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|  | SGA-315: Teaching Portfolio |

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| **Name:** | Kyle Coapman | | **Date & Time of Filming:** | November 25, 2019 |
| **School:** | NSA WPHS | | **Grade / Subject:** | 12th/AP Calculus BC |
| **Lesson Objective(s):** | | SWBAT synthesize understanding of Differential Equations by completing a silent chalk talk and then reflecting on the process. | | |

**Directions**: Film 15-30 minutes of uncut instruction that represents you at your teaching best! Your instruction in this video should showcase your biggest learnings across your two years at Relay. In planning your instruction, you should proactively plan to demonstrate teaching techniques or mindsets from your strongest module from each four Elements of Effective Instruction (Teaching Cycle, Self and Other People, Classroom Culture, Content). Then, you will watch your classroom footage and annotate the salient moments in the video related to your selected modules.

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| ***Strongest Module Annotations*** |  |

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| **Relay GSE Element** | **Video Timestamp** | **Strongest Module & Instructional Strategy from module (if applicable)** | **Reflection:**  Why is this your strongest module within this element?  How is your expertise in this module demonstrated in this video?  How did what you learned in this module impact or change your teaching practice in general?  How did what you learned in this module impact your student outcomes?   * How would you do this differently in a future lesson? (if applicable) |
| **Self and Other People (SOP)** | **Checking in with Students**  8:30 – 9:30  **Shout out**  10:05 – 10:25  **Pushing Students**  10:45 – 12:45  **Individual Goals**  14:10 – 14:30 | **SGA-301:**  Student Relationships | Student relationship have become a core element to my success as a teacher and is my strongest aspect in the SOP domain. This is my strongest element because through these relationships I can understand each student’s personal goals, orientation towards school, and what they are personally managing outside of school (i.e. jobs, sports, family commitments). This allows me to support students AND push them to the next level.  In this clip, I am **checking in with** Saharah during independent practice. I could tell that she was frustrated earlier in the lesson and I wanted to support so she could be successful later in the lesson. Then during a *Stretch It*, I am **pushing** Nakeba using positive framing so that she sticks with it and finds success with the step size. This moment with Nakeba and Saharah would not be possible without an established positive relationship. In addition to these two micro moments, I have implemented shout outs when appropriate to cultivate relationships between students. I also ask students to set their own goals at the beginning of the quarter. I show these at the beginning of class so that students can keep these in mind throughout the quarter.  The learning from this module in SGA-301 has pushed me to front load relationship building at the beginning of the year so that I can create moments of support and challenge that are seen here. Previously, I had just hoped that these relationships developed throughout the year. In future classes, I would like to create a stronger relationship between students, parents, and myself to work together at the beginning of the year. I think the best way to accomplish this would be through either a Zoom call with the student/parent or an in-person meeting with the student/parent. In this conference, I would focus on understanding the student’s performance in their previous math class and their personal and academic goals for this year. |
| **Classroom Culture (CC)** | **Wait Time**  1:20 – 2:10  10:40 – 10:45  11:15 – 11:24  **Everybody Writes:**  6:55 – 8:55  **Cold Call:**  2:50 – 3:00  5:10 – 5:20  5:45 – 5:50  5:58 – 6:03  12:55 – 13:00  **Call and Response:**  10:10 – 10:20 | **SGA-301:**  Engaging Everybody | Engagement techniques are essential to delivering an equitable education to all students. I have heard about each of these techniques in previous years of teaching, but RELAY empowered me to internalize these moves at an unconscious level. Specifically, engaging everybody includes Wait Time, Cold Call, Call and Response, Turn and Talk, and Everybody Writes.  Throughout the video, I provide wait time for the entire class or individual students to think about their responses. After we have discussed interpreting the prompt, I find switch to an everybody writes so that all students have a moment to work through the computations. Throughout the video, I am using cold call for specific purposes. I cold call Jayda and Saharah to make sure they understand how to write the differential equation from the prompt. I cold call on Jorge to make sure he can articulate the key points of the discussion. I cold call Prashanti because she rarely raises her hand, but I want to hear her input, so I know she is on the right track. I use a tiny call and response her as well for the shout out to celebrate Rachel and Jerelyn’s collaboration.  Prior to formally learning these moves at RELAY, I did not know much of the rationale behind these moves. I was simply using them to use them. Through this module and practicing these techniques, I have learned that these moves create equitable learning experiences for all learners. Some students need time to write (Everybody Writes) and others need to talk it our (Turn and Talk). The power of these moves is truly actualized when an instructor integrates them in a lesson. Every learner is unique, and consistently executing these moves consistently opens pathways for students access higher levels of rigor. This has allowed my more reserved students the courage to speak to the whole class after they have written and shared with a partner. For my more outgoing students, they are able to show their excitement in response to during a Call and Response or after a batch of cold calls.  From examination of this clip, I missed opportunities for turn and talks at key moments in the lesson. A turn and talk would have been effective after the poll and after the everybody writes portion. This would allow all students to verbalize their thinking before we shift to the group discussion. In the future, to integrate these as pillars of my classroom, I would like to share my rational for each of these moves with my students formally at the beginning of the year. This would a) allow students to understand my pedagogy further (and buy in) and b) empower students to learn more about themselves. The long-term effect of this might be as student asking, “Mr. Coapman can we have some time to write about this before we share out, that is a deep question.” This would indicate a collective ownership over the classroom learning experience. |
| **Teaching Cycle**  **(TC)** | **Take a Stand**  2:10 – 4:30  **Stretch It**  5:45 – 6:45  10:45 – 12:45  **Chalk Talk: Rollout**  14:30 – 17:30  **Chalk Talk: In Action**  17:30 – 30:00 | **SGA-304:** Implementing Rigorous Instruction | Implementing rigorous instruction provides a tool kit of skills for teachers to level up the rigor of their instruction. The core of this thinking is the concept of ratio – “How do I push my students to do more of the thinking and talking?” The more concrete techniques in this space include Take a Stand and Stretch It is which can be incorporated anywhere in the lesson. Reciprocal Teaching and Chalk Talk are more formal structures for increasing the rigor.  I implement a poll and immediately follow with take a stand to multiple students. This pushes students to justify their response in their own words without validation from me as the teacher. The students also need to listen to each other so that they can defend or change their perspective. There are then two moments where I push students with a stretch it. During the first section, I push Jayda and Saharah to apply the content in a new context. In the second section, I challenge Nakeba to apply her understanding to multiple different situations. I build on this with a clear What to Do directions, an exemplar, and a CFU for a chalk talk. Screenshots of the posters can be found at the end of this document.  Before formally learning these techniques, the rigor of my questioning was low. I would ask CFU’s that were mainly procedural and just *revoices* of exactly what another student had already said. I have learned that Take a Stand and Stretch It are moves where students really level up their understanding. Take a Stand pushes students to become the experts by explaining their reasoning in their own words. Stretch it challenges students to think about a different situation and make their underlying understanding more robust.  In the future, I would like to push Take a Stand and Stretch it to another level by facilitating Mathematical Presentations (similar to a Master’s Defense). Students would work on an ambiguous and risky task throughout the quarter. At the end of the quarter, each student would have their expert moment where they explain how they *stretched* their project and *take a stand* as their peers ask questions to challenge their thinking. |
| **Content** | **Specialize**  5:45 – 6:45  11:15 – 12:45  **Strengthen/Weaken Conclusion**  10:50 – 11:15  **Generalize**  12:45 – 13:05 | **MATH-305:**  Generative Moves | Generative moves have been a key lever for developing my student’s ability to think flexibly. I think this is one of my strongest math content skills because it can be implementing in micro moments of a lesson and have a huge impact for the time that it takes to implement them.  In this lesson, I combine *specialize* with stretch it with both Jayda and Saharah so that they can think flexibly about how to interpret differential equations given verbally. Then, there is a similar moment where I do this with Nakeba by tweaking the number of steps given for Euler’s method. I continue with Nakeba by pushing her to strengthen/weaken a previously held conclusion and reflecting on her thinking. Towards the end of this review, I ask a generalize question regarding the connection between number of steps and accuracy. This challenges students to step out of the specifics and think flexibly about general rules.  Prior to learning Generative moves, most of my questions were inflexible. I would simply ask students question about the single case/problem that we were focused on. Generative moves have been impactful in my classroom for developing flexibly thinking but also curiosity in my students. This flexible thinking is crucial for both succeeding in college STEM courses and for applying math in a wider range of contexts. Also, by considering multiple different specific cases and generalizing ideas, students are developing their curiosity for solving problems in and outside of the math classroom.  To develop this skill set further, I commit to formally scripting these questions to make them more effective. Additionally, I will provide all students the chance to answer these questions through *timing the name* and *wait time.* The video shows me asking individual students these questions, rather than asking the entire group. This would improve ratio for engaging with these critical questions. |

**Chalk Talk Posters:**





