

<b>Teacher/Video</b>	Mawlawi_473_SEC_L2_C1-C3
<b>Content Area</b>	Sun's Effect on Climate and Seasons
<b>STeLLA Strategy</b>	Strategy F: Make explicit links between science ideas and activities. Strategy H: Highlight key science ideas and focus question throughout Strategy G: Link science ideas to other science ideas
<b>Context</b>	This videoclip shows three different timeframes in a 5th grade classroom. The teacher begins by introducing the focus question for Lesson 2 of 6 in a unit focused on sun's effect on climate and season. She refers to a question posed by a student during previous lesson. In the second clip, the teacher works with a student about a question he has about the influence of day/night. The teacher continues to work with small groups of students to answer the question and then whole group.

### Clip 1

00:00:00	T	All right. So yesterday we started our notes, and our notes were we were starting our second lesson and we had our notes with our first question for our lesson, which was why are places on earth closer to the equator-
00:00:14	T	Sorry, why are places closer to the equator hotter than places further from the equator? All right, and that was kind of like Jesus' question from the day before when he noticed that at six degrees south or six degrees north,
00:00:28	T	it didn't really change from winter to summer, it was just kind of hot all year round, all year long. So we're trying to- it's a very similar question, that's what we're trying to finish up answering today. Okay?
00:00:39	T	So our first step in doing that is we have to finish collecting our data from yesterday. So what you're going to do, you will only have three minutes to get this...

### Clip 2

00:00:55	T	My question is, so when we look at our bar graphs a couple days ago, this is what brought up Jesus' question. Why doesn't it change? All right, January and July, it stays the same.
00:01:08	T	When we're really close to the equator, it's between 75 and 80 degrees no matter what time of the year it is. Why is that? So that's what you're trying to answer.
00:01:19	E	(Inaudible).
00:01:25	SN	It stays the same 'cause it's closer to the equator.

00:01:28 T But why?

00:01:29 S Because the equator gets sunlight direct on it if they're closer to the equator.

00:01:33 T Oh, that was a really nice sentence that just came out of your mouth? Can you have it go down onto your paper now?

00:01:38 S Yes.

00:01:39 T/SN Okay./(Inaudible).

00:01:42 T It doesn't change that much close to the equator when the sun hits the equator. The sun hits the whole earth, so what's special about the equator?

00:01:51 SS It hits it direct on.

00:01:53 T Okay, so can you add that to your sentence?

### Clip 3

00:02:03 T We have enough time for one person to share their answer, so if you think you have the best answer to the question...

00:02:12 SN We didn't write-

00:02:14 T No. All right, so I need everyone's full attention to be on Alicia, please. Anna, shh. I need everyone's full attention to be on Alicia, please. She's going to try and explain why doesn't our temperature by the equator change.

00:02:31 SN (Inaudible) and the equator is in the middle, so even though the world's spinning, it stays the same, it won't- it won't change.

00:02:45 T What's not going to change?

00:02:47 S The temperature, because the equator's going to be between both halves of the world. So it- wherever the earth's spinning, that's where there's so much heat, so it's- it's going to be the same temperature when it's close by.

00:03:05 T Okay. So Alicia's saying that the sun's heat stays the same at the equator. Is there anybody who wants to add on to Alicia's idea? Diego.

00:03:15 SN The equator gets direct sunlight, so- and that means more hot.

00:03:23 T Okay. So because our equator's getting the most direct sunlight, that is making it the hottest, which is why, Jesus, it doesn't really change from July to January. Okay? So you have 30 seconds to pack up your things and be back in your rows, guys.

## Lesson Analysis Protocol [Mawlawi\_473\_SEC\_L2\_C1-C3]

### 1. Identify Lens and Strategy

- Where is there clear evidence of the teacher: making explicit links between science ideas and activities (F); linking science ideas to other science ideas (G); and/or highlighting key science ideas and the Focus Question throughout (H)?

### 2. Analyze the Video

- What do students understand (or not) about the sun's effect on climate and seasons?
- How were strategies F (making explicit links between science ideas and activities), G (linking science ideas to other science ideas), or H (highlighting key science ideas and the Focus Question throughout) used to make student thinking visibly (or not)?

Lesson Analysis Step	To Do	Your Analysis
<b>Claim</b>	Turn an observation, question or judgment into a specific claim that responds to the focus question.	
<b>Evidence</b>	Point to a specific place in the video transcript, lesson plan, or student work that supports your claim. Be sure to use timestamps if your evidence comes from a transcript.	
<b>Reasoning</b>	Connect your claim and evidence with reasoning based on STeLLA Strategies, research on teaching and learning, your teaching experience, or scientific principles.	
<b>Consider Alternatives</b>	Alternatives may include an alternative interpretation of evidence, new questions this clip or analysis might raise, and/or alternative question(s), activity(s) or strategies that might have better supported student learning.	

### 3. Reflect and Apply

What ideas about SC SL H, highlighting key science ideas and the focus question, do you want to keep in mind for your own teaching?



<b>Teacher/Video</b>	SSUP_SEC_TN_GR5_SG1_L1_AmyCharles_C1-C8
<b>Content Area</b>	Sun's Effect on Climate and Seasons
<b>STeLLA Strategy</b>	Strategy F: Make explicit links between science ideas and activities
<b>Context</b>	<p>This is lesson 2 of 6 in the Sun's Effect on Climate unit. In this lesson, the students are analyzing data tables and world maps that shows the average temperatures in January and July. The teacher is supporting students in identifying patterns they notice in the data tables and world maps.</p> <ul style="list-style-type: none"> <li>• Teacher continues to orient students to the lesson.</li> <li>• Students organize their notebook.</li> <li>• Teacher works with several small groups</li> <li>• Teacher continues to work with small group and then transitions to a whole group discussion.</li> <li>• Teacher revisits the focus question as part of her set up for the next activity.</li> </ul>

00:00:02	T	So with this whole unit, and I'm going to direct your attention over to our unit central question on the wall over here.
00:00:11	T	Our whole unit question, just like your essential question for what wisdom is, why are some places on Earth hotter than others at different times of year? So get that back in your mind.
00:00:21	T	And our focus question for this lesson, and we're picking up from last time is, what patterns in temperature can you find on Earth at different times of the year?
00:00:30	T	And last time we met, we looked at patterns, as you all just told me, in the US. And you pointed out some of those patterns, but to really answer the question, we have to look at temperature on Earth, right? We have to go a little bit deeper.
00:00:46	T	So I want you to think about this, 'cause this came up last week. Think about this question last week- the other day. If you lived in a different part of the world, okay, would going south always mean you would get warmer?
00:01:03	T	Don't answer out loud, think for a second. 'Cause it came up when we were talking about this and somebody mentioned that as you go in the south in the US, you get warmer.
00:01:13	T	But if we lived other places on Earth, as we went south, would that still be true? Would it always be warmer as you went south?
00:01:22	SN	No.
00:01:23	T	Oh, don't yell out, I want you to think. I'm even going to hold up a little Earth for you to look at and think about. Other places on Earth, if you went south, would you

always be going- getting warmer?

- 00:01:41 T So you're going to look at- we're going to look at temperatures, average temperatures around the world. So right now, I want you to pull out your scientists- your notebook, your science notebook.
- 00:02:06 T So before we kind of dig into this deeper, we've got to get a little organized and that's what we've been using our notebooks for. I want you to write that focus question down quickly at the top of the first page of your next entry.
- 00:02:17 T This could be your subject or your title that we've talked about with notebooks, okay? Put all those essential things in, and for your subject or your title, let's put the focus question.
- 00:02:34 T Shouldn't take you long. It's right over here and it's also listed here. What patterns in temperature can you find?
- 00:02:47 T Quick, you're writing down in your notebook what patterns- you're writing the focus question down.
- 00:02:54 T When you have that written down, I want you to circle the word "patterns."
- 00:03:05 T That's important, that's what we're going to be looking at today. As scientists, we're going to look at patterns. Organize our data and look at some patterns. Okay?
- 00:03:18 T When you have that done, I want your pencil down looking at me, then I'll- I- I know you're ready to move on, okay? Have that down? Okay.
- 00:03:32 T So as you're starting to look at this map, and we're going to- we're going to fill this in to find out what the temperature is for each one, okay? Where are you going to get that information from?
- 00:03:45 T Where are you going to pull the- the data for the temperature in January for Lagos, Nigeria? Where would you find that at? Come show us up here on the board, Bentley. Come show me. Everybody looking at Bentley as he does this.
- 00:04:00 T He's going to show me where I would find the temperature for Lagos in January.
- 00:04:06 SN It's here.
- 00:04:09 T Yeah, and show me the January temperature. Where would you find it? So there's Lag- yes. So he went- he found Lagos, traced it over to the temperature, right?

Okay.

- 00:04:20 T So, is that understandable? Anybody have any questions about how you're going to find that temperature? Do you know where to find it, Talon? Okay.
- 00:04:27 T So what we're going to do- work on now is you and your partner, okay, are going to work to gather the data and organize the data of the patterns in temperature- or average temperature for the world.
- 00:04:41 T You're going to fill out a January map and a July map. And as you're filling this out and you're putting the temperatures, I think I could- if I were you, I'd just write it on this line, okay? Just write the temperature on the line.
- 00:04:54 T I want you to start noticing some patterns, okay? See if you notice some patterns when you do this. All right. Before I turn you loose, somebody tell me back what you're about to do. What are you about to do? Only one person knows. What?
- 00:05:10 T What are you about to do? Ainsley, tell us what we're about to do.
- 00:05:12 SN We're about to write the temperatures.
- 00:05:15 T Mm-hm.
- 00:05:16 S Write the temperatures on which one we're supposed to write. Like on which...countries.
- 00:05:26 T Tell me- okay. So which countries, so what month are you doing?
- 00:05:30 S July.
- 00:05:31 T July. What month is your partner doing?
- 00:05:32 S Ju- January.
- 00:05:33 T January. And then you guys are going to have to talk together about that to notice patterns, okay? So I'm going to set a timer. Let's- let's do- let's do six minutes and then I'll stop us and see if, you know, if we need any more time. Any questions?
- 00:05:50 T Yes, Ben, a question?
- 00:05:51 SN So we need to put the degrees, the heat on where it is?
- 00:05:57 T Absolutely. Yeah. Okay, go for it.
- 00:06:03 T You're noticing a pattern? So say that to your partner.

00:06:05 SN I no- I noticed that, like, on here, like, it's- there's one at a time from where I started and then it went down. Then it stopped right here, then I noticed that it went back up 'cause it went-

00:06:21 T What's going back up? When you say "it," what are you talking about?

00:06:23 S Like, once it- like, it passed the line, it would, like, it, like, started back at the top.

00:06:28 T What are you- what is "it," though? "It starts back up," what is-

00:06:31 S Like, the temperature.

00:06:32 T The temperature? The- okay, the temperature. So you're saying the temperature did what?

00:06:38 S Like, so as soon as it gets down to right here, it went right back up to up here. But it went to Jakarta and last time it was on Lagos.

00:06:51 T So it- you got to about right here?

00:06:53 S Mm-hm.

00:06:54 T Are you saying the temperature changed? What'd the temperature start doing?

00:06:58 S It- it started to get cooler after here.

00:07:01 T Oh. You might draw a line there or something to show that on there. Huh. Did you see what she noticed? It's pretty interesting, right? Get yours down so that you can notice patterns too.

00:07:12 SN Do we have to-

00:07:16 T You guys both finished?

00:07:17 SN Mm-hm.

00:07:18 T Okay. So what patterns are you noticing?

00:07:20 S I noticed that the temperature- both times the changes- the top is- is changing, like right now-

00:07:32 T What do you- hold on a second. What do you mean by at the top? Do you mean at the top of the data table, at the top of the map? What do you mean?

00:07:39 S At the top of the map.



00:07:40 T So the top of the map up here?

00:07:42 S It's- it's, like, lower numbers and it's going down on January, but on the bottom of the map-

00:07:49 SN It's higher.

00:07:51 SN the- the patterns are going way over.

00:07:54 T So in January, let me see if I get what you're saying. Are you saying that in January, which is your map, it's warmer at the bottom than at the top of the map? But for him, it's warmer at the top than the bottom? Is that what you're saying? Do you agree with that?

00:08:11 SN Mm-hm.

00:08:12 T Okay. So we can kind of can call those hemispheres. The- the top hemisphere, the top Northern Hemisphere and Southern Hemisphere, have you heard it called that before?

00:08:21 S Mm-hm.

00:08:22 T So she's saying the Southern Hemisphere of hers is warmer in January, but in yours-

00:08:28 S It's colder. And hers is warmer.

00:08:30 T Huh. Interesting, isn't it? Hm, see if you notice any other patterns.

00:08:39 T All right, what patterns did you guys notice?

00:08:41 SN I noticed that most of the these temperatures lower in July, which is confusing.

00:08:48 T Yeah, why is that confusing?

00:08:51 S Because July's the middle of summer. And- and January is the middle of winter.

00:08:58 T Are there some areas that aren't confusing, that- that match what you think it should do?

00:09:04 S I mean-

00:09:05 T 'Cause like you said, this one in July, it's-

00:09:09 S/T Cold./It's cold and that doesn't match, but are there some areas that match what

we think should be right for July?

- 00:09:16 S/SN Hm./I noticed that in this one, that's (inaudible).
- 00:09:22 T Mm-hm.
- 00:09:24 S But then it gets a little bit higher, it doubles and goes to 66.
- 00:09:28 T So it gets a little higher on the- on the earth? Goes a little farther north?
- 00:09:33 SN I- I notice a pattern. I notice that the top always has a- wait, never mind. Might as-
- 00:09:46 T You can keep thinking about it. Keep thinking about it.
- 00:09:53 T All right, so once again, let's look back at our focus question, okay? Over here on the wall near- ooh, I'm point- I'm pointing at myself near Talon. What patterns and temperature can you find on Earth at different times of the year?
- 00:10:08 T Did we do that just now? And I walked around and I heard lots of people sharing some patterns, so I'm going to call on a few people. But what I need you to make sure you do is that you're listening to the entire message that our speaker is- is saying, okay?
- 00:10:23 T 'Cause right now, you're pretty into this data and you're finding some really cool things, but I need you to pause for a second and listen to who I call on, because they're going to share some cool things that you might want to maybe even jot down, okay?
- 00:10:37 T All right. Addie, I want you to share out what you notice. I need everybody to kind of track towards Addie, which means looking at her, and I want you to be loud so we can hear you good.
- 00:10:45 SN Can I go up there and show?
- 00:10:56 T I would love for you to come up here and show us, yeah. Come on up.
- 00:10:49 S Okay. So I noticed that all of, like, the countries and the cities, when they're farther away from the equator, they're kind of colder.
- 00:11:02 S But whenever they're close to the equator, they're kind of warmer because I think where the- the earth rotates on the- on the axis, I think?
- 00:11:12 T Mm-hm.
- 00:11:13 S The sun kind of just shines on the middle. It shines all over, but, like, mostly on the middle. And so that's why it shines on the lines, it's closest to the equator.

00:11:26 T Hm. Good- good, yeah. I like Jazmarie's like "Yeah, I agree with that, that is so good." All right. Was that kind of what you were talking about, Ainsley, that you noticed with Levi? Can you add to what she just- okay. Come up too.

00:11:40 T I need Kasen, eyes up here, I need you to- to be really listening, okay?

00:11:44 SN Well, so I noticed, like, that, like, right here through here, it's like- it's like under this line, but right here is, like, above this line- it's like- it's-

00:11:56 T Turn this way so they can see what you're pointing at, 'cause I can see but our friends can't.

00:11:59 S Okay, so, like, right here-

00:12:02 T It'll go away if you just tap. Here you go. That's okay, go ahead.

00:12:06 S Right here, here, and here are under this line right here.

00:12:10 T Okay, so under this line of latitude?

00:12:12 S/T Mm-hm./So below 15, she's saying. Uh-huh.

00:12:16 S Below 15, the Rio de-

00:12:20 SN Janeiro.

00:12:21 T Uh-huh, yeah. Rio, yeah.

00:12:23 SN Rio, it's above 30.

00:12:29 T Okay. So the ones below the 30 are what?

00:12:33 S Are- are, like, really cool.

00:12:35 T Okay.

00:12:36 S So I- I'm going to get this. So I noticed that on here, like, it's under this line right?

00:12:46 T Mm-hm.

00:12:47 S It's at, like, above the- it's abo- under the 30.

00:12:51 T/S Okay./So it- it gets- yeah, it gets cooler.

00:12:54 T She's noticing below the 30, it gets cooler, and above- is that in January or July or all year?

00:13:03 S In July.

00:13:04 T In July? Does that- Ari, that's something you talked about. She said she's noticed below the 30, it's colder in July. You said that's kind of confusing, 'cause that's not- it's not cold in July for us, is it?

00:13:20 T Did you notice anything else in the patterns, Ari, when you were looking at that?

00:13:23 SN I also noticed that it, like, got up to, like, 83 to 69.

00:13:29 T Uh-huh.

00:13:30 S And it went above the line.

00:13:32 T Okay.

00:13:33 S And by the line on this paper-

00:13:37 T Yes, Ben did that too. Ben, can- can you come show us where you drew your line at up here?

## Lesson Analysis Protocol SSUP\_SEC\_TN\_GR5\_SG1\_L1\_AmyCharles\_C1-C8

### 1. Identify Lens and Strategy

- What instances of SCSL F (making explicit links between science ideas and the activity) do you observe in this clip?

### 2. Analyze the Video

- What interesting science ideas are revealed in this clip?
- How does the teacher's use of SCSL F (making explicit links between activities) supports (or does not support) students' development of the content storyline.

Lesson Analysis Step	To Do	Your Analysis
<b>Claim</b>	Turn an observation, question or judgment into a specific claim that responds to the focus question.	
<b>Evidence</b>	Point to a specific place in the video transcript, lesson plan, or student work that supports your claim. Be sure to use timestamps if your evidence comes from a transcript.	
<b>Reasoning</b>	Connect your claim and evidence with reasoning based on STeLLA Strategies, research on teaching and learning, your teaching experience, or scientific principles.	
<b>Consider Alternatives</b>	Alternatives may include an alternative interpretation of evidence, new questions this clip or analysis might raise, and/or alternative question(s), activity(s) or strategies that might have better supported student learning.	

### 3. Reflect and Apply

What ideas about engaging students in [insert STL strategy] do you want to keep in mind for your own teaching?



<b>Teacher/Video</b>	SSUP_SEC_TN_GR5_SG4_L6_RachelCox_C1-C2
<b>Content Area</b>	Sun's Effect on Climate
<b>STeLLA Strategy</b>	Strategy G: Link science ideas to other science ideas Strategy H: Highlight key science ideas and focus question throughout
<b>Context</b>	This is lesson 6 of 6 in the Sun's Effect on Climate and Seasons unit. In this lesson, students review science ideas learned throughout the unit to answer the questions: <i>Why are some places on Earth hotter than others at different times of the year? How can we use what we have learned to answer our Unit Central Question?</i> In this clip, the teacher is shown charting students' recall of science ideas learned that will help them answer a given challenge question.

- 00:00:03    Teacher:    Okay. It's getting there quicker, and we learned it's more concentrated, right?
- 00:00:07    Student:    It's focused.
- 00:00:08    Teacher:    Oh, okay. So, I'm gonna add some words. We could say direct. We could say the sunlight is straight on. We could say it's more concentrated.
- 00:00:19    Student:    Or intense.
- 00:00:20    Teacher:    Oh, or intense. And then, you added that the sunlight travels farther to get to the poles.
- 00:00:36    Student:    Mm-hmm. Yeah.
- 00:00:37    Teacher:    Okay. Is there anything else we learned when we angled our tray all the way back at the poles? What did we notice about the sunlight?
- 00:00:46    Student:    So, we noticed that when we angled the tray, it created an oval.
- 00:00:52    Teacher:    Oh, did anyone else remember that? When we angled the tray back with our flashlight, the sunlight was an oval.
- 00:00:59    Student:    Yeah.
- 00:01:00    Teacher:    Okay. What else do you wanna add on to that?
- 00:01:02    Student:    The oval was much
- 00:01:05    Teacher:    Oh, so the same amount of sunlight covered more space?
- 00:01:08    Student    Yeah.

00:01:09 Teacher: So, the sunlight was more spread out? Okay. The sunlight is more spread out. Does that make it hotter or colder at the poles?

00:01:22 SS: Colder.

00:01:23 Teacher: Okay. At the poles, so it's colder. Let's also think about when we used the hula hoop at the beginning of class, when we used that hula hoop in the earth, um, as our Styrofoam ball, what are some ideas we learned from those investigations in the past two weeks? silence Oh, okay. All right. So, they would need to add some more things to their diagram. They also have this axis going straight up and down. Is the earth straight up and down?

00:01:59 SS: No.

00:02:01 Teacher: Okay. So, they wrote, "Because axis is tilted." Did they show the axis tilted in their drawing?

00:02:11 SS: No.

00:02:12 Teacher: Does the writing help me know why it's warm in Argentina?

00:02:17 SS: No.

00:02:19 Teacher: Okay. What could we do differently to this answer?

00:02:25 Student: We can add more words than just--

00:02:28 Student: We can add more detail.

00:02:29 Teacher: Okay. All right. Could y'all help us out with a better sentence.

00:02:35 Student: Because the earth is tilted towards the sun-

00:02:40 Teacher: Oh, okay.

00:02:42 Student: You know.

00:02:43 Teacher: Oh, okay. So, you're saying we should write in complete sentences.

00:02:46 Student: This is because of the- this is because the earth is tilted towards the sun. (background conversation)

00:03:07 Teacher: All right. Is this a better sentence?

00:03:08 SS: Yep. Yep. Yep.

00:03:10 Teacher: Okay. Did I-- Did my writing tell anything about Argentina or Virginia, and why it's



warm and cold there?

00:03:17 Student: Yes.

00:03:18 Teacher: You see the word Argentina in my answer?

00:03:20 SS: No.

00:03:21 Student: inaudible 00:03:21 Argentina. I think it's number one.

00:03:24 Teacher: So, we don't really know which one they answered because they didn't include details in their writing. Right?

00:03:30 Student: Yes, so we can't really find out-- crosstalk

00:03:31 Teacher: So, we would need more writing than one sentence.

00:03:33 Student: Yes, we need more details.

00:03:34 Teacher: Okay. All right. Let's-let's work on their drawing now. So we know this isn't all the writing you'll need to do. So, this is what they have for their earth. And they wrote earth. Good job. They labelled it.

00:03:45 Student: Yeah.

00:03:45 Teacher: Okay. Um, can someone add the axis? They had it like this. We know that's not accurate. Can someone come at it? Can someone come at it? Oh, all right. All the way in the back. I'm gonna erase this axis.

00:04:02 Student: Is it me and

00:04:05 Teacher: She's all the way in the back. I'm sorry. You're both in the back.

00:04:11 Student: I need you.

00:04:13 Teacher: You can ask the class for help if you want help. Thanks for volunteering to figure it out together.

00:04:18 Student: It's like this.

00:04:19 Student: It's like this.

00:04:20 Teacher: How do we know which way it should be slanted?

00:04:21 SS: The north star. the north star, which is this wall?

00:04:28 Teacher: So tell him what to add.

00:04:29 SS: No, not that way.

00:04:31 Teacher: Come up and add it.

00:04:31 Student: It is this way. It is facing the north star.

00:04:34 Student: It's the north star.

00:04:35 Teacher: Wait. Oh.

00:04:36 Student: That looks like a lollipop.

00:04:37 Teacher: All right. You like that? Will you add the north star over here?

00:04:42 Student: Oh, no, right over there.

00:04:45 Teacher: Just do like a little star. Yeah, that's fine. We get it, and what should we always do to our drawings? What should we add? Thank you.

00:04:55 SS: Label.

00:04:55 Teacher: Labels. So, I'm just gonna write north star. I'm gonna add axis. Okay. So, if the axis doesn't go straight up and down, I know my equator doesn't go straight across, who can show me that it's also tilted? Thanks for volunteering to help us figure out how to draw it's kind of- it's kind of hard to come up here. So, we'll-we'll watch and see if this matches as well. Okay?

00:05:23 Student: Okay.

00:05:24 Teacher: You wanna leave that guess or do you wanna ask? How should we draw the-

00:05:29 Student: The equator

00:05:31 Teacher: Okay, all right. She says she wants to ask. Thank you so much for being willing to come put an idea up. I can tell people who are paying attention because they have something to add to our group. All right, you didn't get to come up the first time, you might have a chance yet.

00:05:46 Student: All right, do I bring in my drawing?

00:05:47 Teacher: So right now we think this is the equator.

00:05:50 Student: No.

00:05:51 Teacher: Okay, erase it and fix it. Good job working together guys.

00:05:56 Student: So, do I just, uh, label it?

00:05:58 Teacher: Where would the equator be? Do you need to ask somebody else?

00:06:01 Student: It would be over here, right now.

00:06:06 Student: Yeah, I don't know.

00:06:07 Teacher: All right, let's have someone else come fig-- Help us figure it out. All right, all right, it's you now.

00:06:11 Student: Okay-okay-okay, let's--

00:06:12 Teacher: He's ready.

00:06:13 Student: Listen.

00:06:14 Teacher: I can tell people who are paying attention 'cause we're trying to figure this out.

00:06:16 Student: Can I erase this part?

00:06:17 Teacher: No, the axis is correct.

00:06:18 Student: Okay. Now, listen, the equator does not go down, okay, it goes sideways.

00:06:23 Student: It goes sideways.

00:06:24 Teacher: Oh.

00:06:25 Student: So listen, listen.

00:06:28 Teacher: Give me a thumbs up if you agree with that equator.

00:06:34 Student: No, no.

00:06:35 Student: Good job.

00:06:36 Teacher: You know, I agree. I agree with that. All right, so I'm gonna label it, the equator does go side to side like this.

00:06:46 Teacher: So, should I label that?

00:06:48 SS: Yes.

00:06:48 Teacher: This is correct.

00:06:49 Student: Equator, that's why- that's why we didn't know that.

00:06:51 Teacher: Okay, do I still have anything on my drawing to show why it's getting warm in Richmond, Virginia?

00:07:00 Student: The star.

00:07:01 Teacher: Okay. So, I'm gonna need to add other things to my drawing like the sun, and maybe something about the sunrise being more direct like I see up there, okay. Do you guys think that you can do a better-better work than this?

00:07:15 SS: Yeah.

00:07:16 Teacher: Okay, all right.

00:07:18 Student: draw that or was that a--

00:07:19 Student: You have-- I-I made that up.

00:07:23 Teacher: You have three minutes to decide with your partner what your answer is, then we're gonna have to silently write and draw about it by ourselves, so use your three minutes wisely. On your mark, get set, figure out the answer, go.

## Lesson Analysis Protocol [SSUP\_SEC\_TN\_GR5\_L6\_RCox\_C1-2]

### 1. Identify Lens and Strategy

- What instances of Strategy 6, engage students in using content representation and models, can you identify?

### 2. Analyze the Video

- What do students understand (or not) about why some places on Earth are hotter than others at different times of the year?
- How did students' and/or teacher's use a content representation or model reveal, support or challenge their thinking?

Lesson Analysis Step	To Do	Your Analysis
<b>Claim</b>	Turn an observation, question or judgment into a specific claim that responds to the focus question.	
<b>Evidence</b>	Point to a specific place in the video transcript, lesson plan, or student work that supports your claim. Be sure to use timestamps if your evidence comes from a transcript.	
<b>Reasoning</b>	Connect your claim and evidence with reasoning based on STELLA Strategies, research on teaching and learning, your teaching experience, or scientific principles.	
<b>Consider Alternatives</b>	Alternatives may include an alternative interpretation of evidence, new questions this clip or analysis might raise, and/or alternative question(s), activity(s) or strategies that might have better supported student learning.	

### 3. Reflect and Apply

What ideas about engaging students in using content representation and models do you want to keep in mind for your own teaching?



