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| **Clip name** | Study Group Analysis of Classroom Video (Belcastro: WC L2 – C2) |
| **Grade/Content** | 5th Grade Teachers: Matter, Molecules, and the Water Cycle |
| **Context** | The teachers in this video are members of a STeLLA study group and are meeting for the last time to analyze a post-video of one of their members. After watching the video, pairs of teachers shared their claims, evidence, reasoning, and alternatives with one another. They were asked to identify STeLLA Strategies and analyze the teacher’s use of the strategies to make student thinking visible and help students construct a science content storyline around ideas focused on the main learning goals of lesson 2.The main learning goal for Lesson 1 is:  Water exists in three states of matter—solid, liquid, and gas—and water undergoes changes of state that can be observed. For example, when liquid water is heated it changes into the gas state (water vapor) that is not visible. This process is called evaporation.The main learning goal for this Lesson 2 is: Water exists in three states of matter—solid, liquid, and gas—and water undergoes changes of state that can be observed. For example, when water vapor that is not visible in the air is cooled, it changes into the liquid state through a process called condensation. |

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| 00:00 | Angela | 1 | So my claim was that there's the missed opportunity when the student at 3:46 is talking about evaporation but it's not really evaporation and there's some type of effect with the water. |
| 00:14 | Angela | 2 | And when the student uses the word “evapor- evaporate,” when she's trying to make the connection of water on the outside of the glass, |
| 00:24 | Angela | 3 | I was thinking, if the teacher could have her explain evaporation and the process of evaporation, then that would lead the student hopefully to Strategy G,  |
| 00:36 | Angela | 4 | which is link science ideas to other science ideas, so if she really grasps and can explain why evaporation happens from the day before,  |
| 00:45 | Angela | 5 | then maybe that will lead her to think, “Oh, condensation's the opposite because we just reversed it.” |
| 00:52 | Angela | 6 | And that puts it on the student then to use Strategy H, which is highlight key science ideas and the focus question throughout. |
| 01:02 | Angela | 7 | So kind of working with G and H together, if she had probed and asked her to talk about evaporation more. |
| 01:12 | PDL: Jody | 8 | And why is that important? |
| 01:13 | Angela | 9 | Because instead of just using some vocabulary, it would show the true understanding and build that storyline for her and the people around her too, |
| 01:26 | Angela | 10 | because even when were debating what humidity feels like or not, we did that ourselves because we do understand evaporation and condensation. |
| 01:36 | Angela | 11 | So we were ma- linking those ideas to come up with our conclusion, so if she really understood that, she could probably link those herself. |
| 01:49 | Khlang | 12 | I want to piggyback off of that one, with the making connections by synthesizing and summarizing key science ideas. |
| 01:56 | Khlang | 13 | So at the point where the student brings up the temperature and then you say that timestamp about- it has something to do with- with the ice making it colder, and that's at timestamp 4:19. |
| 02:10 | Amy | 14 | Mm-hm. |
| 02:11 | Khlang | 15 | And then at that point, a student says, “Vapor?” And you say, “Oh, what about vapor?” And then you proceed to talk about- Gunnar put a good vocabulary word out there. |
| 02:22 | Khlang | 16 | And it kind of moves away from temperature and it goes back to vapor playing a really important role. |
| 02:27 | Amy | 17 | Mm-hm. |
| 02:28 | Khlang | 18 | So I think just making that link between the science ideas and if they could formulate for themselves, then, as we were talking to synthesize that piece- |
| 02:36 | Amy | 19 | Mm-hm. |
| 02:37 | Khlang | 20 | You know, because it was brought up, but then once the water vapor piece came up, it kind of went back to water vapor and then the whole temperature piece kind of went to the back. |
| 02:47 | Amy | 21 | Mm-hm. |
| 02:48 | Angela | 22 | It's almost like she could've said, “What do temperature and water vapor-” |
| 02:51 | Khlang | 23 | Yes. Link those science ideas, yeah. |
| 02:52 | Angela | 24 | “have to do with”- mm-hm. |
| 02:54 | Amy | 25 | Or how temperature and water vapor- I mean, the student used the word “react,” like what- what's happening with temperature and water vapor? |
| 03:05 | Angela | 26 | How could temperature affect or…? |
| 03:07 | Amy | 27 | Like, bring in the idea of water vapor, but continue the idea of temperature as playing a role. |
| 03:14 | Khlang | 28 | Because I think you did a very good job of highlighting the key science idea of water vapor. |
| 03:19 | Amy/Khlang | 29 | Mm-hm. / But the temperature one almost got dismissed a little bit. |
| 03:22 | Angela | 30 | Mm-hm. I didn't even notice that the first couple times I watched it, so analyzing it is like, “Oh. Definitely wouldn't have-” |
| 03:29 | Amy | 31 | Yeah. |
| 03:30 | Several | 32 | Right. |
| 03:31 | Amy | 33 | Like, if that's what they're supposed to be able to explain, you need both parts within there. |
| 03:33 | Khlang | 34 | Parts, right. |
| 03:35 | Angela | 35 | It's almost like it should've been a buzzword, like “What'd you say? Temperature? Huh?” |
| 03:38 | Amy | 36 | Yeah, exactly. Like, you need a checklist of those, like-  |
| 03:40 | Angela | 37 | Yeah. |
| 03:41 | Amy | 38 | “these- if this is the perfect response at the end, every time I hear a word, I can emphasize all of those.” |
| 03:44 | Angela | 39 | Mm-hm. |
| 03:46 | Amy | 40 | Yeah. “Now you say your word. Now you say your word.” |
| 03:49 | Angela | 41 | Yeah. |
| 03:50 | Amy | 42 | “Go. Combine them.” |
| 03:51 | Tami | 43 | Well, that's kind of where I was going on that at 4:03.9. Where the student was- you know, disregard the thing about the fog,  |
| 04:02 | Tami | 44 | but where they made the connection, maybe that's why this doesn't have water on the outside, 'cause it's room temperature. |
| 04:08 | Amy/Tami | 45 | Mm-hm. / And again, it's back to that temperature, and I think that student was so close, so close to getting the whole idea because everything had been going on with the ice. |
| 04:20 | Amy | 46 | Mm-hm. |
| 04:21 | Tami | 47 | And the condensation in the cup, that actual word, the wetness on the cold one.  |
| 04:29 | Tami | 48 | But now this didn't- kind of taking it back to “Well, look at this one, it doesn't have it because it's room temperature.” |
| 04:38 | Tami | 49 | And I think that was almost a missed opportunity. Kind of what you're saying is “Well, that opposite thing?” |
| 04:44 | Amy | 50 | Mm-hm. |
| 04:45 | Tami | 51 | You know? So I think that would've been so close to making that explicit link, Strategy F between the science ideas and the activity, |
| 04:58 | Tami | 52 | That, “Yeah, we're looking at this neat thing with this water condensing on the outside, but this other glass is still just as important…” |
| 05:07 | Amy/Tami | 53 | Mm-hm. / “…because of- of the temperature.” |