do you have about participating? What isn't clear? What is missing?
  - What needs to be clarified? What questions do you have?
- Post group responses to prompt C in a bullet point below.

<p><b>Group 1</b>            Facilitator: Jim            Participants: Jack, Erin, Diane            Notes:</p> <ul style="list-style-type: none"> <li>• At least one of us doesn't even know what they'll be teaching next year :/</li> <li>• How can energy be woven into place based instruction when students aren't necessarily from the place where their school is?</li> <li>• In other parts of the world there are groups of people who are not considered underserved that are very much considered underserved in the U.S.</li> <li>• Diane - How will I work this into my Conceptual Physics course? I have not taught energy in half the years I've been a Physics instructor (since 2019-2020), and even the years I've "covered" energy, it's been a fairly basic treatment of potential and kinetic energy topics with a very brief discussion of work and power. I'm open to making my curriculum much more relevant/tangible/social justice-focused, and then wonder how I can do that in other units, as well, so this doesn't seem like a stark contrast</li> </ul>	<p><b>Group 2</b>            Facilitator: Jaime/Rachel            Participants: Daniel, Deborah, Mike            Notes:</p> <ul style="list-style-type: none"> <li>• Daniel - What is positionality? - All the different aspects of your social identity and how those impact the teaching and learning of energy and equity.</li> <li>• Deborah - Opportunity to take in the real world (not a given in Texas) - often there are extremely specific directions about what to teach, but in this area there's more expectation to tailor to the unique students &amp; moment.</li> <li>• Deborah - Never thought about connecting energy to <u>equity</u> before.</li> <li>• Deborah - Wanting to add more student discussion to the class and this will support that. Has been very presentational in the past.</li> <li>• Mike - Climate change is urgent and energy is related to that. Used to have that after-AP-exam window, but now needs to work it in all along somehow.</li> <li>• Daniel - does a power plant unit but never thought about the lands the power plant is on before.</li> <li>• Mike - Intrigued as to what energy and equity even means. Is it an SES thing,</li> </ul>
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<p>to the rest of the year.</p> <ul style="list-style-type: none"><li>• Diane - practically speaking, how much time will this take in my curriculum? How will I need to adjust my scope/sequence to do it justice (pun intended - did you catch that, Heena?)</li><li>• Erin - How do I weave this so that I will still meet my state standards?</li><li>• Erin - I may also be teaching chemistry, is there a way that I could teach this from a chemistry lens as well?</li><li>• Jack - How to connect the local energy landscape to a classic physics course?</li><li>• Jack - What exactly is equity and who decides what equity is?</li><li>• Jack - How can I use my expertise to efficiently present physics in a way that would be considered equitable?</li><li>• Jack - With the constraints and time requirements of teaching an advanced physics course AP/IB, how can we manage to incorporate the concepts we will cover here?</li></ul>	<p>or within the schools that we teach, or - Equity is such a big word.</p> <ul style="list-style-type: none"><li>• Mike heard about this on Twitter. Daniel connected through AMTA. Deborah was in Sacramento and saw us there, originally heard us on Facebook.</li><li>• AP vs conceptual physics - conceptual seems like it would be easier bc lacks the time constraints of AP</li><li>•</li><li>•</li><li>•</li><li>•</li></ul>
<p><b>Group 3</b> Facilitator: Nora/Rosemary Participants: Kevin, Megan, Golsin Notes: Goals</p> <ul style="list-style-type: none"><li>• It's hard to weave equity into the topics we teach. Go beyond collaborative lab groups. Weave equity into the content and skills.</li><li>• Learn from people in this workshop who are coming from very different places. Learn from others in different states.</li><li>• Applying equity and science is challenging because of such diverse experiences and needs. How do you meet all students' needs.</li><li>• In the past felt like equity did not apply to physics but am excited to weave social and inequity issues into different parts of the curriculum.</li><li>• Connecting climate change and climate justice to energy. Want to make more connections.</li><li>• Concerns about the community that the school is in is conservative. How do you navigate it?</li></ul> <p>Questions/Clarification</p> <ul style="list-style-type: none"><li>• Will there be examples of applying equity in the classroom?</li><li>• Is there a book that could be used in a co-taught English and Chemistry class?</li></ul>	<p><b>Group 4</b> Facilitator: Heena Participants: Sabrina, Ellen, Rebecca Notes:</p> <ul style="list-style-type: none"><li>• Looking forward to navigating positionality in the science classroom</li><li>• How do we navigate “politics” in the science classroom</li><li>• Incorporating a peer physics class - how do we get everyone’s ideas in the space</li><li>• Interested in how positionality influences how they think about the concepts, and how they present the concepts</li><li>• Excited to learn about the ways in which energy shows up in society and the policies in different countries</li><li>• How do we apply equity to math and science disciplines</li><li>• How do we give students the tools to make decisions about science in their lives</li></ul> <p>Questions</p> <ul style="list-style-type: none"><li>• Logistics - signed up with work e-mail, but using personal email. Needs access to items in the portal</li><li>• The climate is changing - how do we leverage our learnings in this space to find local and sustainable energy solutions</li></ul>

Debrief Breakout Group Learning Goals discussion

Facilitator: Tali  
Format: Whole Group  
Time: 10 minutes

- Notes (Rachel + others):
- Lots of questions about “how do I fit this topic in to a physics class at a specific level, will we see examples of how this can be done?” Yes, lots of examples, at multiple levels.
  - What does equity mean in our contexts? It’s a big concept, and we will provide multiple opportunities for how this will show up in your teaching.
    - Who decides what is equity?
  - What do we mean by positionality? We will support you to reflect your own social identity - how you see yourself and how others see you

- We can all expand our ideas based on the other people’s perspectives in this workshop - encouragement to keep an open mind!
- How do we give students the tools to make decisions about science in their lives?
- People are in different political contexts and that can be a scary or exciting part of doing this work - there will be big and small ways, ways that push boundaries more and less. This can affect whether students have access to materials
- What is equity IN YOUR CONTEXT? This will be an important question.

## Introduction to the Portal

Facilitator: Kara  
Format: Whole Groups  
Time: 15 minutes

Take a few minutes to. . .

1. Explore the Portal <https://www.energyandequity.org/>
2. Update your Profile (click on the icon in the upper righthand corner)
3. Update your preferences (in your profile, see the “change preferences” hyperlink under your icon/photo)
4. Checkout the Workshop page including the Week 1 Schedule tab: [Summer Workshop 2023](#)

## Community agreements

Facilitator: Tali H.  
Format: Discussion  
Time: 45 min

### Instructions

- A. (15 min) Individual Reflection: What do I need to fully engage in the workshop? What is important to me in terms of discussion, disagreements, differences in perspective, etc? Post here [E&E Community Agreements](#)
- B. (15 min) Breakout Session: Develop a set of recommended agreements (write in spaces below).
- C. (15 min) Group Discussion: Finalize the community agreements.

<p><b>Group 1</b> Facilitator: Jim Participants: Jack, Erin, Diane Notes:</p> <ul style="list-style-type: none"><li>● It is appreciated that multiple people posted agreements associated with child care issues (mute, camera off, run away from computer for a bit, etc)</li><li>● It is appreciated that thus far links to session docs, padlets, breakout rooms, etc have been well facilitated</li><li>● The chat has been used thus far in a non-distracting way and that is appreciated thus far</li><li>● Leading with curiosity, giving people grace, allowing people the freedom to speak in “rough draft” form</li><li>● Assume people are coming in with good intentions</li></ul>	<p><b>Group 2</b> Facilitator: Jaime/Rachel Participants: Daniel, Deborah, Mike Notes:</p> <ul style="list-style-type: none"><li>● For the people that need to juggle other responsibilities - Communicate that that’s what you’re doing. If someone says, “I’m listening but I can’t participate right now because I’m in the car,” we have to respect that.<ul style="list-style-type: none"><li>○ <b>Use the coffee cup!!</b></li></ul></li><li>● Mike - No need to take turns in a robotic way. But Daniel likes taking turns because it can make things more equitable.</li><li>● Let’s get to know each other!</li><li>● We think zoom chat is a fun sidebar</li><li>● We’re here for two weeks, we signed on with the best intentions, we can take the time for conversations to develop naturally</li></ul>
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<b>Group 3</b> Facilitator: Nora/Rosemary Participants: Kevin, Megan, Golsin Notes: <ul style="list-style-type: none"><li>• Assume good intentions and attend to harmful impacts.</li><li>• Balancing discussion. Provide space for everyone to speak without one voice dominating the conversation.</li><li>• Being present as much as possible and being empathic to people's outside responsibilities.</li><li>• Empathetic Listening, listening to understand.</li><li>• Acknowledging that not all participants face the same challenges.</li> <li>• Lean into discomfort.</li></ul>	<b>Group 4</b> Facilitator: Heena Participants: Sabrina, Ellen, Rebecca Notes: <ul style="list-style-type: none"><li>• Being flexible with the different logistical needs of participants</li><li>• Take care of ourselves and needs</li><li>• Assume good intentions and attend to possible harmful impacts. Be mindful of how your words can impact others</li><li>• Come with curiosity</li><li>• Making sure everyone who wants to, has an opportunity to speak</li><li>• Create psychological and physical safety in the space</li></ul>
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Proposals

- Assume good intentions and attend to possible harm or other impacts.
- Provide space for others to speak. Take turns speaking and make sure everyone has an opportunity to speak.
- Be a good listener.
- Begin and end on time.
- Acknowledge life is happening and everyone has different needs.
- When you want to be on the call but can't participate because you're picking up your kids or whatever, communicate this. One great option is to use the "I'm away" (coffee cup) reaction in zoom.
- Enable people to catch up when they need to duck out: written instructions in the session doc, check in with Thaseus to know where to go.
  - Be aware that the chat disappears, but the session doc is forever
- Chat: a fun sidebar conversation is okay! If it gets too distracting, we'll revisit this.
- What does it mean to "attend to possible harm or other impacts"?
  - For example, if you use the wrong pronouns, just say "Oh whoops" and use the correct pronouns. Not go into a big explanation of how you aren't used to it or whatever.
  - For another example, if someone tells you they felt hurt or harmed by something, do your best to react with acceptance and curiosity rather than defensiveness, if at all possible.
  - Rather than "calling people out" = "You did a bad thing," call people IN to a curious conversation: "This is how this felt to me, can we talk about this?"
  - [Restorative conversations](#) is a great framework for this kind of thing
- Pronouns: You can choose to have them as part of your zoom name, or not.
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