

Year-at-a-Glance (YAG) --- Grade 5 --- Science



Unit 1: Nature of Science and Engineering (embedded in Units 2, 3 and 4)

- 1.1 I can plan and carry out scientific investigations. (5.1.1.2.1)
- 1.2 I can identify the variables in a scientific experiment. (5.1.1.2.2.)
- 1.3 I can identify how variables and the process of a scientific investigation may affect the outcome. (5.1.1.1.2, 5.1.1.2.3)
- 1.4 I can critique whether a scientific investigation is a fair test. (5.1.1.2.3)
- 1.5 I can collect relevant evidence for a scientific experiment. (5.1.1.2.2)
- 1.6 I can construct explanations based on evidence. (5.1.3.4.1)
- 1.7 I can use models and appropriate scientific tools to investigate the world around me. (5.1.1.1.4)
- 1.8 I can apply the practices and tools of a scientist to gather, analyze and interpret data. (5.1.3.4.1)
- 1.9 I can explain scientists' need for clear communication, which leads to further scientific questions and investigations. (5.1.1.1.1, 5.1.1.1.3)
- 1.10 I can create and analyze different kinds of maps and models. (5.1.3.4.2)
- 1.11 I can explain how engineered products and services impact our natural world. (4.1.2.1.1)
- 1.12 I can describe how an engineering design solution solves problems. (4.1.2.2.1)
- 1.13 I can plan how to solve a problem using the engineering design process. (4.1.2.2.2)
- 1.14 I can test and evaluate engineering design solutions. (4.1.2.2.3)
- 1.15 I can communicate my results after testing and evaluating an engineering solution. (4.1.2.2.3)
- 1.16 I can describe how local culture affects science and engineering. (5.1.3.2.1)

Unit 2: Physical Science – Force and Experiments (10-12 weeks)

Module – FOSS Motion Force and Models

- 2.1 I can identify how force affects motion. (5.2.2.1.2, 5.2.2.1.3)
- 2.2 I can analyze the relationship between force and motion. (5.2.2.1.2, 5.2.2.1.3)

Unit 3: Physical Science and Engineering – Simple Machines (4-5 weeks)

Module –EiE Marvelous Machines: Making Work Easier

- 3.1 I can demonstrate how simple machines change force and an object's motion. (5.2.2.1.1)

Unit 4: Earth Science - Our Changing Earth (6-7 weeks)

Module – FOSS Landforms

- 4.1 I can describe changes that take place on Earth to produce soil. (5.3.1.2.1)
- 4.2 I can explain the different processes that form the Earth's surface. (5.3.1.2.2)
- 4.3 I can identify uses of Minnesota's renewable and nonrenewable resources. (5.3.4.1.1)
- 4.4 I can explain how natural resources are obtained and processed for use. (5.3.4.1.2)
- 4.5 I can evaluate the impact of decisions that affect the environment. (5.3.4.1.3)

Unit 5: Life Science and Engineering – Oil Spill (OPTIONAL; 4 weeks)

Module – EiE A Slick Solution: Cleaning an Oil Spill

- 5.1 I can analyze the impact of changes to a natural system. (5.4.2.1.2)
- 5.2 I can evaluate human interactions with natural systems as beneficial or harmful. (5.4.4.1.1)
- 6.3 I can explain the relationship between environmental factors in a given natural system. (5.4.2.1.1)
- 6.5 I can evaluate human interactions with natural systems as beneficial or harmful. (5.4.4.1.1)

Unit 6: Life Science - Natural Systems (12-14 weeks)

Module – FOSS Environments

- 5.1 I can analyze the impact of changes to a natural system. (5.4.2.1.2)
- 6.1 I can identify how plant and animal structures and functions can lead to advantages in survival. (5.4.1.1.1)
- 6.2 I can determine what living and nonliving environmental factors are needed for a natural system. (5.4.2.1.1)
- 6.3 I can explain the relationship between environmental factors in a given natural system. (5.4.2.1.1)
- 6.4 I can describe a Minnesota natural system through the interactions and relationships between its different parts. (5.4.2.1.1)
- 6.5 I can evaluate human interactions with natural systems as beneficial or harmful. (5.4.4.1.1)