Minnesota Science

Grade 3

Adopted 2019

Grade 3

Physical Science

1. Asking questions and defining problems. 3P.1.1
    1. Students will be able to ask questions about aspects of the phenomena they observe, the conclusions they draw from their models or scientific investigations, each other's ideas, and the information they read. 3P.1.1.1
        1. Ask questions based on observations about why objects in darkness can be seen only when illuminated. 3P.1.1.1.1
2. Planning and carrying out investigations. 3P.1.2
    1. Students will be able to design and conduct investigations in the classroom, laboratory, and/or field to test students' ideas and questions, and will organize and collect data to provide evidence to support claims the students make about phenomena. 3P.1.2.1
        1. Plan and conduct a controlled investigation to determine the effect of placing objects made with different materials in the path of a beam of light. 3P.1.2.1.1
1. Developing and using models. 3P.3.1
    1. Students will be able to develop, revise, and use models to represent the students' understanding of phenomena or systems as they develop questions, predictions and/or explanations, and communicate ideas to others. 3P.3.1.1
        1. Develop a model to describe that light reflecting from objects and entering the eye allows objects to be seen. 3P.3.1.1.1

Life Science

2. Planning and carrying out investigations. 3L.1.2

    1. Students will be able to design and conduct investigations in the classroom, laboratory, and/or field to test students' ideas and questions, and will organize and collect data to provide evidence to support claims the students make about phenomena. 3L.1.2.1

        2. Plan and conduct an investigation to determine how amounts of sunlight and water impact the growth of a plant. 3L.1.2.1.2

1. Developing and using models. 3L.3.1

    1. Students will be able to develop, revise, and use models to represent the students' understanding of phenomena or systems as they develop questions, predictions and/or explanations, and communicate ideas to others. 3L.3.1.1

        2. Develop multiple models to describe how organisms have unique and diverse life cycles but all have birth, growth, reproduction, and death in common. 3L.3.1.1.2

2. Constructing explanations and designing solutions. 3L.3.2

    1. Students will be able to apply scientific principles and empirical evidence (primary or secondary) to explain the causes of phenomena or identify weaknesses in explanations developed by the students or others. 3L.3.2.1

        1. Construct an explanation using evidence from various sources for how the variations in characteristics among individuals of the same species may provide advantages in surviving, finding mates, and reproducing. 3L.3.2.1.1

1. Engaging in argument from evidence. 3L.4.1

    1. Students will be able to engage in argument from evidence for the explanations the students construct, defend and revise their interpretations when presented with new evidence, critically evaluate the scientific arguments of others, and present counterarguments. 3L.4.1.1

        1. Construct an argument about strategies animals use to survive. 3L.4.1.1.1

2. Obtaining, evaluating and communicating information. 3L.4.2

    1. Students will be able to read and interpret multiple sources to obtain information, evaluate the merit and validity of claims and design solutions, and communicate information, ideas, and evidence in a variety of formats. 3L.4.2.1

        1. Obtain information from various types of media to support an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction. 3L.4.2.1.1

Earth and Space Science

1. Analyzing and interpreting data. 3E.2.1
    1. Students will be able to represent observations and data in order to recognize patterns in the data, the meaning of those patterns, and possible relationships between variables. 3E.2.1.1
        1. Record observations of the sun, moon, and stars and use them to describe patterns that can be predicted. 3E.2.1.1.1
2. Using mathematics and computational thinking. 3E.2.2
    1. Students will be able to use mathematics to represent physical variables and their relationships; compare mathematical expressions to the real world; and engage in computational thinking as they use or develop algorithms to describe the natural or designed worlds. 3E.2.2.1
        1. Organize and electronically present collected data to identify and describe patterns in the amount of daylight in different times of the year. 3E.2.2.1.1
2. Obtaining, evaluating and communicating information. 3E.4.2
    2. Students will be able to gather information about and communicate the methods that are used by various cultures, especially those of Minnesota American Indian Tribes and communities, to develop explanations of phenomena and design solutions to problems. 3E.4.2.2
        1. Gather information and communicate how Minnesota American Indian Tribes and communities and other cultures use patterns in stars to make predictions and plans. 3E.4.2.2.1