



Evaluating Curriculum Materials for Alignment with the New Vision for K-12 Science Education

What Is The Issue?

Many teachers, schools, and districts are now challenged to identify curriculum materials that support the vision of the [*Next Generation Science Standards \(NGSS\)*](#) and [*A Framework for K-12 Science Education*](#). Whether adapting existing materials or adopting new ones, it is important to evaluate all curriculum materials for deep alignment to multiple dimensions of the new vision. This tool highlights how the [*Educators Evaluating the Quality of Instructional Products \(EQIP\) Rubric*](#) and [*support videos*](#) can be used to guide that process.

WHY IT MATTERS TO YOU

- **Teachers** should collaborate to analyze and select curriculum materials that are aligned to the NGSS.
- **District Staff & PD Providers** should understand how to appropriately use the EQIP Rubric in a collaborative process to evaluate curriculum materials for their NGSS alignment.
- **School Leaders** should provide the time, space, and resources for collaborative teams to evaluate curriculum materials for potential adaptation or adoption.

Things To Consider

- Until new curriculum materials are available, evaluating and [adapting materials](#) is a crucial part of [implementing the new vision](#).
- The evaluation of curriculum materials should be a collaborative process undertaken by a team of reviewers. The team needs deep knowledge of [three-dimensional learning](#) and to become comfortable using the EQulP Rubric. It is a time-intensive process.
- Alternatively, if you need to more quickly review a short learning sequence (without scoring), use the [NGSS Lesson Screener tool](#).

Recommended Actions You Can Take

- **Form a review team.** The EQulP Rubric is designed to be used by a group of people who collaboratively evaluate curriculum materials and share their responses and feedback. The group should work through the categories of the rubric in sequence.
- **Become comfortable with the EQulP Rubric and process.** Watch [these videos in the NGSS EQulP Rubric Series](#) for an overview. Then, read through the EQulP Rubric ([Fillable PDF](#) & [Word](#)) to get a sense of the recommended process for evaluating curriculum materials. Helpful resources include the [“NGSS EQulP Professional Learning Facilitator’s Guide,”](#) [“Guide to Implementing the NGSS,”](#) and [“Examples of Quality NGSS Design.”](#)
- **Review the chosen unit or lesson plan.** Read the material thoroughly, making notes about connections to NGSS-aligned practices, crosscutting concepts, and disciplinary core ideas, as well as how it supports at least one performance expectation.
- **Apply the EQulP Rubric, beginning with Category I.** This category focuses on how the unit or lesson supports the three dimensions of science learning and coherence from lesson to lesson. Next to each criterion, write why it is met and/or suggestions for improvement.
- If the criteria of Category I are met, then the unit or lesson can be considered to be NGSS aligned and it is appropriate to **proceed to Category II.** This category is focused on how the material “supports instruction and learning for all students” with a specific focus on equity. Category II provides guidance for achieving coherence at the unit level and “provides and adjusts supports for students in order to make students increasingly responsible for their own learning.”
- **Category III** is focused on how different assessments (pre, formative, summative, self-) can be embedded, designed in alignment with three-dimensional learning, and made equitable for all students.

REFLECTION QUESTIONS

- Are the science units you are currently teaching aligned to the NGSS? Are they equitable? How do you know?
- What does deep alignment of instructional materials to the NGSS vision look like? How might this differ from a more superficial alignment?
- What do you need to learn in order to select lessons that align with the new vision or to adapt them to be better fit?

“What is particularly important is that teachers develop the capacity to design sequences of instruction by learning a set of pedagogical principles that can guide their selection or adaptation of materials.”
– Penuel, Gallagher & Moorthy (2011)

Attending To Equity

- Category II of the EQulP Rubric evaluates issues of equity within curriculum materials, identifying differentiation, culturally responsive teaching, relevance, supports for English Language Learners or special education students, and extensions for skilled or high-interest students.
- Category III attends to equity issues by calling for assessments that use “methods, vocabulary, representations, and examples that are accessible and unbiased for all students.”

ALSO SEE STEM TEACHING TOOLS:

- #4 [Multiple Instructional Models](#)
- #15 [Equity in Science Education](#)
- #18 [3D Formative Assessments](#)

