COMMON CORE
Lessons & Activities

Classification of
ORGANISMS

SAMPLE

Reading for Information
Higher-Order Thinking
Writing Prompts
Current Events Analysis
Vocabulary
Cause & Effect
Graphic Organizers
& More!

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CORE
RESOURCE
™

About this Book

This Common Core Lessons and Activities Book allows you to immediately meet new Common Core State Standards for English Language Arts, as well as Literacy and Writing in History/Social Studies. It is designed to supplement your Social Studies resources, adding new Common Core rigor, analysis, writing, inference, text-dependent questions, and more into your daily instruction.

How to Use this Book:

- Work through the lessons and activities as a class to teach your students higher-order thinking, analysis, and 21st century skills necessary to meet new Common Core expectations.
- Allow students to work through the lessons independently to build and practice these new skills.
- Include technology collaboration, presentation, and discussion in the activities as you desire—you can decide how in-depth to go.
- Watch your class develop new abilities to meet the rigor of Common Core State Standards, right before your eyes!

Tips:

- Use some of the pages—or use them all—based on your grade, your students, your curriculum, and your needs.
- Use the pages at their current size, or if you prefer them to be 8-1/2" x 11", enlarge them 125% on your copy machine.
- Download graphic organizers labeled **"GO"** in the Table of Contents by going to: www.gallopade.com/client/go
- Use the correlations grid to easily see which Common Core standards are covered in each lesson.

Common Core Lessons & Activities:
Classification of Organisms

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G: Includes Graphic Organizer
GO: Graphic Organizer is also available 8½" x 11" online
download at www.gallopade.com/client/go
(numbers above correspond to the graphic organizer numbers online)

Can You Classify?

Look at the list and answer the questions.

THIS WEEK'S GROCERY LIST

1 pound of ground beef
6 pears
2 packages of bacon
1 gallon of milk
1 head of lettuce
4 squash
2 pound of salmon
1 head of broccoli

4 tomatoes
1 package of chicken wings
1 large watermelon
6 red apples
1 small pineapple
12 ounces of cream cheese
2 pound of tuna fish
1 bunch of spinach

1. Complete the graphic organizer by classifying the items on the grocery list. First, classify them into two broad groups. Then classify them into the smaller, more specific groups.

| All Food on Grocery List |

SAMPLE

| Food from plants: | Food from animals: |

| Fruit (part of plant with seeds): | Vegetables (part of plant without seeds): | Meat (made from animal muscle): | Dairy (made from animal milk): |

2. Which level uses more characteristics to classify the items?

3. Think of another way to divide the grocery list into your own system of classification. Choose your categories based on similarities and differences. You can be creative! Draw a diagram of your system of classification, classify all of the items on the grocery list, and share your results with your class.

Kingdoms & Domains

Read the texts and answer the questions.

The system of classification and taxonomy that we use today began with Carl Linnaeus in the 1700s. Linnaeus divided all living organisms into two very broad groups called kingdoms—*Plantae* and *Animalia*. Scientists today still classify organisms as plants and animals, but many living organisms are not plants or animals. Since Linnaeus' time, scientists have discovered more about life on Earth and added more kingdoms. Today, most scientists use a system of classification with six kingdoms. However, the number of kingdoms could change if new species are discovered that do not fit in any of the current six kingdoms.

Plantae are <u>multicellular</u> organisms like trees and flowers. They have cells with a nucleus. Plant cells also have thick cell walls for support and chloroplasts that help make food from sunlight.

Animalia are multicellular organisms that can move. Like plant cells, animal cells contain a nucleus. However, animal cells do not have a cell wall or chloroplasts. Animals gain energy by eating food from plants or other animals. Animals range from small insects to the largest whale.

Fungi are similar to plants but have remarkable differences. Like plants, fungi are multicellular, except for yeasts, and have cells that contain a nucleus. Their cells have a cell wall like plants, but they do not contain chloroplasts or make food from sunlight. Instead, fungi are natural decomposers and gain energy from absorbing the nutrients of dead organisms.

Protista are microscopic <u>unicellular</u> organisms that have a nucleus. Protists come in a wide variety of forms. Some protists, like amoeba, are animal-like and can move. Some protists, like algae, are plant-like and cannot move and contain chloroplasts for photosynthesis.

Bacteria and **Archaea** are the simplest organisms, having only one cell and no nucleus. Bacteria and Archaea are very similar microscopic organisms. However, Archaea have different chemicals in their cells and tend to live in extreme environments. In fact, scientists believe archaea are closely related to the first life forms ever to exist on Earth.

1. What are the six kingdoms?

2. A. The prefix "multi" means "many." What can you infer about organisms that are <u>multicellular</u>?
   B. The prefix "uni" means "one." What can you infer about organisms that are <u>unicellular</u>?

3. Give at least two examples of how scientists use each of the following to classify organisms into kingdoms:
   A. number of cells   B. how it gains energy   C. cell structure

4. A. Compare and contrast plants and animals.
   B. What do plants, animals, fungi, and protists have in common?

5. Explain why a system of classification can change over time.

PART B: Read this text and answer the questions below.

> Many scientists recognize a taxonomic level above kingdom, called a domain. In fact, domains are the broadest taxonomic level and are sometimes called super-kingdoms.
>
> Scientist group organisms from the six kingdoms into three large domains—Eurkarya, Bacteria, and Archaea—based on their cell structures. Eukarya contains organisms that are <u>eukaryotic</u>, which means they have cells with a nucleus. Bacteria and Archaea contain organisms that are <u>prokaryotic</u>, which means they have a cell without a nucleus.

6. A. Use the second text to define <u>eukaryotic</u>.
   B. Which kingdoms contain organisms that are eukaryotic?

7. A. Use the second test to define <u>prokaryotic</u>.
   B. Which kingdoms contain organisms that are prokaryotic?

8. Use information from both texts to complete the table.

Domain ➡	Archaea	Bacteria	Eukarya			
Kingdom			Protista			
Cell Type		No Nucleus			Nucleus	
Cell Number		Unicellular				
How organism gets energy	Varies	Varies	Varies			

1. _____ What traits do all animals have in common?
2. _____ What is a vertebrate?
3. _____ Are most animals vertebrates or invertebrates?
4. _____ How many phyla is the animal kingdom divided into?
5. _____ Are fish more closely related to mollusks or mammals?

PART B: Use the text to determine whether each statement is **true (T)** or **false (F)**. Rewrite each false statement to be true.

6. _____ The animal kingdom can be divided into smaller categories.
7. _____ The kingdom *Animalia* is a very narrow, specific taxon.
8. _____ The animal kingdom includes single and multicellular organisms.
9. _____ Vertebrate animals only live on land.
10. _____ Invertebrates do not have skeletons.

Complete the graphic organizer by comparing and contrasting vertebrates and invertebrates.

Vertebrates   **Invertebrates**
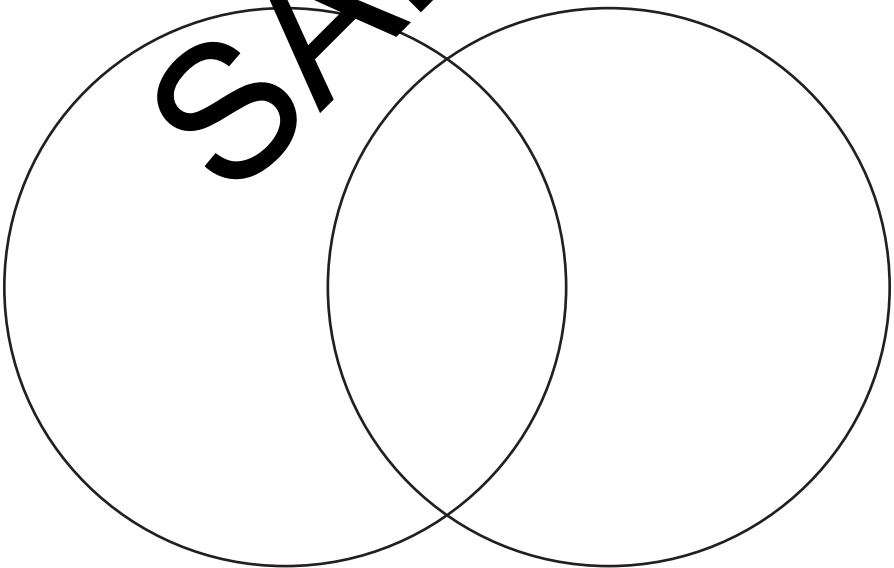
Classifying Animals

Read the text and answer the questions.

The animal kingdom, or kingdom *Animalia*, is a very diverse group of organisms. Some animals live in the air, some on land, and some in the water. Different animals may have different physical characteristics, different life cycles, and different reproduction methods. Animals range from the smallest worms to the largest whales.

Although organisms in the kingdom *Animalia* vary greatly, all animals have key similarities. All animals are made of many eukaryotic cells. All animals have the ability to move their own bodies. All animals are consumers, meaning they must eat other organisms as food for energy.

Organisms in the kingdom *Animalia* can be classified into smaller groups. One of the first characteristics scientists use to classify animals into smaller groups is body structure. An important body-structure trait they look at is whether or not the animal has a backbone. Animals with a backbone are called vertebrates. Animals without a backbone are called invertebrates.

All vertebrates are in the phylum *Chordata*. Vertebrates typically have a strong skeletal system that is supported by the backbone. All mammals (animals that have fur or hair), including humans, are vertebrates. Birds, reptiles, amphibians, and fish also have backbones. Believe it or not, only about 10% of all animals in the animal kingdom have a backbone.

In contrast, about 90% of all animals are invertebrates. There are eight different phyla of invertebrates. Arthropods, mollusks, worms, and echinoderms are some of the different types of invertebrates. The phylum *Arthropoda* includes all invertebrates with jointed exoskeletons and at least three pairs of jointed legs. Insects, spiders, and crustaceans are in this category. The phylum *Mollusca* includes animals that usually have soft unsegmented bodies and shells. Snails and clams are examples of this category. The phylum *Annelida* includes long, slender invertebrates that have soft bodies and no limbs, such as worms. Other phyla classifications are based on traits such as pores, a single opening to the digestive system, and more!

Correlations to Common Core State Standards

For your convenience, correlations are listed page-by-page, and for the entire book!

This book is correlated to the Common Core State Standards for English Language Arts grades 3-8,
and to Common Core State Standards for Literacy in History, Science, & Technological Subjects grades 6-8.

Correlations are highlighted in gray.

	READING	WRITING	LANGUAGE	SPEAKING & LISTENING
	Includes: RI: Reading Informational Text RST: Reading Science & Technical Subjects	**Includes:** W: Writing WHST: Writing History/Social Studies, Science, & Technical Subjects	**Includes:** L: Language LF: Language Foundational Skills	**Includes:** SL: Speaking & Listening

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18	RI · 1 2 3 4 5 6 7 8 9 10 / RST	W · 1 2 3 4 5 6 7 8 9 10 / WHST	L · 1 2 3 4 5 6 / LF	SL · 1 2 3 4 5 6
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For the complete Common Core standard identifier, combine your grade + "." + letter code above + "." + number code above.

In addition to the correlations indicated here, the activities may be adapted or expanded to align to additional standards and to meet the diverse needs of your unique students!

Common Core Lessons & Activities Books

Social Studies Titles:

- Declaration of Independence
- U.S. Constitution
- Bill of Rights
- Road to the Civil War
- The Civil War: Key Battles & Events
- Jamestown
- Key Events of World War II
- Civil Rights Movement
- Branches of Government
- Basic Economic Concepts
- Women's Suffrage and the 19th Amendment
- The American Revolution
- Explorers
- The Olympics
- Underground Railroad
- Forms of Government: Democracy, Monarchy, & Oligarchy & More
- Ancient Greece
- Ancient Egypt
- Native Americans
- Indian Removal & the Trail of Tears
- Inventors & Inventions
- Map Skills
- Westward Expansion
- Communities

Science Titles:

- Habitats
- States of Matter
- Cell Structure
- Weather
- Water Cycle
- Energy
- Solar System
- Sound
- Mammals
- Light
- Rocks and Minerals
- Oceans
- Heredity & Genetics
- Magnetism
- Natural Resources
- Ecosystems
- Force & Motion
- History of the Earth
- Life Cycles
- Wave Properties
- Landforms
- Classification of Organisms
- Electricity
- The Scientific Method

COMMON CORE
Lessons & Activities

Are you expected to change how you teach because of new CCSS for English Language Arts & new CCSS for Literacy and Writing in History/Social Studies and Science?

Are you expected to continue to meet existing science and social studies standards, AND integrate new, more rigorous expectations for reading, writing, analysis, inference, and more into your daily instruction?

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