

## **Using 3-Dimensional Teaching and NASA Resource for Tiered and Targeted Instruction**

### **Summary**

The topic of the Professional Development that I propose to lead is: Using 3-Dimensional Teaching and NASA Resources for Tiered and Targeted Instruction. I chose this topic because this year my school is focusing PD's on tiered and targeted instructional strategies as a part of our work plan and I believe that knowledge of NASA resources and education around the 3-dimensional teaching framework could enhance our teachers ability to meet the needs of our diverse learners. This PD will integrate content from the Endeavour program by utilizing the 3-dimensional teaching framework as a targeted instructional strategy. Each of the 3 Dimensions of teaching: disciplinary core ideas (DCIs), crosscutting concepts (CCCs), and science and engineering practices (SEPs), can be used to support tiered and targeted instruction for a variety of learning needs. After there is learning done around how the 3-dimensional framework can be used to enhance tiered and targeted instruction, a variety of NSTA, NASA and other Endeavour teaching resources will be made accessible to teachers for exploration. These resources will provide teachers with a jumping point to begin practicing 3-Dimensional Tiered and Targeted instruction in their classrooms. It is important that there are resources to support a variety of grade levels and learning needs so ideally each grade level will have access to at least one or two resources that they can utilize in their classrooms that are aligned to the PD topic.

This professional development will service 20-30 K-8 teachers in my building. Each teacher in grades k-4 has 25-30 students, grades 5-6 have 50-60 students and grades 7-8 have 100-120 students. While this professional development will be reaching a wide range of teachers, it is aligned with work we are already doing around tiered and targeted instruction. We are focussing on this work because high percentages of the students in our building have a variety of learning needs, requiring a wide range of

teaching strategies to ensure sufficient student growth and achievement. This professional development will be held during our weekly PD meetings from 3:10-4:00. While this span does not equal to be an hour, the PD that is being proposed will be split into two separate sessions: a learning and exploration session and an analysis and reflection session.

### **Focus Standards**

This PD will not have a standard specific focus rather dimension specific focus: Science and Engineering Practices and Crosscutting concepts at various grade levels. These are the dimensions to learning that align with tiered and targeted instruction most effectively.

### **Pre and Post Survey Strategies**

For the pre-survey, I would like to gather general data around teachers' knowledge and understanding of the NGSS standards and the 3-Dimensional Framework. I expect that most teachers in the building will be more or less unfamiliar with the NGSS standards and its framework as the Colorado Academic Standards are utilized to k-5 science learning in my district. I would also like to survey teachers to see which components of the 3-dimensional teaching framework would be beneficial for various learning groups in their classrooms.

For the post-survey, I would like to focus on analyzing the use of provided resources in the classroom on if teachers found the resources useful and are there any that they would suggest. It is often that teachers are presented with a new teaching strategy but are not given resources to implement that strategy in their classroom- I would like to attempt to provide teachers with access to one or two grade level resources that could work for targeted instruction and see if those resources are utilized and across which grade levels. This data will be collected via surveys and interviews.