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Driving Question 1 1
What is a plant?

Students explore what it takes to be a good scientist. Then the young scientists investigate the concept of living and non-living things, with an emphasis on plants. They go outside to photograph plants and then begin an observation experiment by planting some seeds.

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Driving Question 2 35
How do plants use their parts to grow and survive?

Students start to investigate what plants need and how a plant's parts help it to grow and survive. They begin building the first room in the Museum of Leafology: the Plant Parts Room.

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Scientist and Engineer Investigation Experience:

Digital Investigation Guided Investigation Hands-On Investigation Reading for Evidence 3-D Assessment Video Investigation

Driving Question 3

How are seeds dispersed?

69

Performance Expectations: 1-LS1-1 Use materials to design a solution to a human problem by mimicking how plants and/or animals use their external parts to help them survive, grow, and meet their needs; K–2-ETS1-2 Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem; K–2-ETS1-3 Analyze data from tests of two objects designed to solve the same problem to compare the strengths and weaknesses of how each performs.

Students explore the many methods that plants use to distribute seeds away from the parent plant. In teams, students tackle an Engineering Design Challenge to design and build seeds for dispersal by wind. They test and present the results of their design before adding a Seeds Room to the Museum of Leafology.

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Driving Question 4

How are young and adult plants alike and different?

125

Performance Expectation: 1-LS3-1 Make observations to construct an evidence-based account that young plants and animals are like, but not exactly like, their parents.

Students observe the seedlings they planted and record similarities and differences. Then students explore plants in nature, sketching plants they find, focusing on comparing and contrasting young and adult plants of the same type.

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Driving Question 5

What special features do some plants have that help them survive and grow?

155

Performance Expectation: 1-LS1-1 Use materials to design a solution to a human problem by mimicking how plants and/or animals use their external parts to help them survive, grow, and meet their needs; 1-LS3-1 Make observations to construct an evidence-based account that young plants and animals are like, but not exactly like, their parents.

Students investigate the clever strategies plants use to get what they need. They discuss the defenses some plants incorporate, using these ideas to create and sketch their own imaginary plant with special defenses. They make two new rooms for the Museum of Leafology: the Seedlings and Parent Plants Room, and the Amazing Plants Room.

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Driving Question 6

How can plants inspire humans to solve problems?

179

Performance Expectations: 1-LS1-1 Use materials to design a solution to a human problem by mimicking how plants and/or animals use their external parts to help them survive, grow, and meet their needs; K–2-ETS1-1 Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool; K–2-ETS1-2 Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.

Students tackle the second Engineering Design Challenge of the module. The first half of the Driving Question provides examples of existing inventions that were inspired by plants. Then, student pairs design, build, and present their own plant-inspired solution to a human problem.

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Driving Question 7

How are all plants alike and how are they different?

219

Students finish preparing the Museum of Leafology, then invite other classes and their own families to visit the museum in order to demonstrate their learning. The final lesson features a pair of assessment tasks and a reading about edible plants, followed by a celebratory plant parts salad.

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