Classroom Instructional Material Alignment Tool – Noncore

The purpose of this document is to assist teachers in determining alignment of their Instructional materials being used in the classroom. Effective instructional materials are learning resources used to help students acquire essential knowledge, skills, and abilities as outlined in the standards. This includes print and non-print materials. It may also provide evidence to support your discussion about standards and resources as part of your evaluation.

Title: _Introduction to Engineering Design_ Author(s): _PLTW_ Publisher(s): _PLTW_ Grade Level: _9-12_

Standard(s) addressed in this instructional material: _CCR Anchor Standards for Reading, Writing, Literacy Standards for Science + Technical Subjects; Architecture + Civil Engineering, Mechanical Engineering, Employability Skills for Career Readiness_

Instructions: Use the tables below to reflect upon and then determine if the instructional material meets each criteria.

I. Alignment to the Nevada Academic Content Standards (NVACS)- NON NEGOTIABLES

Criteria	Meets Criteria			Evidence
	Yes	No	N/A	
Targets a set of grade-level Nevada Academic Content Standards (NVACS).	X			
Selects text(s) that measure within the grade-level text complexity band and are of sufficient quality and scope for the stated purpose.	X			
Other: _____				

II. Key Shifts in the Nevada Academic Content Standards (NVACS)

Criteria	Meets Criteria			Evidence
	Yes	No	N/A	
Reading Text Closely: Makes reading text(s) closely, examining textual evidence, and discerning deep meaning a central focus of instruction.	X			
Text-Based Evidence: Facilitates rich and rigorous evidence-based discussions and writing about common texts through a sequence of specific, thought-provoking, and text-dependent questions (including, when applicable, questions about illustrations, charts, diagrams, audio/video, and media).	X			
Writing from Sources: Routinely expects that students draw evidence from texts to produce clear and coherent writing that informs, explains, or makes an argument in various written forms. Include a balance of on-demand and process writing and short, focused research projects.			X	
Academic Vocabulary: Focuses on building students' academic vocabulary in context throughout instruction.	X			
Increasing Text Complexity: Focuses students on reading a progression of complex texts drawn from the grade band (a balance of informational and literary texts as defined by the NVACS). Provides text-centered learning that is sequenced, scaffolded, and supported to advance students toward independent reading of complex texts at the CCR level.	X			
Building Disciplinary Knowledge: Provides opportunities for students to build knowledge about a topic/subject through analysis of a coherent selection of strategically sequenced, discipline-specific texts.	X			
Other: _____				

*Based on the EQUIP, IMET, and Publisher's Criteria Review Rubrics for Lessons and Units

III. Assessment

Criteria	Meets Criteria			Evidence
	Yes	No	N/A	
Assesses various modes, including a range of pre-, formative, summative, performance tasks, and self-assessment measures.	X			**Project-based rubrics provided; teacher created pre-, formative, self-assessment**
Includes aligned rubrics, answer keys and scoring guidelines that provide sufficient guidance for interpreting student understanding and performance.				
Other: _____				

IV. Instructional Supports

Criteria	Meets Criteria			Evidence
	Yes	No	N/A	
Provides for authentic learning, application of literacy skills, student-directed inquiry, analysis, evaluation, and/or reflection.	X			
Integrates targeted instruction in such areas as grammar and conventions, writing strategies, discussion rules, and all aspects of foundational reading.			X	
Provides appropriate level and type of scaffolding, differentiation, intervention and support for all learners. • Supports diverse cultural and linguistic backgrounds, interests and styles. • Provides extra supports for students working below grade level. • Provides extensions for students with high interest or working above grade level.	X			**Instructional supports include teacher flexibility to supplement curriculum based on student need, interest, and learning style.**
Other: _____				

Summary/Reflection:

1. Alignment to Standards: College and Career Readiness Anchor Standards for Reading and Writing, Grades 6-12; Standards for Literacy in Science and Technical Skills, Grades 6-12

   Upon review, the PLTW Introduction to Engineering Design curriculum addresses and supports student learning needs with regard to the College and Career Readiness Anchor Standards for Reading and Writing as detailed in the Standards for Literacy in Science and Technical Skills, grades 6-12. Of particular note was the curriculum's Reading focus on Craft and Structure, Integration of Knowledge and Ideas, and Key Ideas and Details. In addition, of particular note was the curriculum's Writing focus on Research to Build and Present Knowledge.

2. Alignment to Standards: Architecture and Civil Engineering Standards; Mechanical Engineering Standards

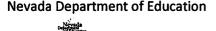*Based on the EQUIP, IMET, and Publisher's Criteria Review Rubrics for Lessons and Units

PLTW Introduction to Engineering Design is the first year course in both the Architectural and Civil Engineering Program of Study and Mechanical Engineering Program of Study. PLTW Introduction to Engineering Design is created to provide learning opportunities for students in the areas of CAD and Drafting Experience, Design Process Experience, and Computational and Analytical Skills. Concepts and Lessons are aligned with the Science, Technology, Engineering and Mathematics Career Cluster, the Engineering and Technology Career Pathway (ST-ET) as outlined in the Crosswalks of Architectural and Engineering Standards, the Common Career Technical Core and Common Core Mathematical Practices (p. 30-31, Nevada CTE Standards, Architectural and Civil Engineering). In addition, the curriculum aligns with the Science, Technology, Engineering & Mathematics Career Cluster, the Engineering and Technology Career Pathway (ST-ET) as outlined in the Crosswalks of Mechanical Engineering Standards, and the Common Career Technical Core and Common Core Mathematical Practices (p. 27-28, Nevada CTE Standards, Mechanical Engineering).

3. Alignment to Standards: Employability Skills for Career Readiness Standards

PLTW Introduction to Engineering addresses and supports student learning needs with regard to the Standards for Employability Skills for Career Readiness. Of particular note were:
   a. Performance Standard 1: Demonstrate Employability skills for Career Readiness
      i. 1.1.1-Demonstrate a positive work ethic by coming to work every day on time, a willingness to take direction, and motivation to accomplish the task at hand.
      ii. 1.1.3-Demonstrate teamwork skills by contributing to the success of a team, assisting others, and requesting help when needed.
      iii. 1.1.6-Demonstrate conflict-resolution skills by negotiating diplomatic solutions to interpersonal and workplace issues.

   b. Performance Standard 2: Demonstrate Professional Knowledge and Skills
      i. 1.2.2-Demonstrate effective reading and writing skills by reading and interpreting workplace documents and writing clearly.
      ii. 1.2.3-Demonstrate critical-thinking skills by analyzing and resolving problems that arise in completing assigned tasks.
      iii. 1.2.4-Demonstrate healthy behaviors and safety skills by following safety guidelines and managing personal health.
      iv. 1.2.8-Demonstrate time on task, and resource management skills by organizing and implementing a productive plan of work.
      v. 1.2.9- Demonstrate mathematical skills by using mathematical reasoning to accomplish tasks.
   c. Performance Standard 3: Demonstrate Technical Knowledge and Skills
      i. 1.3.2-Demonstrate proficiency with information technology by using computers, file management techniques, and software/programs effectively.
      ii. 1.3.3-Demonstrate proper Internet use and security by using the Internet appropriately for work.

*Based on the EQUIP, IMET, and Publisher's Criteria Review Rubrics for Lessons and Units

Overall Classroom Instructional Material Meets Criteria Rating: __x_Yes ___No ___ N/A