



Making Sense of SCIENCE Course Descriptions

Matter (five days)

This second edition Matter course has been designed for the Next Generation Science Standards (NGSS) for teachers of grades 5–12. The science investigations cover the properties of matter, particles of matter, changes in matter, atomic structure, and matter in action. The literacy component focuses on reading skills and the teaching investigations analyze student work to guide instruction.

Dynamic Earth (five days)

The five-day Dynamic Earth institute offers a systems approach to learning earth science and is aligned to the Next Generation Science Standards. Dynamic Earth is designed for teachers of grades 2–8. The science investigations include earth systems, pedosphere (soils), changing systems, geosphere, and earth's surface. The literacy component focuses on student discourse and the teaching investigations analyze student work to guide instruction.

Systems (two days)

Designed for teachers in grades K-5, this two-day course introduces the concepts of systems and systems thinking, dives into how to define systems, explores the utility of defining systems in various ways, describes how systems do and do not change over time, including explorations of dynamic equilibrium and positive and negative feedback. The course includes consideration of the role of argumentation and a plan for supporting students using the concept of systems and developing and refining system models. The course includes a half-day session focused on the connections with the New Mexico STEM Ready! science standards. Participants will receive access to a corresponding short unit for their elementary grade level that is aligned to the NM STEM Ready! science standards.

Waves (two days)

This two-day course is designed for teachers in grades 6–8 and introduces the properties of waves (e.g., amplitude, frequency), explores the forces that trigger waves, and investigates the ability for waves to cause change (e.g., how waves transfer energy and the amount of energy associated with different waves). The course includes a half-day session focused on the connections with the New Mexico STEM Ready! science standards. Participants will receive

access to a corresponding short unit for their middle school grade level that is aligned to the NM STEM Ready! science standards.