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Leadership Professional Development Proposal: Spring 2022

For my PD proposal, I am choosing a blend of options 1 and 2: Professional Development with Content and Pedagogical focus. I will be creating a professional development titled ***Engaging Literacy and Discourse with the 5E's***. The focus of this PD will be to give an overview of the 5E unit plan model as well as integrating literacy and discourse resources. I chose this topic because I believe the 5E template allows for more purposeful student engagement than other unit plan templates do. Also, in a discussion I had recently with Dr. Christine Christianson, the Director of Teacher Education and Associate Professor of Teacher Education at Ferrum College, shared that in her observations of pre-service teachers completing their student teaching, she was not seeing a lot of hands-on, engaging activities and instead was seeing more of the “sit-listen-complete.” With this, teachers give information, students are expected to retain the information and then complete a worksheet focused on the topic. I asked her if she had ever used the 5E model with students and learned that she wasn't familiar with this at all. For these reasons, I chose to work with Ferrum College and pre-service teachers on developing engaging, integrated unit plans.

The PD I am proposing integrates NASA assets and Endeavor content. Throughout the Endeavor courses, lesson and unit plans have been created in the 5E format. All plans were developed around engagement, exploring, explaining, elaborating, and evaluating. The 5E unit plan incorporated other necessary elements of lesson design such as phenomena, student-centered classrooms, and real-world connections. Beyond NASA assets and Endeavor content, this PD would help meet the requirements of multiple Virginia State Standards (see Appendix A). In addition to the 5E format, I will be utilizing information from the course “Literacy and Discourse in the Science Classroom”. I have chosen to use materials such as the article titled “*Arguing History: SSSSTeaching historical scientific controversies to engage students in discourse and the nature of science*” (Clary, 2013). Presenting articles such as this one can help prepare pre-service teachers for authentic discourse using integration. With the class being a combined science and social studies method course, I believe using resources like this would help cement the connection between the PD and the class content.

Pre-service teachers enrolled in Ryan Bates' “Science and Social Studies Methods” course at Ferrum College will be the participants in my PD. Students in this class are required to write an integrated unit plan. I selected this topic because of conversations I have had with Dr. Christianson, as referenced previously. In addition, I chose pre-service teachers at Ferrum College as my audience because I have noticed over the past few years of working with first-year teachers from their program that their graduates often have difficulty with writing student-centered lesson plans and instead write plans that are more focused on what the teacher will do. I am also modeling proficiency based education for our county and believe that the 5E plan is necessary for proper implementation of a true proficiency based classroom. It is also my goal to help ease the transition from graduates to first year teachers in the county in which I work.

The outcomes for *Engaging Literacy and Discourse with the 5E's* are to integrate engaging literacy and discourse within the science classroom, facilitate use of the 5E unit plan template, and to identify, use, and understand the components of the 5E plan in order to maximize student engagement. Participants will be expected to write a draft of an integrated 5E Unit plan of their content and grade level choice. It will be expected that students watch and participate in a minimum of two virtual sessions and two in person sessions. Pre-service teachers will walk away from this course being able to compare and contrast lesson plan formats as well as be able to plan for the student-centered classroom.

A larger outcome that I am hoping to achieve with this PD is to have Ferrum College begin to utilize and implement the 5E plan and STEM education. Conversations have already been had about a possibility so having this course demonstrate the benefits and impacts of the 5E plan may be the determining factor for future use.

Prior to the first virtual session participants will be asked to complete a pre-learning survey. This survey will ask for participants to rate themselves for understanding and knowledge of the components of the 5E unit plan. They will be asked to describe what they believe an effective lesson plan looks like and justify each part. Last, they will be asked to identify what their beliefs are in relation to literacy and discourse in the science classroom. There will be a section for participants to ask questions they have before going into the PD. These questions will help me determine the learning path for the participants.

Then, halfway through the PD, students will be given the same learning survey. Their answers will be compared to the pre-learning survey to gauge how their thinking has changed at this point. Again, participants will have the opportunity to ask questions about things they are wondering or still don't understand. At this point of the PD, the questions they ask will be used as a formative assessment to determine how well I have engaged participants in the 5E components and what may need to be redirected as we move forward.

Finally, at the end of the PD, participants will be asked to complete the survey a final time. This will be compared to their first two responses to determine how they have grown and their thinking has changed. On this survey, a section will be added for participants to rate the effectiveness of the PD in relation to the 5E's. I will also ask participants to rate the PD session itself based on authenticity, level of impact, and level of engagement.

Our semester with the Endeavor program will end before Ferrum College's semester does. It has already been agreed upon that I will continue to work with the participants throughout the remainder of their semester to serve as a mentor for writing the 5E plan. I will schedule times to meet with both participants, Dr. Christianson, and Mr. Bates. Participants will be given my contact information and asked to reach out at any time they need help or ideas with the 5E plan. I also plan to follow up with each participant beyond the semester if they indicate they would like further support.

Appendix A

The planned PD will help meet state requirements at multiple grade levels and content areas as seen in the 2018 Virginia Science Standards of Learning and the 2017 Virginia English Standards of Learning. However, the PD is not limited to these areas, the list below is a sample referenced from the 5th grade.

5th Grade Science Standards:

- 5.1 The student will demonstrate an understanding of scientific and engineering practices by
- a) asking questions and defining problems
 - b) planning and carrying out investigations
 - c) interpreting, analyzing, and evaluating data
 - d) constructing and critiquing conclusions and explanations
 - e) developing and using models
 - f) obtaining, evaluating, and communicating information

5th Grade English Standards:

- 5.6 The student will read and demonstrate comprehension of nonfiction texts.
- a) Use text features such as type, headings, and graphics, to predict and categorize information.
 - b) Skim materials to develop a general overview of content and to locate specific information.
 - c) Identify the main idea.
 - d) Summarize supporting details.
 - e) Identify organizational pattern(s).
 - f) Identify transitional words and phrases that signal an author's organizational pattern.
 - g) Locate information from the text to support opinions, inferences, and conclusions.
 - h) Identify cause and effect relationships.
 - i) Differentiate between fact and opinion.
 - j) Compare and contrast details and ideas within and between texts.
 - k) reading strategies throughout the reading process to monitor comprehension.
- 5.7 The student will write in a variety of forms to include narrative, descriptive, expository, and persuasive.
- a) Engage in writing as a process.
 - b) Select audience and purpose.
 - c) Use a variety of prewriting strategies.
 - d) Introduce and develop a topic, incorporating evidence and supporting details.
 - e) Organize information to convey a central idea.
 - f) Recognize different forms of writing have different patterns of organization including story structure for narrative writing.
 - g) Write a clear topic sentence focusing on the main idea.
 - h) Clearly state a position including supporting reasons and evidence to persuade the intended audience.
 - i) Write multi paragraph compositions.
 - j) Use precise and descriptive vocabulary to create tone and voice.
 - k) Vary sentence structure by using transition words and prepositional phrases.
 - l) Revise writing for clarity of content using specific vocabulary and information.

References

Clary, R. (2013). Arguing History:SSSTeaching historical scientific controversies to engage students in discourse and the nature of science. *The Science Teacher*, 39-43. <https://doi.org/https://drive.google.com/drive/u/0/folders/11JS0EbhEClyjwmEGT2xZB5C1YCUh4HEG>

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