

FALMOUTH PUBLIC SCHOOLS

SCIENCE CURRICULUM

Unit Overview: Life Science (LS) From Seed to Plant

Grade 1

Suggested time frame: 10 sessions and record keeping + assessment(s)

Science Curriculum Goals

1. SCIENTIFIC LITERACY. Provide all students with science experiences that are appropriate to their cognitive stages of development and serve as a foundation for more advanced ideas that prepare them for life in an increasingly complex scientific and technological world.
2. INSTRUCTIONAL EFFICIENCY. Provide all teachers with a comprehensive, flexible, attainable science curriculum based upon current research on learning; including collaborative learning, student discourse, and embedded assessment, and uses effective instructional methodologies including: hands-on active inquiry-based learning, integration of disciplines and content areas, and multisensory methods.
3. SYSTEMIC REFORM. Aligned to the Massachusetts State Curriculum Frameworks Science Standards and societal expectations that will prepare students with the knowledge, skills and understandings to succeed in the 21st century.

Pedagogy

Young people need an understanding of basic scientific concepts and methods in order to comprehend the scientific issues that will shape their lives. It is equally important for students to develop and apply the concepts and process skills used in scientific inquiry so that they will be prepared to solve problems encountered in other areas of study and in dealings with the everyday world.

This unit emphasizes basic science concepts and skills presented through a range of engaging, inquiry-based, hands-on instructional experiences that focus on the processes and techniques of discovery. This unit is designed to promote scientific literacy and provide opportunities for students to satisfy their innate curiosity as they develop techniques for observing, questioning, and testing basic scientific concepts.

Unit Summary

From Seed to Plant introduces students to the life cycle of a plant. Students read about the different parts of seeds and how seeds develop into plants. They explore the functions of different plant parts and see what a plant needs to grow. Students find out about gardeners and why the plants they grow are important. They also discover the fascinating ways seeds travel from place to place.

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(adapted from lhsfoss.org)

Curriculum Standards and Enduring Understandings

LS3 Draw and label stages of the life cycle of plants

LS8 Identify plants' needs

- Plants need sunlight, soil and water in order to complete their life cycle.

LS3 Draw and label stages of the life cycle of plants

LS4 Recognize plants look like their parents

- A plant follows a predictable life cycle in which it grows to resemble its parent.

LS7 Describe seasonal changes in plants

- Plants change along with the seasons.

Essential Questions

- How can you help a seed so it grows to complete its life cycle?
- How does a seed change as it grows?
- How do you know what kind of plant will grow from a seed?
- How do plants change along with the seasons?

Unit Vocabulary

garden
leaf
leaves
life cycle
mature plant
plant
roots
seed pod
shoots
soil
sprout
stem

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Evidence of Scientific Method within Instruction

- ✓ Reading (shared, guided, independent) – *share information, collaborate*
- ✓ KWL – *activate, predict, analyze, hypothesize*
- ✓ Think – Pair – Share – *share information, collaborate*
- ✓ Modeling – *share information, observe, experiment*
- ✓ Participating in experiments - *share information, procedure, measure, record, compare, sort & classify*

Assessments

- ❖ Observations
- ❖ Anecdotal notes
- ❖ Class discussions
- ❖ Activity sheets (for most lessons)
- ❖ Lab report(s)
- ❖ ORQ(s) *from Essential Questions