Professional Learning Workshops from *Phenomenon Science Education*

INTRODUCTION TO PHENOMENA

In this first-touch workshop, you will explore the use of phenomena in activities and lessons aligned to three-dimensional (3D) performance expectations derived from the ideas discussed in *A Framework for K-12 Science Education*.

- We place you in the role of a student scientist to review the structure and student-centered intent of 3D standards.
- We dig deep into phenomena, exploring criteria, characteristics, and pitfalls.
- You will evaluate examples of stand-alone phenomena and phenomena associated with published resources, discussing the alignments and merits of each.
- You will evaluate activities in published resources, focusing on the phenomenon, student use of the three core dimensions, and student-centered learning.
- In the end, you will have a process to determine if a curricular resource aligns to your state's standards and whether it has a phenomenon or anchor that will work for you.

Introduction to Phenomena involves eight contact hours, plus assignments. We customize the content for your group (e.g., for participants in Indiana, we discuss the 2023 Indiana Academic Standards for Science; for participants in Pennsylvania, we discuss the new STEELS). We offer it in online blocks that you can schedule as you like. Or we can come to you and run it in-person over two days, which allows for more interaction. Finally, we offer a one-day in-person version that covers standards and phenomena but omits discussion of published resources and possible modifications (* below indicates material omitted from the one-day version).

Learning Objectives:

1. I can identify the individual core dimensions of a given 3D performance expectation.
2. I can recognize student-centered, 3D-aligned teaching and learning.
3. I can recognize student-centered sensemaking in a 3D-aligned activity or lesson.*
4. I can use given criteria to identify and evaluate phenomena.
5. I can recognize when a curricular resource includes a phenomenon and evaluate whether the resource has students address that phenomenon.*
6. I understand that students can use core dimensions to make sense of phenomena.

Goals:

1. You will be able to recognize phenomenon-based, student-centered, 3D-aligned learning materials.
    a. You will be able to identify the core dimensions of a given 3D standard.
    b. You will be able to identify phenomena and evaluate them to determine if a proposed phenomenon is workable for a given 3D standard.
    c. You will be able to determine if curricular materials align to 3D state science standards, use phenomena, and integrate 3D-aligned teaching and learning.*

https://www.phenomenon.science/standards-and-phenomena-courses

Contact us to schedule a session: josh@phenomenon.science