


Course Overview

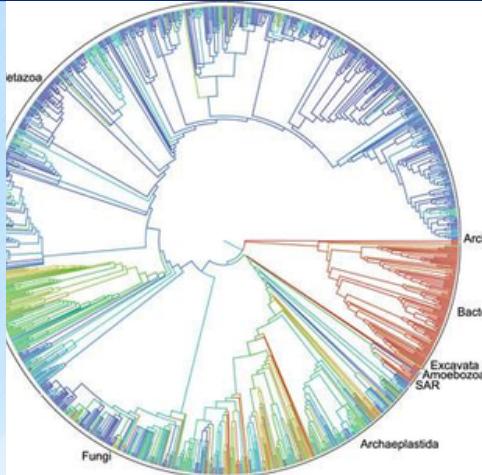
Zoology is an engaging exploration of the animal kingdom, focusing on animal diversity, anatomy, physiology, behavior, and ecology. Students learn how animals function, adapt, and evolve through hands-on labs and research activities.

Unit Title

Classification of Life

Time Frame

2-3 Weeks


Unit Title

Kingdoms

Time Frame

2-3 Weeks

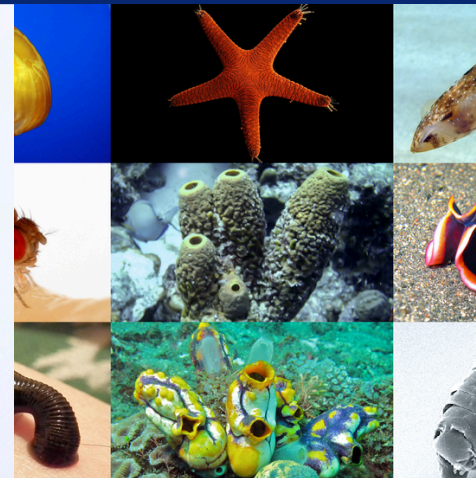
The Six Kingdoms of Life

Unit Title

Invertebrates

Time Frame

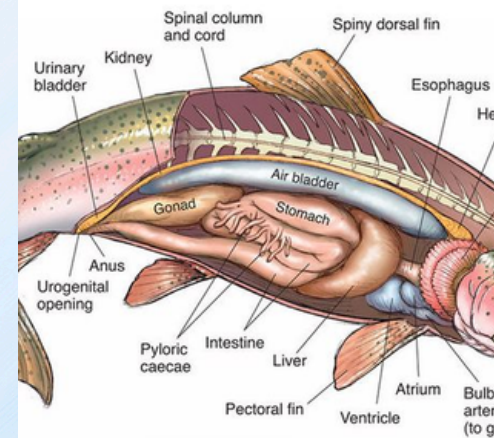
3-4 Weeks


Unit Title

Fish

Time Frame

3 Weeks


Focus of the Unit

Students will learn about taxonomy, Linnaeus's System of Classification, and phylogenetic trees.

Focus of the Unit

Students will focus on the five Kingdoms of life including: Plantae, Fungi, Monera, Bacteria, Protista, and Animalia,.

Focus of the Unit

Students will go through the 9 Phylums of invertebrates including body plans, ecological importance, and classification.

Focus of the Unit

Students will explore the three major groups of fish and their body plans, anatomy, ecological importance, and classification.

Course Title

Zoology



INNOVATIVE
ARTS ACADEMY

Course Overview

Zoology is an engaging exploration of the animal kingdom, focusing on animal diversity, anatomy, physiology, behavior, and ecology. Students learn how animals function, adapt, and evolve through hands-on labs and research activities.

Unit Title

Amphibians

Time Frame

3 Weeks



Focus of the Unit

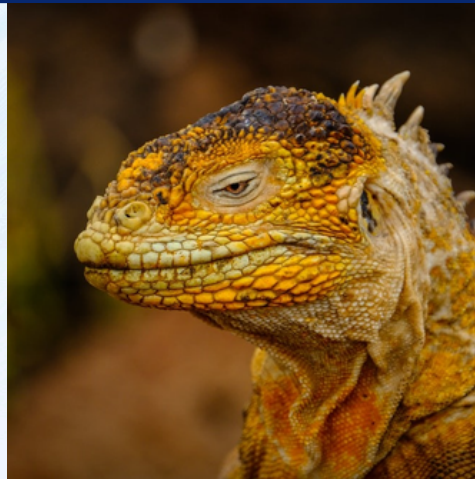
Students will focus on the groups of amphibians including life cycles, adaptations, and comparative anatomy.

Unit Title

Reptiles

Time Frame

3 Weeks



Focus of the Unit

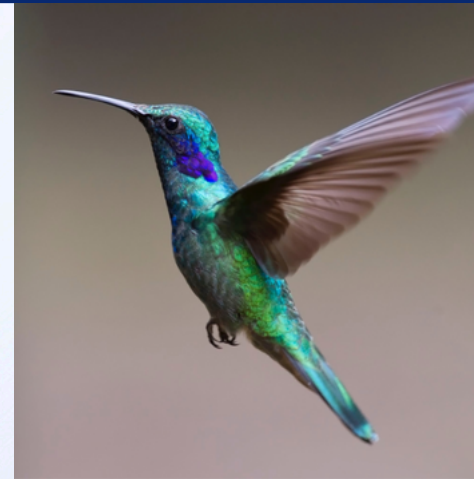
Students will focus on groups of reptiles including adaptations, aquatic/terrestrial evolution, and comparative anatomy.

Unit Title

Birds

Time Frame

3 Weeks



Focus of the Unit

Students will learn about the reproductive, behavior, and social structures of the different bird groups as well as feather structure analysis.

Unit Title

Mammals

Time Frame

4 Weeks



Focus of the Unit

Students will cover the different groups of mammals including mammal skull identification, reproduction and social structures, and comparative anatomy.

Course Title

Zoology



INNOVATIVE
ARTS ACADEMY

**Course
Overview**

Zoology is an engaging exploration of the animal kingdom, focusing on animal diversity, anatomy, physiology, behavior, and ecology. Students learn how animals function, adapt, and evolve through hands-on labs and research activities.

Unit Title

Animal Behavior (Ethology)

Time Frame

4 Weeks



Focus of the Unit

Students will focus on
instinct and learned
behaviors, communication
and social interactions, and
predator-prey dynamics.

Unit Title

Ecology and Conservation

Time Frame

4 Weeks

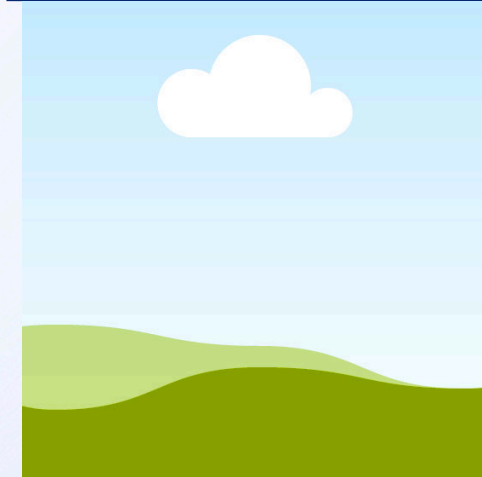


Focus of the Unit

Students will focus on
human impacts on animal
populations, endangered
species case studies, and a
final project around a
student-led conservation
effort.

Unit Title

Time Frame

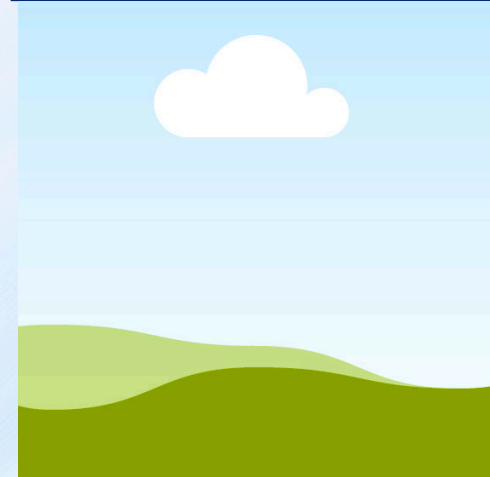


Focus of the Unit



Unit Title

Time Frame



Focus of the Unit



Unit Title**Classification of Life****Time Frame**

2-3 Weeks

**INNOVATIVE**
ARTS ACADEMY**Essential Question(s)**

- What defines an animal and how do scientists study them?
- How does evolution shape the diversity of life?
- How are animals classified based on shared characteristics?

**Focus of the Unit**

Students will learn about taxonomy, Linnaeus's System of Classification, and phylogenetic trees.

Standards

3.1.9-12.A-H Evolution: Explain how natural selection and genetic variation influence species survival. / Environmental Literacy: Investigate environmental influences on trait variation and population change.

Learning Targets

I can explain what zoology is and describe common research methods.

Learning Targets

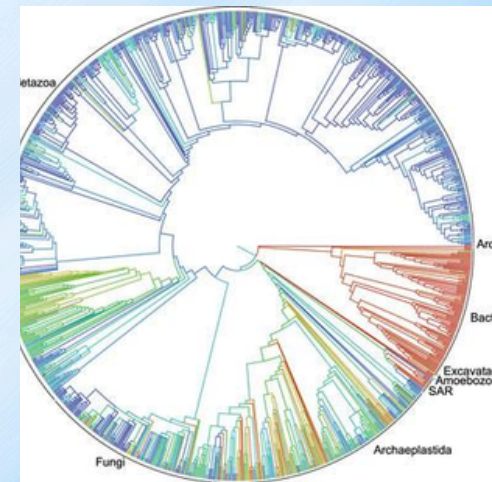
I can summarize how natural selection and evolution influence animal traits.

Learning Targets

I can use classification system to categorize animals into major groups.

Learning Targets

I can explain the different classification systems used throughout history and how they evolved into our modern taxonomy.

**Resources**

McGraw Hill Inspire Biology Textbook

Unit Title**Kingdoms****Time Frame**

2-3 Weeks

**INNOVATIVE**
ARTS ACADEMY**Essential Question(s)**

- How are living things categorized into Kingdoms?
- How do scientists use classification to organize life?

**Focus of the Unit**

Students will focus on the five Kingdoms of life including: Plantae, Fungi, Monera, Bacteria, Protista, and Animalia,.

Standards

3.1.9-12.S Communicate scientific information that common ancestry and biological evidence are supported by multiple lines of empirical evidence. / / Environmental Literacy: Investigate environmental influences on trait variation and population change.

Learning Targets

I can explain the kingdoms of life and provide examples for each.

Learning Targets

I can identify and describe the characteristics of the major kingdoms of life.

Learning Targets

I can explain how cellular structure and function support organism survival.

Learning Targets

I can classify organisms based on observable characteristics and evolutionary relationships.

**Resources**

McGraw Hill Inspire Biology Textbook

Unit Title**Invertebrates****Time Frame**

3-4 Weeks

**INNOVATIVE**
ARTS ACADEMY**Essential Question(s)**

- How do invertebrate body plans influence their behavior and ecological roles?
- Why are invertebrates essential to ecosystems and human life?

**Focus of the Unit**

Students will go through the 9 Phylums of invertebrates including body plans, ecological importance, and classification.

Standards

3.1.9-12.A Construct an explanation based on evidence for how the structure of DNA determines the structure of proteins which carry out the essential functions of life through systems of specialized cells.

Learning Targets

I can describe major invertebrate phyla and their defining features.

Learning Targets

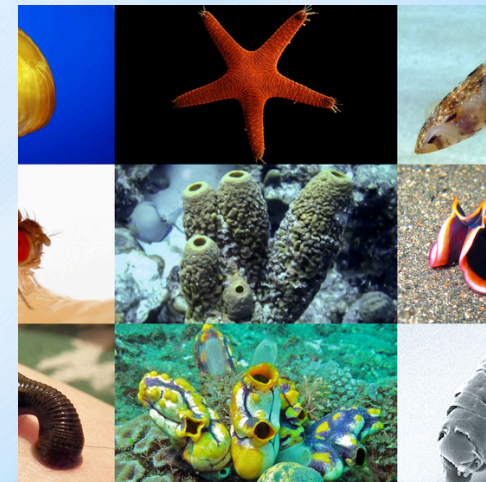
I can compare invertebrate body systems across groups.

Learning Targets

I can analyze the ecological importance of insects, mollusks, and other invertebrates.

Learning Targets

I can identify invertebrates through observation and classification activities.

**Resources**

McGraw Hill Inspire Biology Textbook

Unit Title	Fish
Time Frame	3 Weeks



INNOVATIVE
ARTS ACADEMY

	Essential Question(s)
	- What features distinguish fish from other vertebrates? - What evolutionary transitions allowed fish to diversify?

	Focus of the Unit
	Students will explore the three major groups of fish and their body plans, anatomy, ecological importance, and classification.

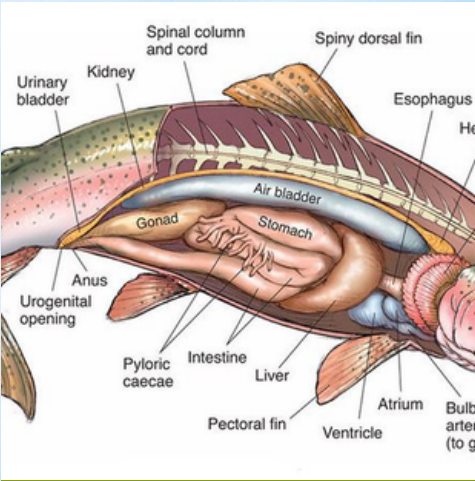
Standards	3.1.9-12.S Communicate scientific information that common ancestry and biological evolution are supported by multiple lines of empirical evidence. / CCC: Patterns and Systems - observe anatomical and physiological patterns across these groups.
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Learning Targets
I can identify key anatomical traits of fish.

Learning Targets
I can explain major adaptations that support different habitats of fish.

Learning Targets
I can use anatomical evidence to infer relationships among fish groups.

Learning Targets
I can explain adaptations that support life in water.



Resources	McGraw Hill Inspire Biology Textbook
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Unit Title**Amphibians****Time Frame**

3 Weeks

**INNOVATIVE**
ARTS ACADEMY**Essential Question(s)**

- What features distinguish amphibians from other vertebrates?
- What evolutionary transitions allowed amphibians to diversity?

**Focus of the Unit**

Students will focus on the groups of amphibians including life cycles, adaptations, and comparative anatomy.

Standards

3.1.9-12.S Communicate scientific information that common ancestry and biological evolution are supported by multiple lines of empirical evidence. / CCC: Patterns and Systems - observe anatomical and physiological patterns across these groups.

Learning Targets

I can identify key anatomical traits of amphibians.

Learning Targets

I can explain major adaptations that support different habitats of amphibians.

Learning Targets

I can compare life cycles and reproductive strategies among amphibian groups.

Learning Targets

I can explain adaptations that support amphibian life in water and on land.

**Resources**

McGraw Hill Inspire Biology Textbook

Unit Title	Reptiles
Time Frame	3 Weeks



INNOVATIVE
ARTS ACADEMY

	Essential Question(s)
	- What features distinguish reptiles from other vertebrates? - What evolutionary transitions allow reptiles to diversity into different kinds of habitats?

	Focus of the Unit
	Students will focus on groups of reptiles including adaptations, aquatic/terrestrial evolution, and comparative anatomy.

Standards	3.1.9-12.S Communicate scientific information that common ancestry and biological evolution are supported by multiple lines of empirical evidence. / CCC: Patterns and Systems - observe anatomical and physiological patterns across these groups.
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Learning Targets
I can identify key anatomical traits of reptile groups.

Learning Targets
I can explain major adaptations that support different habitats of reptiles.

Learning Targets
I can compare life cycles and reproductive strategies among reptiles.

Learning Targets
I can use anatomical evidence to infer relationships among reptile groups.



Resources	McGraw Hill Inspire Biology Textbook
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Unit Title	Birds
Time Frame	3 Weeks



INNOVATIVE
ARTS ACADEMY

	Essential Question(s)
	• What features distinguish birds from other vertebrates? • How did the adaptation of feathers help birds diversity?

	Focus of the Unit
	Students will learn about the reproductive, behavior, and social structures of the different bird groups as well as feather structure analysis.

Standards	3.1.9-12.A Construct an explanation based on evidence for how the structure of DNA determines the structure of proteins which carry out the essential functions of life through systems of specialized cells. / SEP: Evaluate empirical evidence to support claims about adaptation and behavior.
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Learning Targets
I can describe the structures and functions unique to birds.

Learning Targets
I can explain physiological adaptations such as flight.

Learning Targets
I can evaluate how social behavior influences survival in birds.

Learning Targets
I can describe characteristics that are unique to birds and provide examples.



Resources	McGraw Hill Inspire Biology Textbook
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Unit Title**Mammals****Time Frame**

4 Weeks

**INNOVATIVE**
ARTS ACADEMY**Essential Question(s)**

- What features distinguish mammals from other vertebrates?
- How do behaviors such as migration, communication, and parental care support mammalian survival?

**Focus of the Unit**

Students will cover the different groups of mammals including mammal skull identification, reproduction and social structures, and comparative anatomy.

Standards

3.1.9-12.A Construct an explanation based on evidence for how the structure of DNA determines the structure of proteins which carry out the essential functions of life through systems of specialized cells. / SEP: Evaluate empirical evidence to support claims about adaptation and behavior.

Learning Targets

I can describe the structures and functions unique to mammals.

Learning Targets

I can explain physiological adaptations such as endothermy in mammals.

Learning Targets

I can evaluate how social behavior influences survival in mammals.

Learning Targets

I can compare skulls, skeletons, and other structures to identify mammal groups and species.

**Resources**

McGraw Hill Inspire Biology Textbook

Unit Title**Animal Behavior (Ethology)****Time Frame**

4 Weeks

**INNOVATIVE**
ARTS ACADEMY**Essential Question(s)**

- How do animals learn, communicate, and interact socially?
- How do behavior patterns contribute to survival and reproduction?

**Focus of the Unit**

Students will focus on instinct and learned behaviors, communication and social interactions, and predator-prey dynamics.

Standards

3.1.9-12.O Evaluate the evidence for the role of group behavior on individual and species' chances to survive and reproduce. / SEP & CCC: Collect, interpret, and communicate observational data; identify patterns in behavioral responses.

Learning Targets

I can distinguish between innate and learned behaviors.

Learning Targets

I can analyze examples of communication, social hierarchy, and mating behaviors.

Learning Targets

I can conduct and interpret observations of animal behavior.

Learning Targets

I can explain how behavioral adaptations improve survival and reproductive success.

**Resources**

McGraw Hill Inspire Biology Textbook

Unit Title	Ecology and Conservation
Time Frame	4 Weeks



INNOVATIVE
ARTS ACADEMY

	Essential Question(s)
	- How do animals interact with ecosystems? - What role do humans play in species decline and conservations solutions?

	Focus of the Unit
	Students will focus on human impacts on animal populations, endangered species case studies, and a final project around a student-led conservation effort.

Standards	3.1.9-12.N Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity. / Environmental Literacy & Sustainability: Understand ecosystems, human impacts, resource use, and biodiversity conservation.
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Learning Targets
I can explain food webs, trophic levels, and biodiversity.

Learning Targets
I can evaluate human impacts on animal populations.

Learning Targets
I can research and propose solutions for a conservation issue.

Learning Targets
I can research an animal's adaptations, ecological role, threats, and conservations strategies in a species case study.



Resources	McGraw Hill Inspire Biology Textbook
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