

Cocalico School District
Year-at-a-Glance - Curriculum Overview

Department: Cocalico Connections Course: Science 7 Grade Level: 7

Outline for the course:

The Scientific Process

Scientific Inquiry [Guided Notes](#)

Warm-Up

Get ready for the lesson.

Instruction

How do scientists conduct scientific investigations?

Summary

Review and connect what you learned.

Assignment

Identify components of scientific inquiry.

Quiz Answers

Measurement [Guided Notes](#)

Warm-Up

Get ready for the lesson.

Instruction

How are things measured using the metric system?

Summary

Review and connect what you learned.

Assignment

Practice using the metric system.

Quiz Answers

Analyzing Data [Guided Notes](#)

Warm-Up

Get ready for the lesson.

Instruction

Why are data analyzed?

Summary

Review and connect what you learned.

Assignment

Analyze data.

Quiz Answers

Evaluating Scientific Explanations [Guided Notes](#)

Warm-Up

Get ready for the lesson.

Instruction

How are scientific explanations evaluated?

Summary

Review and connect what you learned.

Assignment

Read "Who Built the Pyramids?"

Quiz Answers

Hypotheses, Theories, and Laws [Guided Notes](#)

Warm-Up

Get ready for the lesson.

Instruction

What is the relationship among hypotheses, theories, and laws?

Summary

Review and connect what you learned.

Assignment

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Distinguish hypotheses, theories, and laws.

Quiz Answers

Unit Test

Unit Test Review Answers

Unit Test Answers

Characteristics of Living Things

Characteristics of Life [Guided Notes](#)

Warm-Up

Get ready for the lesson.

Instruction

What does it mean to be living?

Summary

Review and connect what you learned.

Assignment

Identify the characteristics and basic needs of all living things.

Assignment

Read about the experiments that proved that living things come from other living things.

Quiz Answers

Test

Test Review Answers

Test Answers

Life on Earth: Cell Structure and Function

Cell Theory [Guided Notes](#)

Warm-Up

Get ready for the lesson.

Instruction

What is the cell theory?

Summary

Review and connect what you learned.

Assignment

Describe the cell theory.

Quiz Answers

Cell Structure [Guided Notes](#)

Warm-Up

Get ready for the lesson.

Instruction

What are the roles of different organelles in a cell?

Summary

Review and connect what you learned.

Assignment

Describe cell structures and functions.

Quiz Answers

Animal and Plant Cells [Guided Notes](#)

Warm-Up

Get ready for the lesson.

Instruction

How are animal and plant cells alike and different?

Summary

Review and connect what you learned.

Assignment

Analyze the structures of animal and plant cells.

Quiz Answers

Lab: Exploring Cells

Warm-Up

Get ready for the lesson.

Instruction

What are the characteristics of different cell types?

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Virtual Lab

Use a microscope to investigate differences between a variety of cells.

Assignment: Reflect on the Lab

Answer questions based on the lab activity.

Exploring Cells Rubric

This is the rubric I will use to grade your lab report.

Lab Report

Write your lab report.

Summary

Review and connect what you learned.

Test

Test Review Answers

Test Answers

Photosynthesis and Respiration

Cellular Interactions with the Environment [Guided Notes](#)

Warm-Up

Get ready for the lesson.

Instruction

How do materials move into and out of a cell?

Summary

Review and connect what you learned.

Assignment

Analyze how materials move into and out of cells.

Assignment

Learn about specific molecules that are actively transported across the cell membrane.

Quiz Answers

Cell Homeostasis [Guided Notes](#)

Warm-Up

Get ready for the lesson.

Instruction

How does a cell maintain homeostasis?

Summary

Review and connect what you learned.

Assignment

Explore cellular transport.

Quiz Answers

Photosynthesis [Guided Notes](#)

Warm-Up

Get ready for the lesson.

Instruction

What happens during the process of photosynthesis?

Summary

Review and connect what you learned.

Assignment

Demonstrate your understanding of photosynthesis.

Quiz Answers

Photosynthesis and Cellular Respiration [Guided Notes](#)

Warm-Up

Get ready for the lesson.

Instruction

What are the similarities and differences between photosynthesis and cellular respiration?

Summary

Review and connect what you learned.

Assignment

Read about photosynthesis and cellular respiration.

Quiz Answers

Cellular Respiration [Guided Notes](#)

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Warm-Up

Get ready for the lesson.

Instruction

What happens during the process of cellular respiration?

Summary

Review and connect what you learned.

Assignment

Analyze cellular respiration.

Quiz Answers

Test

Test Review Answers

Test Answers

Properties and Changes of Matter

Atoms [Guided Notes](#)

Warm-Up

Get ready for the lesson.

Instruction

What is the structure of an atom?

Summary

Review and connect what you learned.

Assignment

Read about atoms.

Assignment

Describe an atom.

Quiz Answers

Elements, Compounds, and Mixtures [Guided Notes](#)

Warm-Up

Get ready for the lesson.

Instruction

What is everything on Earth made of?

Summary

Review and connect what you learned.

Assignment

Write about applications of elements, compounds, and mixtures.

Quiz Answers

Periodic Table [Guided Notes](#)

Warm-Up

Get ready for the lesson.

Instruction

How is the periodic table arranged?

Summary

Review and connect what you learned.

Assignment

Explore the periodic table of elements.

Quiz Answers

Building Blocks of Life [Guided Notes](#)

Warm-Up

Get ready for the lesson.

Instruction

What roles do specific elements and molecules play in living organisms?

Summary

Review and connect what you learned.

Assignment

Describe the building blocks of life.

Quiz Answers

Organic Compounds [Guided Notes](#)

Warm-Up

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Get ready for the lesson.

Instruction

What is unique about carbon and its compounds?

Summary

Review and connect what you learned.

Assignment

Practice identifying the characteristics of carbon, isomers, and models.

Quiz Answers

Instruction

How can unknown nutrients be identified?

Virtual Lab

Explore the presence of nutrients in food by performing a virtual experiment.

Cycles of Matter [Guided Notes](#)

Warm-Up

Get ready for the lesson.

Instruction

How does matter cycle through an ecosystem?

Summary

Review and connect what you learned.

Assignment

Assess cycles of matter in an ecosystem.

Quiz Answers

Unit Test

Unit Test Review Answers

Unit Test Answers

Cellular Organization

Body Organization and Homeostasis [Guided Notes](#)

Warm-Up

Get ready for the lesson.

Instruction

How is the human body organized to maintain homeostasis?

Summary

Review and connect what you learned.

Assignment

Analyze how the body is organized to maintain homeostasis.

Assignment

Read about how organ systems work together.

Quiz Answers

The Human Skeleton [Guided Notes](#)

Warm-Up

Get ready for the lesson.

Instruction

What are the major structures and functions of the human skeletal system?

Summary

Review and connect what you learned.

Assignment

Read about the human skeletal system.

Quiz Answers

The Musculoskeletal and Integumentary Systems [Guided Notes](#)

Warm-Up

Get ready for the lesson.

Instruction

What are the structures and functions of muscles, bones, and skin?

Summary

Review and connect what you learned.

Assignment

Describe the skeletal, muscular, and integumentary systems.

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Quiz Answers

The Digestive and Excretory Systems [Guided Notes](#)

Warm-Up

Get ready for the lesson.

Instruction

How do the digestive and excretory systems work?

Summary

Review and connect what you learned.

Assignment

Analyze how the digestive and excretory systems work.

Project: Modeling Food Digestion

Use a variety of materials to model food digestion.

Quiz Answers

The Digestive System [Guided Notes](#)

Warm-Up

Get ready for the lesson.

Instruction

How is food passed through the body and processed for energy?

Summary

Review and connect what you learned.

Assignment

Explore digestive system disorders.

Quiz Answers

The Immune System [Guided Notes](#)

Warm-Up

Get ready for the lesson.

Instruction

How does the immune system help the body fight against illness?

Summary

Review and connect what you learned.

Assignment

Analyze how the immune system helps the body fight against illness and disease.

Quiz Answers

Medicine and the Immune System [Guided Notes](#)

Warm-Up

Get ready for the lesson.

Instruction

How does the human body respond to medical treatment?

Summary

Review and connect what you learned.

Assignment

Write about medicine and the immune system.

Quiz Answers

The Reproductive System [Guided Notes](#)

Warm-Up

Get ready for the lesson.

Instruction

What are the roles of the male and female reproductive systems?

Summary

Review and connect what you learned.

Assignment

Analyze the roles of the male and female reproductive systems.

Quiz Answers

The Respiratory System [Guided Notes](#)

Warm-Up

Get ready for the lesson.

Instruction

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What are the major structures and functions of the respiratory system?

Summary

Review and connect what you learned.

Assignment

Read about the structures and functions of the respiratory system.

Quiz Answers

The Circulatory and Respiratory Systems [Guided Notes](#)

Warm-Up

Get ready for the lesson.

Instruction

How do the circulatory and respiratory systems deliver important substances?

Summary

Review and connect what you learned.

Assignment

Analyze the structures and functions of the circulatory and respiratory systems.

Quiz Answers

The Nervous System [Guided Notes](#)

Warm-Up

Get ready for the lesson.

Instruction

How does the body respond to stimuli?

Summary

Review and connect what you learned.

Assignment

Describe the nervous system.

Quiz Answers

The Peripheral Nervous System [Guided Notes](#)

Warm-Up

Get ready for the lesson.

Instruction

What are the major divisions of the peripheral nervous system, and what are their functions?

Summary

Review and connect what you learned.

Assignment

Write about the peripheral nervous system.

Assignment

Practice what you have learned about the peripheral nervous system.

Quiz Answers

The Nervous and Endocrine Systems [Guided Notes](#)

Warm-Up

Get ready for the lesson.

Instruction

How does the body respond to stimuli?

Summary

Review and connect what you learned.

Assignment

Analyze how the body responds to stimuli.

Project: Researching Stimuli and Responses

Create a presentation describing how the body responds to stimuli.

Quiz Answers

Test

Test Review Answers

Test Answers

Cell Cycle and Meiosis

Cell Cycle [Guided Notes](#)

Warm-Up

Get ready for the lesson.

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Instruction

What is the cell cycle?

Mitosis in Real Cells

Identify the stage of the cell cycle.

Summary

Review and connect what you learned.

Assignment

Analyze and describe the cell cycle.

Quiz Answers

Meiosis [Guided Notes](#)

Warm-Up

Get ready for the lesson.

Instruction

What is meiosis, and why is it important?

Summary

Review and connect what you learned.

Assignment

Analyze meiosis.

Asexual and Sexual Reproduction [Guided Notes](#)

Warm-Up

Get ready for the lesson.

Instruction

How do organisms reproduce?

Summary

Review and connect what you learned.

Assignment

Describe asexual and sexual reproduction.

Project: Comparing Asexual and Sexual Reproduction

Construct models of asexual and sexual reproduction.

Quiz Answers

Life on Earth: Classifying Earth's Organisms

Classification of Living Things [Guided Notes](#)

Warm-Up

Get ready for the lesson.

Instruction

What characteristics are used to classify organisms?

Summary

Review and connect what you learned.

Assignment

Describe the classification of organisms.

Quiz Answers

Bacteria [Guided Notes](#)

Warm-Up

Get ready for the lesson.

Instruction

What are bacteria?

Summary

Review and connect what you learned.

Assignment

Describe bacteria.

Quiz Answers

Protists [Guided Notes](#)

Warm-Up

Get ready for the lesson.

Instruction

How do the various types of protists differ?

Summary

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Review and connect what you learned.

Assignment

Compare and contrast protists.

Quiz Answers

Fungi [Guided Notes](#)

Warm-Up

Get ready for the lesson.

Instruction

What are fungi?

Summary

Review and connect what you learned.

Assignment

Describe fungi.

Quiz Answers

Overview of Plants [Guided Notes](#)

Warm-Up

Get ready for the lesson.

Instruction

How are plants alike and different?

Summary

Review and connect what you learned.

Assignment

Identify and describe plants.

Quiz Answers

Overview of Animals [Guided Notes](#)

Warm-Up

Get ready for the lesson.

Instruction

How are animals distinguished from other living things?

Summary

Review and connect what you learned.

Assignment

Characterize animals.

Quiz Answers

Dichotomous Keys [Guided Notes](#)

Warm-Up

Get ready for the lesson.

Instruction

How can an unknown organism be identified?

Summary

Review and connect what you learned.

Assignment

Practice identifying unknown organisms.

Quiz Answers

Animal Behavior [Guided Notes](#)

Warm-Up

Get ready for the lesson.

Instruction

How do animals respond to stimuli?

Summary

Review and connect what you learned.

Assignment

Distinguish animal behaviors.

Assignment

Read about animal behaviors that produce and protect their offspring.

Quiz Answers

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Test

Test Review Answers

Test Answers

Life on Earth: Plants

Types of Plants [Guided Notes](#)

Warm-Up

Get ready for the lesson.

Instruction

How have plants evolved over time?

Summary

Review and connect what you learned.

Assignment

Practice identifying plants.

Quiz Answers

The Life Cycles of Plants [Guided Notes](#)

Warm-Up

Get ready for the lesson.

Instruction

How does the life cycle of a plant differ depending on plant type?

Summary

Review and connect what you learned.

Assignment

Practice identifying the life cycles of plants.

Quiz Answers

Seedless Plants [Guided Notes](#)

Warm-Up

Get ready for the lesson.

Instruction

How do seedless plants differ?

Summary

Review and connect what you learned.

Assignment

Identify the characteristics of nonvascular and seedless vascular plants.

Quiz Answers

Seed Plants [Guided Notes](#)

Warm-Up

Get ready for the lesson.

Instruction

What are the structures and functions of seed plants?

Summary

Review and connect what you learned.

Assignment

Describe and identify characteristics of seed plants.

Quiz Answers

Angiosperms [Guided Notes](#)

Warm-Up

Get ready for the lesson.

Instruction

What are angiosperms?

Summary

Review and connect what you learned.

Assignment

Describe angiosperms.

Assignment

Read about pollination and seed dispersal.

Quiz Answers

Plant Responses [Guided Notes](#)

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Warm-Up

Get ready for the lesson.

Instruction

How do plants respond to different stimuli?

Summary

Review and connect what you learned.

Assignment

Describe how plants respond to different stimuli.

Quiz Answers

Photosynthesis in Plants

Vocabulary

Direct Instruction - Running Time: 17 min 13 sec

Online Content

Journal Activity

Lab Lecture - Running Time: 8 min 7 sec

Lab Assessment Answers [View Lab](#)

Practice Answers

Quiz Answers

Lab: Flower Dissection

Warm-Up

Get ready for the lesson.

Instruction

How can dissection be used to investigate the anatomy of a flower?

Virtual Lab

Use a virtual lab to explore the anatomy of a flower.

Wet Lab

Conduct an investigation to explore the anatomy of a flower.

Assignment: Reflect on the Lab

Answer questions based on the lab activity.

Flower Dissection Rubric

This is the rubric I will use to grade your lab report

Lab Report

Write your lab report.

Summary

Review and connect what you learned.

Test

Test Review Answers

Test Answers

Genetics, Heredity, and Natural Selection

Introduction to Heredity [Guided Notes](#)

Warm-Up

Get ready for the lesson.

Instruction

How are traits passed from one generation to the next?

Summary

Review and connect what you learned.

Assignment

Analyze how traits are passed from one generation to the next.

Quiz Answers

Predicting Heredity [Guided Notes](#)

Warm-Up

Get ready for the lesson.

Instruction

How can traits be predicted?

Summary

Review and connect what you learned.

Assignment

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Analyze Punnett squares to predict traits.

[Quiz Answers](#)

Lab: Heredity and Punnett Squares

Warm-Up

Get ready for the lesson.

Instruction

How are Punnett squares used to predict phenotypes?

Virtual Lab

Use a virtual lab to explore the use of Punnett squares to predict genotypes and phenotypes of offspring.

Assignment: Reflect on the Lab

Answer questions based on the lab activity.

Heredity and Punnett Squares Lab Rubric

This is the rubric I will use to grade your lab report.

Lab Report

Write your lab report.

Summary

Review and connect what you learned.

Genetic Code [Guided Notes](#)

Warm-Up

Get ready for the lesson.

Instruction

What are the structures and functions of DNA?

Summary

Review and connect what you learned.

Assignment

Analyze the structures and functions of DNA.

Assignment

Read about DNA and protein synthesis.

Quiz Answers

DNA Mutations [Guided Notes](#)

Warm-Up

Get ready for the lesson.

Instruction

What are the types of DNA mutations and their effects?

Summary

Review and connect what you learned.

Assignment

Describe DNA mutations.

Quiz Answers

Advances in Genetics [Guided Notes](#)

Researching Genetically Modified Foods Project Rubric

This is the rubric I will use to grade your PowerPoint.

Warm-Up

Get ready for the lesson.

Instruction

What are some advances in genetics?

Summary

Review and connect what you learned.

Assignment

Analyze advancements in genetics.

Project: Researching Genetically Modified Foods

Create a PowerPoint presentation on genetically modified foods.

Quiz Answers

Unit Test

Unit Test Review Answers

Unit Test Answers

Evolution

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The Theory of Evolution [Guided Notes](#)

Warm-Up

Get ready for the lesson.

Instruction

How was the theory of evolution developed?

Summary

Review and connect what you learned.

Assignment

Examine the theory of evolution.

Quiz Answers

Evidence for Evolution [Guided Notes](#)

Warm-Up

Get ready for the lesson.

Instruction

How do similarities between different species support the theory of evolution?

Summary

Review and connect what you learned.

Assignment

Describe the evidence for evolution.

Quiz Answers

Evolutionary Relationships [Guided Notes](#)

Warm-Up

Get ready for the lesson.

Instruction

How can evolutionary relationships be modeled and interpreted?

Summary

Review and connect what you learned.

Assignment

Analyze and interpret evolutionary relationships.

Assignment

Read about evolutionary relationships.

Quiz Answers

Natural Selection [Guided Notes](#)

Warm-Up

Get ready for the lesson.

Instruction

How does natural selection affect the evolution of a species?

Summary

Review and connect what you learned.

Assignment

Describe natural selection.

Quiz Answers

Ecology

Organizational Hierarchy [Guided Notes](#)

Warm-Up

Get ready for the lesson.

Instruction

How are populations, communities, and ecosystems related?

Summary

Review and connect what you learned.

Assignment

Explore the world's biomes.

Quiz Answers

Populations and the Environment [Guided Notes](#)

Warm-Up

Get ready for the lesson.

Instruction

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How do living and nonliving factors in an environment interact with each other?

Summary

Review and connect what you learned.

Assignment

Identify biotic factors, abiotic factors, and interactions within an ecosystem.

Quiz Answers

Interactions among Living Things [Guided Notes](#)

Warm-Up

Get ready for the lesson.

Instruction

How do organisms interact with each other?

Summary

Review and connect what you learned.

Assignment

Identify relationships among organisms.

Quiz Answers

Energy Flow in Ecosystems [Guided Notes](#)

Warm-Up

Get ready for the lesson.

Instruction

How does energy flow through an ecosystem?

Summary

Review and connect what you learned.

Assignment

Analyze the transfer of energy through ecosystems.

Quiz Answers

Cycles of Matter [Guided Notes](#)

Warm-Up

Get ready for the lesson.

Instruction

How does matter cycle through an ecosystem?

Summary

Review and connect what you learned.

Assignment

Assess cycles of matter in an ecosystem.

Project: Modeling the Carbon Cycle

Construct a model of the carbon cycle to show how carbon is recycled through an ecosystem.

Quiz Answers

Diversity of Life [Guided Notes](#)

Warm-Up

Get ready for the lesson.

Instruction

How are organisms alike and different?

Summary

Review and connect what you learned.

Assignment

Compare and contrast organisms.

Quiz Answers

Biodiversity [Guided Notes](#)

Warm-Up

Get ready for the lesson.

Instruction

Why is biodiversity important and how can it be preserved?

Summary

Review and connect what you learned.

Assignment

Describe biodiversity.

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[Assignment](#)

Read about another threat to biodiversity.

[Short Writing](#)

Describe ways that biodiversity can be protected.

[Quiz Answers](#)

[Biomes \[Guided Notes\]\(#\)](#)

[Warm-Up](#)

Get ready for the lesson.

[Instruction](#)

How do the various terrestrial biomes differ?

[Summary](#)

Review and connect what you learned.

[Assignment](#)

Identify and describe Earth's terrestrial biomes.

[Quiz Answers](#)

[Aquatic Ecosystems \[Guided Notes\]\(#\)](#)

[Warm-Up](#)

Get ready for the lesson.

[Instruction](#)

How do aquatic ecosystems differ?

[Summary](#)

Review and connect what you learned.

[Assignment](#)

Describe aquatic ecosystems.

[Quiz Answers](#)

[Human Impact on the Environment \[Guided Notes\]\(#\)](#)

[Warm-Up](#)

Get ready for the lesson.

[Instruction](#)

How does human activity benefit or harm the environment?

[Summary](#)

Review and connect what you learned.

[Assignment](#)

Read the article "Green Building."

[Unit Test](#)

[Unit Test Review Answers](#)

[Unit Test Answers](#)

[Career Exploration](#)

[Career Exploration Assignment](#)

[Career Exploration](#)

Read the Career Assignment document, look at the 3 additional documents, and then write the career paragraph.

% of Course Time: Self-paced, to cover all topics in the outline from above

Textbooks & Supplemental Materials: Edgenuity lessons, supplemented by Cocalico Teachers of Record

Assessments: Edgenuity quizzes and tests, performance tasks

Standards Addressed: Contact the Online Learning Facilitator for a supplemental document from Edgenuity outlining any applicable PA Standards address in the course topics. Note that for some courses, there are no PA Standards which may exist.



Eagle P.A.C.T. Course Connections:

Online Learning courses help to prepare students for the diverse ways in which they will learn outside of school. The self-paced, independent nature of virtual courses also helps to develop important skills such as self-advocacy, time management, organization, study skills, and self-discipline. Such skills are needed for a successful future.