Applicable State of Michigan Grade Level Content Expectations (GLCEs)

Below is a list of content standards, statements, and grade level expectations applicable to the program “Soil Science and Stewardship.”

Grade Levels 4-7:  
Note: No GLCE Standards are available for Grade 8

Michigan Grade Level Content Expectations: Science

- Discipline 1: Science Processes
  - K-7 Standard: Inquiry Process (IP)
    - Grade 4 Expectations:
      - S.IP.04.11 Make purposeful observation of the natural world using the appropriate senses.
      - S.IP.04.12 Generate questions based on observations.
      - S.IP.04.13 Plan and conduct simple and fair investigations.
      - S.IP.04.14 Manipulate simple tools that aid observation and data collection (for example: hand lens, balance, ruler, meter stick, measuring cup, thermometer, spring scale, stop watch/timer, graduated cylinder/beaker).
  - Grades 5-7 Expectations:
    - S.IP.05.11, S.IP.06.11 & S.IP.07.11 Generate scientific questions based on observations, investigations, and research.
    - S.IP.05.12, S.IP.06.12 & S.IP.07.12 Design and conduct scientific investigations.
    - S.IP.05.13, S.IP.06.13 & S.IP.07.13 Use tools and equipment (spring scales, stop watches, meter sticks and tapes, models, hand lens) appropriate to scientific investigations.
  - K-7 Standard: Inquiry Analysis and Communication (IA)
    - Grade 4 Expectation:
      - S.IA.04.13 Communicate and present findings of observations and investigations.
    - Grade 5-7 Expectations:
      - S.IA.05.13, S.IA.06.13 & S.IA.07.13 Communicate and defend findings of observations and investigations using evidence.
  - K-7 Standard: Reflections and Social Implications (RS)
    - Grades 4-7 Expectation:
      - S.RS.04.18, S.RS.05.17, S.RS.06.17 & S.RS.07.17 Describe the effect humans and other organisms have on the balance of the natural world.

- Discipline 2: Physical Science
  - K-7 Standard: Forces and Motion (FM)
    - Grades 4, 6-7 Expectations: General Concepts of Above Standard Covered.
    - Grade 5 Expectation:
• **P.FM.05.31** Describe what happens when two forces act on an object in the same or opposing directions.

• **Discipline 3: Life Science**
  o **K-7 Standard:** Organization of Living Things (OL)
    ▪ **Grades 4-5, 7 Expectations:** General Concepts of Above Standard Covered.
    ▪ **Grade 6** Expectations:
      • **L.OL.06.51** Classify producers, consumers, and decomposers based on their source of food (the source of energy and building materials).
      • **L.OL.06.52** Distinguish between the ways in which consumers and decomposers obtain energy.
  o **K-7 Standard:** Ecosystem (EC)
    ▪ **Grade 4** Expectation:
      • **L.EC.04.11** Identify organisms as part of a food chain or food web.
    ▪ **Grade 5** Expectations: General Concepts of Above Standard Covered
    ▪ **Grade 6** Expectations:
      • (see L.EC.M.3) **L.EC.06.31** Identify the living (biotic) and nonliving (abiotic) components of an ecosystem.
    ▪ **Grade 7** Expectations: General Concepts of Above Standard Covered

• **Discipline 4: Earth Science**
  o **K-7 Standard:** Solid Earth (SE)
    ▪ **Grades 4-5, 7 Expectations:** General Concepts of Above Standard Covered
    ▪ **Grade 6** Expectations:
      • (See E.SE.M.1) **E.SE.06.13** Describe how soil is a mixture made up of weather eroded rock and decomposed organic material.
      • **E.SE.06.14** Compare different soil samples based on particle size and texture.