

# Traits and Organisms and their Environment

Content Area: **Science**  
Course(s):  
Time Period: **Full Year**  
Length: **Full Year**  
Status: **Published**

## Unit Overview

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Students will acquire an understanding that organisms have different inherited traits and that the environment can also affect the traits that an organism develops. The crosscutting concepts of patterns and cause and effect are called out as organizing concepts for these disciplinary core ideas. Students are expected to demonstrate grade-appropriate proficiency in analyzing and interpreting data, constructing explanations, and designing solutions. Students are also expected to use these practices to demonstrate understanding of the core ideas.

## Enduring Understandings

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All organisms transfer matter and convert energy from one form to another.  
Both matter and energy are necessary to build and maintain structures within the organism.  
Organisms are grouped in taxonomy based upon similarity.  
Understand the cause and effect of adaptations.  
Living organisms have systems and structures that function to support life.  
Living organisms experience cycles that vary over the span of their lives.

## Essential Questions

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How is matter transformed, and energy transferred/transformed in living systems?  
How are organisms of the same kind different from each other?  
How does this help them reproduce and survive?  
How do fossils help explain about organisms from the past?  
Why do plants grow flowers?  
Why do plants give us fruit?  
Why are some apples red and some green?  
How could you make the biggest fruit in the world?

## Learning Objectives

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Be able to recognize plant and animal traits and where they are from.  
Be able to recognize how the environment affects traits  
Be able to explain how adaptations help organisms survive  
Be able to explain how an organism's characteristics and how being a member of a group help it survive and reproduce

## Standards: Content

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SCI.3-LS2-1	Construct an argument that some animals form groups that help members survive.
SCI.3-LS4-1	Analyze and interpret data from fossils to provide evidence of the organisms and the environments in which they lived long ago.
SCI.3-LS4-3	Construct an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all.
SCI.3-LS4-4	Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change.

## Standards: Interdisciplinary

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### Assessment Evidence

Formative	Teacher observations, Class discussions, Lab Activities, Key concepts and vocabulary quizzes, Science Starter's/Do Nows, Open Ended Responses, Modeling, Simulations, Innovators Monthly Research, Lab Activities, Vocabulary Responses, Exit Questions, Interactive Digital Assessments embedded in Exploring Science Digital Book
Summative	Projects, Tests, Quizzes, lab skills demonstrations, projects, and vocabulary quizzes.
Alternative & Benchmark	Alternative - Read to the student and chart oral responses. Word banks, sentence frames, oral responses, graphic organizers, observations, portfolios of student work, orally administered assessments, and anecdotal notes. Benchmark – LinkIt Benchmark Assessment, Teacher Generated Assessments
<a href="#"><u>Assessment Evidence Resource</u></a>	

### Instructional Resources

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Smartboard, Computers, Websites and digital interactives/models, Multi-media presentations, Video Streaming, Brain Pop, Middle School Science, Generation Genius Digital Curriculum, Mystery Science Digital Curriculum, Amplify Digital Curriculum, Microsoft 365, Primary and Secondary Source Documents, Assorted lab materials, crayons, colored pencils, markers, graph paper, charts, tape, scissors, beans, Ziploc bags, paper towels, water [Third Grade Science Course](#)

[Instructional Resource List](#)

## Curricular Mandates

*Below are the curricular requirements as defined in NJ Administrative Code and Statute*

Amistad	Diversity, Equity, and Inclusion
Holocaust	LGBT and Disabilities (Grades 6-12)
Climate Change	Asian American & Pacific Islander

## Social Emotional Learning (SEL) Competencies

*[NJ Social and Emotional Learning Competencies & Sub-Competencies](#)*

	Self-Awareness		Relationship Skills
	Responsible Decision-Making	X	Social Awareness
X	Self-Management		

## 21st Century Skills & Themes

X	Global and Cultural Awareness	Technology Literacy	Planning and Budgeting
X	Creativity and Innovation	Financial Institutions	Risk Management and Insurance
	Information and Media Literacy	Digital Citizenship	Economic and Government Influences
X	Critical Thinking and Problem Solving	Credit Profile	Career Awareness and Planning
	Civic Financial Responsibility	Financial Psychology	

