

FALMOUTH PUBLIC SCHOOLS

SCIENCE CURRICULUM

Unit Overview: Life Science (LS) Food Chains and Webs

Grade 3

Suggested time frame:

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

Food Chains and Webs kit provides hands-on activities and readers that enable students to explore the complex network known as the food web. Because most food webs begin with plants, students first explore plants as producers by experimenting with soil and light to find the best growing conditions in terrariums. They then introduce crickets, earthworms and anoles, gaining an understanding of how animals are either consumers or decomposers depending on what they eat.

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Curriculum Standards and Enduring Understandings

LS2 Identify structures in plants that are responsible for food production, support, water transport, reproduction, growth and production.

- A plant's structures are responsible for its survival.

LS3 Recognize that plants go through predictable life cycles that include birth, growth, development, reproduction, and death.

- Plants have a predictable life cycle.

LS3 Describe how energy derived from the sun is used by plants and is transferred within a food chain.

- The energy of the sun is stored in plants and is transferred from one organism to another in a food chain/web.

Essential Questions

- How does each part of a plant work together as a system to contribute to its survival?
- What makes the stages of a plant's life a predictable life cycle?
- What is a plant's role in transferring energy from the sun throughout the food chain?

Unit Vocabulary

anole	germinate	seed leaf
chlorophyll	pollinate	seedling
coniferous	primary consumer	silt
decay	producer	soil
deciduous	sand	system
earthworm	secondary consumer	terrarium

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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
- ❖ Lab report(s)
- ❖ ORQ(s) from Essential Questions
- ❖ Common Assessment: Design/Create a plant that has all the parts necessary for its survival.
- ❖ ORQ(s) *from Essential Questions
- ❖ (Choose) Section 2, Sheet A or Section 2, Sheet B.

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