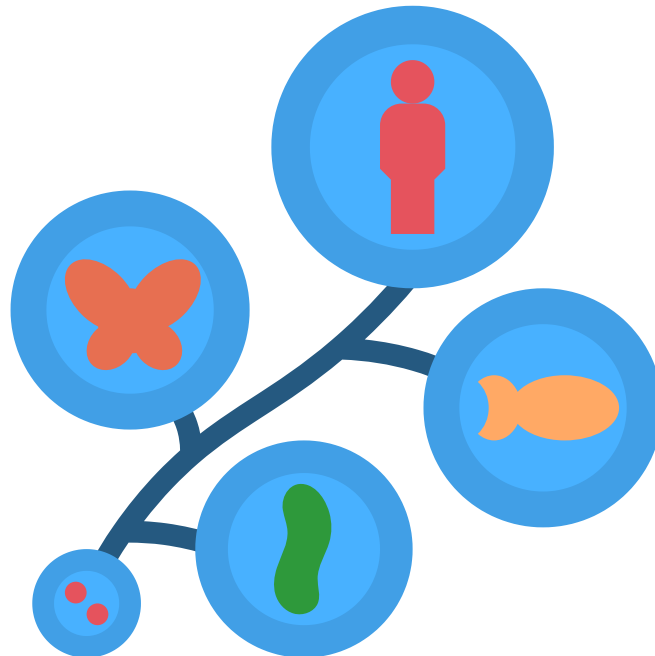


MS-LS4 California Grade 8 Science

- Full Standard

Preferred Integrated Model

- ✓ **Biological Evolution: Unity and Diversity**
- ✓ **Complete Standard for California 8th Grade Preferred Integrated Science Instruction Model**
- ✓ **Save you over 75%**



UPGRADE to the Bundle

California Grade 8 Science Full Year Science Curriculum

Preferred Integrated Model

- ✓ Complete Curriculum for California 8th Grade Preferred Integrated Science Instruction Model
- ✓ Over 150 Resources Included, Grouped into Standard and Presented in the Preferred Order According to the California Department of Education
- ✓ Save you over 75%



Everything You Need to Teach 8th Grade Science in California using the Preferred Model

- Lesson Bundles
- Lessons in PowerPoint and Google
- Homework and/or Worksheets Provided for Many Lessons
- Teacher and Student Versions of Each Lesson
- Many Activities, Projects, Review Activities, STEM Challenges



NGSS Included

- MS-LS3 Heredity: Inheritance and Variation of Traits
- MS-LS4 Biological Evolution: Unity and Diversity
- MS-ESS1 Earth's Place in the Universe
- MS-ESS3 Earth and Human Activity
- MS-PS2 Motion and Stability: Forces and Interactions
- MS-PS3 Energy
- MS-PS4 Waves and their Applications in Technologies for Information Transfer
- MS-ETS1 Engineering Design



CLICK HERE



Save 75% and get the FULL
Year Curriculum

Resources Included

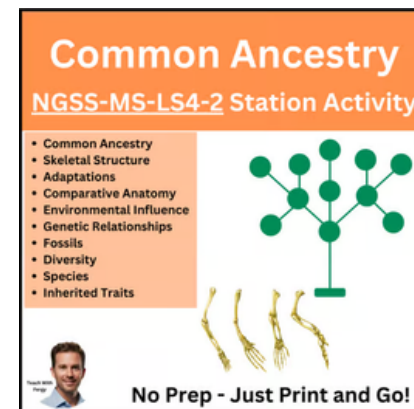
MS-LS4-1

- Fossils and Geologic Time Lesson
- Fossils Reading
- Evidence of Evolution in Fossils - Station Activity
- Fossils and Geologic Time Lab Station Activity



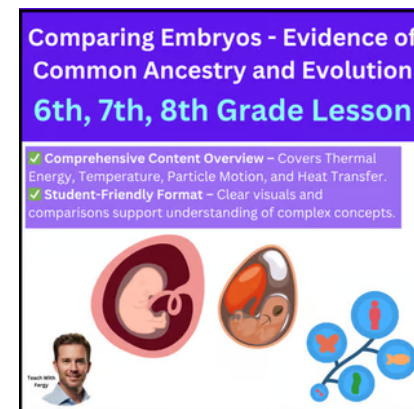
MS-LS4-2

- Evolution Lesson
- Fossils Reading
- Common Ancestry - Station Activity
- Evolution - Scavenger Hunt
- Crash Course Video Worksheet - The Timeline of Life



MS-LS4-3

- Comparing Embryos Evidence of Common Ancestry and Evolution Lesson
- Comparative Embryology - Station Activity
- Crash Course Video Worksheet Human Evolution and Chimps



Resources Included

MS-LS4-4

- Physical & Behavioral Adaptations Lesson
- Natural Selection Lesson
- Natural Selection and Adaptation - Station Activity
- Physical Adaptations Reading
- Animal Adaptations Reading
- Crash Course Video Worksheet Population Genetics

MS-LS4-5

- Genetic Technologies and Gene Therapy Lesson
- Reproductive Technologies Lesson
- Reproductive Technologies - Scavenger Hunt
- Artificial Selection - Station Activity
- GMO Research Activity
- Genetically Modified Organisms Reading
- Genetics and Gene Therapy Reading

MS-LS4-6

- Physical & Behavioral Adaptations Lesson
- Natural Selection and Population Modeling - Station Activity
- Physical Adaptations Reading
- Natural Selection Lesson
- Animal Adaptations Reading
- Crash Course Video Worksheet - Life's Way of Stayin Alive

Reading Comprehension Passage & Questions

Animal Adaptations

6th, 7th, and 8th Grade Science

- ✓ No Prep, Ready-to-Use Resource in Google and Office Format
- ✓ Includes Comprehension and Extension Questions



Artificial Selection

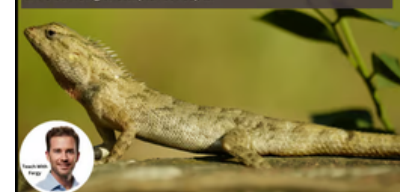
NGSS-MS-LS4-5 Station Activity



Physical and Behavioral Adaptations Lesson

6th, 7th, 8th Grade

- ✓ Comprehensive Content Overview - Includes evolution refresher, physical and behavioral adaptations, and inquiry-based learning
- ✓ Student-Friendly Format - Clear visuals and comparisons support understanding of complex concepts.

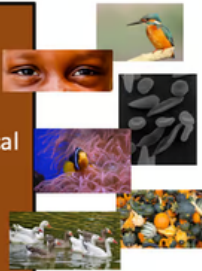


Everything You Need to Teach 8th Grade Science in California using the Preferred Model for MS-LS4

Complete Lessons

Natural Selection

- Natural Selection
- Biodiversity
- Adaptation – Physical and Behavioral
- Human Influence



TWFI MIDDLE SCHOOL LESSON

Physical and Behavioral Adaptations Lesson

6th, 7th, 8th Grade

- ✓ Comprehensive Content Overview – Covers how changes in motion cause energy transfer and temperature changes.
- ✓ Student-Friendly Format – Clear visuals and comparisons support understanding of complex concepts.



TWFI MIDDLE SCHOOL LESSON

Comparing Embryos - Evidence of Common Ancestry and Evolution

6th, 7th, 8th Grade Lesson

- ✓ Comprehensive Content Overview – Covers Thermal Energy, Temperature, Particle Motion, and Heat Transfer.
- ✓ Student-Friendly Format – Clear visuals and comparisons support understanding of complex concepts.



TWFI MIDDLE SCHOOL LESSON

Evolution

- What is Evolution?
- Example of Evolution
- Evidence for Evolution – Body Structures
- Evidence for Evolution – Fossil Record
- Evidence for Evolution – Embryological Development
- Evidence for Evolution – Vestigial Traits
- Evidence for Evolution – DNA



TWFI MIDDLE SCHOOL LESSON

Genetic Technologies and Gene Therapy

- Introduction to Genetic Engineering
- CRISPR Technology
- Viruses and Gene Therapy
- GMOs



TWFI MIDDLE SCHOOL LESSON

Reproductive Technologies Lesson

- ✓ Comprehensive Content Overview – This lesson explores technologies that help plants and animals reproduce such as selective breeding, IVF, and cloning.
- ✓ Student-Friendly Format – Clear visuals and comparisons support understanding of complex concepts.



TWFI MIDDLE SCHOOL LESSON

Fossils and Geologic Time

MIDDLE SCHOOL – EARTH SCIENCE

- What is a Fossil?
- How Does Fossilization Occur?
- Rock Strata
- The Fossil Record
- The Geologic Time Scale



TWFI MIDDLE SCHOOL LESSON

Everything You Need to Teach 8th Grade Science in California using the Preferred Model for MS-LS4

Activities

Reading Comprehension Passage & Questions

Physical Adaptations
6th, 7th, and 8th Grade Science

- ✓ No Prep, Ready-to-Use Resource
- ✓ In Google and Office Format
- ✓ Includes Comprehension and Extension Questions



Reading Comprehension Passage & Questions

Animal Adaptations
6th, 7th, and 8th Grade Science

- ✓ No Prep, Ready-to-Use Resource
- ✓ In Google and Office Format
- ✓ Includes Comprehension and Extension Questions



Fossils
Scientific Reading Comprehension Article and Extension Activity



Improve your students' Literacy and Analysis Skills, use as an Emergency Substitute Plan, or create Applicability in your classroom

Genetically Modified Organisms
Scientific Reading Comprehension Article and Extension Activity



Improve your students' Literacy and Analysis Skills, use as an Emergency Substitute Plan, or create Applicability in your classroom

Genetics and Gene Therapy
Scientific Reading Comprehension Article



Improve your students' Scientific Literacy and Analysis Skills, use as an Emergency Substitute Plan or create Applicability in your classroom

Crash Course Biology 2.0
#16: Evolutionary History: The Timeline of Life

- ✓ Classroom Ready - Just Print and Go!
- ✓ Active Engagement - Keep Students' Attention
- ✓ Direct Video Link Included

[WATCH VIDEO](#)



Includes Student Copy and Answer Keys

Crash Course Biology 2.0
#19: Human Evolution: We Didn't Evolve From Chimps

- ✓ Classroom Ready - Just Print and Go!
- ✓ Active Engagement - Keep Students' Attention
- ✓ Direct Video Link Included

[WATCH VIDEO](#)



Includes Student Copy and Answer Keys

Crash Course Biology 2.0
#13: Natural Selection: Life's Way of Stayin' Alive

- ✓ Classroom Ready - Just Print and Go!
- ✓ Active Engagement - Keep Students' Attention
- ✓ Direct Video Link Included

[WATCH VIDEO](#)

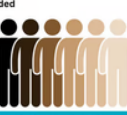


Includes Student Copy and Answer Keys

Crash Course Biology #14:
Population Genetics: Why do we have different skin colors?

- ✓ Classroom Ready - Just Print and Go!
- ✓ Active Engagement - Keep Students' Attention
- ✓ Direct Video Link Included

[WATCH VIDEO](#)



Includes Student Copy and Answer Keys

Device-Based Scavenger Hunt
Introduction to Evolution

Includes:

- 5 Unique Locations
- Online form submission
- Answer Key

Works on all smartphones, tablets, Chromebooks, and laptops

- 100% Digital
- Simulations
- Quizzes
- Videos
- Games
- and more



Device-Based Scavenger Hunt
Reproductive Technologies

Includes:

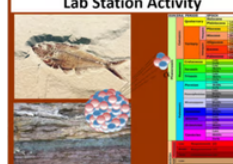
- 5 Unique Locations
- Online form submission
- Answer Key

Works on all smartphones, tablets, Chromebooks, and laptops

- 100% Digital
- Simulations
- Quizzes
- Videos
- Games
- and more



Fossils and Geologic Time
Lab Station Activity



7 Lab Station Activities to get your kids out of their seats and engaged in their learning

Analysing Evidence about CRISPR

CRISPR is a powerful tool for editing DNA. It has been used to edit the DNA of many organisms, including humans. However, there are concerns about the safety and ethical implications of CRISPR. This activity will help you understand the science behind CRISPR and the issues surrounding its use.

Question	Answer
1. What is CRISPR?	CRISPR is a natural defense mechanism in bacteria that allows them to remember and fight off viruses.
2. How does CRISPR work?	CRISPR works by using a guide RNA to target a specific sequence of DNA and then using a Cas9 enzyme to cut the DNA at that location.
3. What are the potential benefits of CRISPR?	CRISPR has the potential to be used to treat genetic diseases, improve crop yields, and create new medicines.
4. What are the potential risks of CRISPR?	CRISPR could be used to create "designer babies" or to alter the human genome in ways that could have unintended consequences.
5. How can we ensure the safe and ethical use of CRISPR?	We need to have strict regulations and oversight for the use of CRISPR, and we need to have open discussions about the ethical implications of this technology.

Evidence of Evolution in Fossils
NGSS-MS-LS4-1 Station Activity



No Prep - Just Print and Go!

Common Ancestry
NGSS-MS-LS4-2 Station Activity



No Prep - Just Print and Go!

Natural Selection and Adaptation
NGSS-MS-LS4-4 Station Activity



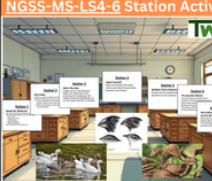
TWF

Comparative Embryology
NGSS-MS-LS4-3 Station Activity



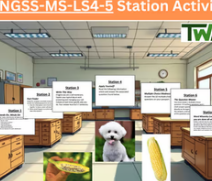
TWF

Natural Selection and Population Modeling
NGSS-MS-LS4-6 Station Activity



TWF

Artificial Selection
NGSS-MS-LS4-5 Station Activity



TWF

The Standard is Explained and the Resources it Incorporates are Outlined

California Preferred Integrated NGSS Course Model – Grade 8 MS LS4 Biological Evolution: Unity and Diversity

Note: There are resources that overlap between the standards. Simply choose the order that best fits your classroom. Also, there are more resources here than you will most likely decide to use. I have provided extra so you can make the best decision for your students on what is best to include.

MS LS4-1: Analyze and interpret data for patterns in the fossil record that document the existence, diversity, extinction, and change of life forms throughout the history of life on Earth under the assumption that natural laws operate today as in the past.

Emphasis is on finding patterns of changes in the level of complexity of anatomical structures in organisms and the chronological order of fossil appearance in the rock layers. *Assessment Boundary:* Assessment does not include the names of individual species or geological eras in the fossil record.

Resources:

- Fossils and Geologic Time Lesson
- Fossils Reading
- Evidence of Evolution in Fossils - Station Activity
- Fossils and Geologic Time Lab Station Activity

MS LS4-2: Apply scientific ideas to construct an explanation for the anatomical similarities and differences among modern organisms and between modern and fossil organisms to infer evolutionary relationships.

Emphasis is on explanations of the evolutionary relationships among organisms in terms of similarity or differences of the gross appearance of anatomical structures.

Resources:

- Evolution Lesson
- Fossils Reading
- Common Ancestry - Station Activity
- Evolution - Scavenger Hunt
- Crash Course Video Worksheet - The Timeline of Life

MS LS4-3: Analyze displays of pictorial data to compare patterns of similarities in the embryological development across multiple species to identify relationships not evident in the fully formed anatomy.

Emphasis is on inferring general patterns of relatedness among embryos of different organisms by comparing the macroscopic appearance of diagrams or pictures. *Assessment Boundary:* Assessment of comparisons is limited to gross appearance of anatomical structures in embryological development.

Resources:

- Comparing Embryos Evidence of Common Ancestry and Evolution Lesson
- Comparative Embryology - Station Activity
- Crash Course Video Worksheet Human Evolution and Chimps

MS LS4-4: Construct an explanation based on evidence that describes how genetic variations of traits in a population increase some individuals' probability of surviving and reproducing in a specific environment.

Emphasis is on using simple probability statements and proportional reasoning to construct explanations.

Resources:

- Physical & Behavioral Adaptations Lesson
- Natural Selection Lesson
- Natural Selection and Adaptation - Station Activity
- Physical Adaptations Reading
- Animal Adaptations Reading
- Crash Course Video Worksheet Population Genetics

MS LS4-5: Gather and synthesize information about technologies that have changed the way humans influence the inheritance of desired traits in organisms.

Emphasis is on synthesizing information from reliable sources about the influence of humans on genetic outcomes in artificial selection (such as genetic modification, animal husbandry, gene therapy); and, on the impacts these technologies have on society as well as the technologies leading to these scientific discoveries.

Resources:

- Genetic Technologies and Gene Therapy Lesson
- Reproductive Technologies Lesson
- Reproductive Technologies - Scavenger Hunt
- Artificial Selection - Station Activity
- GMO Research Activity
- Genetically Modified Organisms Reading
- Genetics and Gene Therapy Reading

MS LS4-6: Use mathematical representations to support explanations of how natural selection may lead to increases and decreases of specific traits in populations over time.

Emphasis is on using mathematical models, probability statements, and proportional reasoning to support explanations of trends in changes to populations over time. *Assessment Boundary:* Assessment does not include Hardy Weinberg calculations.

Resources:

- Physical & Behavioral Adaptations Lesson
- Natural Selection and Population Modeling - Station Activity
- Physical Adaptations Reading
- Natural Selection Lesson
- Animal Adaptations Reading
- Crash Course Video Worksheet - Life's Way of Stayin Alive

Who is this Bundle for?

- **Teachers who teach grade 8 science in California and who use the ‘Preferred Integrated Model’**
- **Teachers who want a variety of resources at their fingertips in order to meet the standards**
- **Teachers who don’t have time to develop their own resources or organize what to teach and when**