

Transcript for Video Clip 5.2

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Content area:	The Sun's effect on climate
STeLLA strategy:	Identify one main learning goal (SCSL strategy A).
Context:	In this lesson on the Sun's effect on climate, students are exploring the impact of elevation and proximity to water on the average temperature of cities at the same latitude.

Video Clip 2

Time Code	Speaker	Discussion
0:00:00.9	T	... measurements.
0:00:01.4	SN	Because water cools down slower and heats up faster.
0:00:04.6	SN	Yeah, it's already dropping.
0:00:06.4	T	All right.
0:00:06.8	SN	81.3 and [inaudible].
0:00:07.7	SN	And so I think that ...
0:00:09.3	SN	Holy ... Did you see how fast that one's dropping?
0:00:09.9	SN	it'll ... this one will decrease its temperature faster ...
0:00:13.4	SN	It's [inaudible].
0:00:14.1	SN	and this one will ...
0:00:16.0	SN	81.1.
0:00:16.5	SN	it ... it'll take longer.
0:00:17.6	SN	Holy...
0:00:17.9	T	And if that is true ...
0:00:18.5	SN	And this one's 71 ... 72.
0:00:19.7	T	then would that have an impact on the land near the water? Like San Francisco?
0:00:25.6	SN	Yes.
0:00:26.2	T	If it ... if it ... if it heats ...
0:00:29.2	SN	It's already at 80.8.
0:00:30.0	T	more slowly and cools more slowly, the large body of water, would that impact San Francisco's weather and climate?
0:00:34.9	SN	Wow.
0:00:35.0	SN	Sixty now.
0:00:36.4	SN	Time. It's been 1 minute.
0:00:38.3	T	We'll talk about that.

0:00:40.0	SN	My idea is ...
0:00:40.6	SN	We're noticing how this ... it's cooling ... it's cooling faster, because it used to be at 81.9. Now it's all the way at 81... 80.2.
0:00:49.0	T	OK. What are we seeing with the heating ... with the heating rates?
0:00:52.9	S	That ...
0:00:53.2	SN	That the soil is ...
0:00:54.2	SN	The soil is heating up.
0:00:54.4	SN	The soil heats faster.
0:00:56.2	T	Is it ... is it clearly ... is it clearly obvious?
0:00:59.1	SS	Yes.
0:00:59.6	T	And that's a real question, I want ...
0:01:00.4	SN	It clearly is.
0:01:01.2	T	It's clearly obvious?
0:01:02.3	SN	Yes.
0:01:02.6	SN	The water takes longer at first ...
0:01:02.9	SN	The water increased and then it ...
0:01:04.3	S	was 60 ... 60 ... 67.5. Then the soil was 68 ... 68 degrees. But then it went to 75.6; then the water, 69.3. And then the soil had gone up, and so it was at ...
0:01:22.3	T	What ... what is your ... what are your 9-minute readings?
0:01:24.7	S	Um ...
0:01:25.7	SN	Nine-minute ...
0:01:25.9	SN	Water is 72 degrees Fahrenheit.
0:01:28.3	T	OK. And ...
0:01:28.9	S	And then ...
0:01:29.3	T	So soil?
0:01:29.4	SN	Soil is ...
0:01:30.3	SN	81.9.
0:01:31.2	T	So that is what? What's that ...
0:01:33.2	SN	Two minutes.
0:01:33.6	T	diff ... What's that range?
0:01:34.3	SN	That's about ...
0:01:36.4	SS	9.8 degrees.
0:01:37.5	T	OK, so 10 ... about 10 degrees?
0:01:39.9	SN	About 10 degrees.

0:01:40.0	SN	Yeah, around.
0:01:40.7	T	Would you ... would you call that significant?
0:01:42.3	SN	Well ...
0:01:42.6	SN	Yes.
0:01:43.1	SN	From the 6-minute ... from the 6-minute, that had gone up because it was 81.3 ...
0:01:47.6	SN	This one is still cool.
0:01:48.1	SN	and so it went up ...
0:01:48.4	SN	This one's still ...
0:01:49.2	SN	to the 9-minute from 89.9.
0:01:49.8	SN	This one's still about where it was. This one's, like ...
0:01:52.6	T	OK.
0:01:52.8	SN	Oh my God!
0:01:53.2	T	So does that tell us something?
0:01:54.6	SS	Yes.
0:01:54.9	T	It ... it's ...
0:01:55.4	SN	Yeah.
0:01:55.6	SN	It's going decimal one, decimal zero, decimal one ...
0:01:57.6	T	All right, so it's fluctuating ...
0:01:59.1	S	Yeah.
0:01:59.5	T	a 10th of a degree?
0:02:00.8	SN	Are you keeping an eye on ...
0:02:01.2	SN	Yeah, and then ...
0:02:02.3	T	So what ...
0:02:02.6	S	the soil is already in the 70s ...
0:02:03.2	SN	Thirty seconds.
0:02:04.3	SN	from the 80s.
0:02:05.0	T	OK. So what are we seeing right here with these [inaudible]?
0:02:07.6	SN	That the soil ...
0:02:09.4	SN	The soil is decreasing faster than the water ...
0:02:11.8	SN	And it ...
0:02:12.2	SN	And it's rising. It's rising faster and decreasing faster.
0:02:14.9	T	OK.
0:02:15.9	SS	And the water ...
0:02:16.9	SN	is maintaining-

0:02:17.1	SN	is rising slower ...
0:02:18.5	T	Say ... say that.
0:02:19.4	SN	Maintaining its temperature, almost.
0:02:21.6	T	Nice. OK, so can we ... Can we relate that back to yesterday's graph? Those graph lines, yes?
0:02:27.4	SS	Yes.
0:02:28.7	SN	Set.
0:02:29.2	SN	How Colorado Springs ...
0:02:29.7	T	Colorado Springs and St. Louis ...
0:02:30.3	SN	Ready ... ready, guys?
0:02:31.1	SN	Yeah.
0:02:31.7	T	and San Francisco.
0:02:32.6	SN	Go!
0:02:33.1	SS	72.1.
0:02:34.2	T	All right. Excellent discussion.
0:02:36.1	SN	2.3! Holy cow, that ...