

Mars Rover Celebration NGSS Alignment

WEEK 6: WRITING AND PRESENTING

LESSON 14: MANUAL AND SKIT

GRADE LEVEL: 6-8

PERFORMANCE EXPECTATIONS

In the NGSS framework, one of the important things that teachers need to do is explicitly identify when Science and Engineering Practices (SEP) and Cross Cutting Concepts (CCC) are being covered. The SEP's and CCC's are pervasive throughout the Mars Rover Celebration curriculum. The tables here are intended to assist the teacher in deciding when to mention that an SEP or CCC is part of the material being presented.

Lesson Objectives		
Students who demonstrate understanding can: <ul style="list-style-type: none">Brainstorm ideas to be developed into a team skitWork cooperatively to assign duties and write a team skitCollaborate with team members to complete the Mars Rover Manual		
MS Engineering Design		
MS-ETS1-1 Define the criteria and constraints of a design problem with sufficient precision to ensure a successful solution, taking into account relevant scientific principles and potential impacts on people and natural environment that may limit possible solutions.		
SCIENCE AND ENGINEERING PRACTICES (SEP)	DISCIPLINE CORE IDEAS (DCI)	CROSSCUTTING CONCEPTS (CCC)
Obtaining, Evaluating, and Communicating Information Integrate qualitative scientific and technical information in written text with that contained in media and visual displays to clarify claims and findings	ESS1: Earth's Place in the Universe: ESS1.B: Earth and the Solar System	Patterns Graphs and charts can be used to identify patterns in data

SUMMARY OF THE THREE DIMENSIONS

The 5E lesson model provides the 5 phases of learning that helps to facilitate the process of science understanding. Teachers are encouraged to use the table below to help align their teaching methods with the embedded Science and Engineering Practices (SEP), Disciplinary Core Ideas (DCI) and Cross Cutting Concepts (CCC) present in the lesson.

5E MODEL PHASE	SCIENCE AND ENGINEERING PRACTICES (SEP)	DISCIPLINE CORE IDEAS (DCI)	CROSSCUTTING CONCEPTS (CCC)
ENGAGE	Obtaining, Evaluating and Communicating Information	Earth and the Solar System	Patterns
EXPLORE	Obtaining, Evaluating and Communicating Information	Earth and the Solar System	Patterns
EXPLAIN	Obtaining, Evaluating and Communicating Information	Earth and the Solar System	Patterns
ELABORATE	Obtaining, Evaluating and Communicating Information	Earth and the Solar System	Patterns
EVALUATE	Performance Expectations	Performance Expectations	Performance Expectations