NEW TEKS ALIGNED

4th Grade Science Scope & Sequence

KESLER SCIENCE

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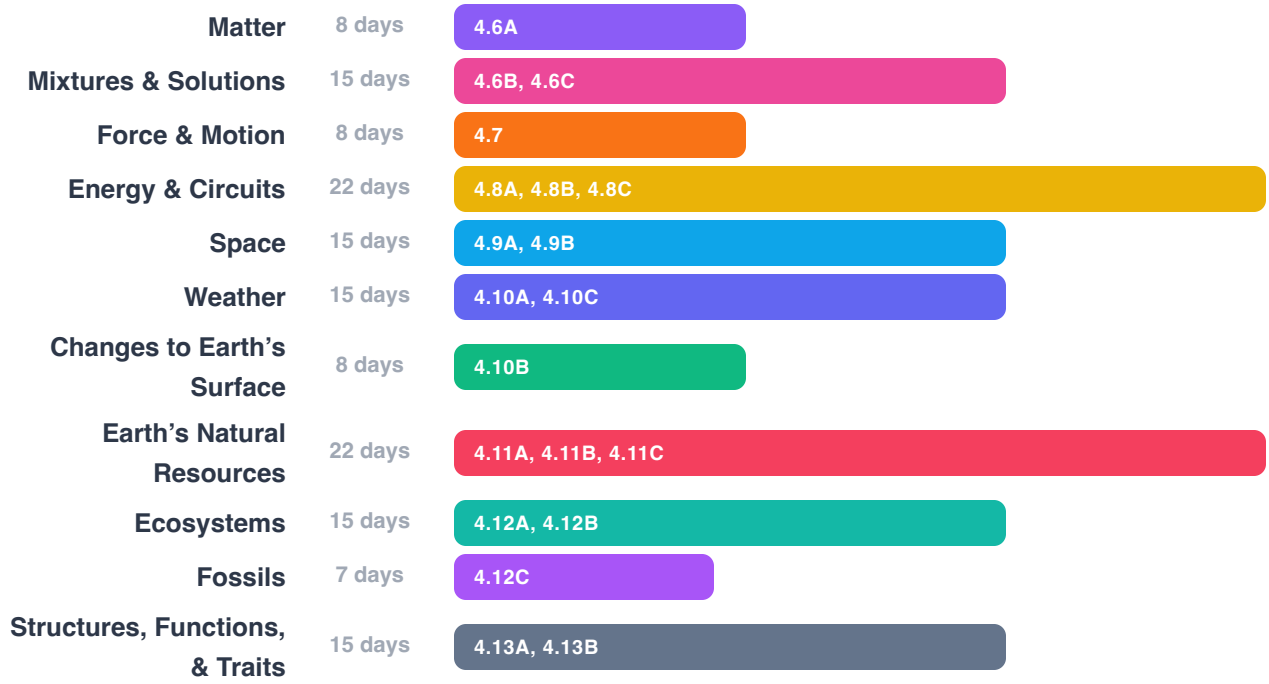
150 school days • 11 units • 20 TEKS standards



A Note from Chris

Before you jump into the calendar, a couple of things from me.

This guide is built around 150 instructional days, not the 175 sitting on your contract. You and I both know how many of those days quietly disappear. STAAR windows, benchmark testing, assemblies, picture day, the fire drill that swallows your whole science block. I left that cushion on purpose so you're not cramming three units into the last two weeks of May.

The order isn't random. We open with matter, mixtures, force, and energy while everybody's still fresh, head outside for space, weather, and Earth's changing surface, then finish the year with ecosystems, fossils, and how living things are built. Each unit gives the next one something to stand on.

And you know your kids and your campus calendar way better than I ever will. If your district teaches ecosystems in the fall, move it there. If weather flows better right after space, go for it. Treat this like a roadmap. You're still the one driving.

Let's go have a great year.

ACTIVITY TYPE KEY (USED IN DAY-BY-DAY TABLES)

Engagement | Station Lab | Presentation + INB | Inquiry Lab | Assessment | Amazing Anchors | Reading | Writing Prompt | WIKI Ticket | Student Choice

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1 Matter

8 days 1 standard: 4.6A

CONTENT STANDARDS

TEKS 4.6A
Classify and describe matter using observable physical properties, including temperature, mass, magnetism, relative density (the ability to sink or float in water), and physical state (solid, liquid, gas)

KEY VOCABULARY

- matter
- mass
- physical state
- relative density
- temperature
- gas
- physical properties
- magnetism
- volume
- solid
- liquid

SUGGESTED RECURRING THEMES

4.5E Investigate how energy flows and matter cycles through systems

SUGGESTED SCIENCE & ENGINEERING PRACTICES

4.1A Ask questions and define problems based on observations

DAY-BY-DAY PACING

MON	TUE	WED	THU	FRI
Day 1 **Describing Physical Properties** ENGAGEMENT	Day 2 **Describing Physical Properties** STATION LAB (INPUT)	Day 3 **Describing Physical Properties** STATION LAB (OUTPUT)	Day 4 **Describing Physical Properties** PRESENTATION + INB	Day 5 **Describing Physical Properties** PRESENTATION + INB **Physical Properties of Matter** WIKI TICKET
Day 6 **Describing Physical Properties** STUDENT CHOICE	Day 7 **Describing Physical Properties** STUDENT CHOICE	Day 8 **Describing Physical Properties** ASSESSMENT		

2 Mixtures & Solutions

15 days 2 standards: 4.6B, 4.6C

CONTENT STANDARDS

TEKS 4.6B
Investigate and compare a variety of mixtures, including solutions that are composed of liquids in liquids and solids in liquids

TEKS 4.6C
Demonstrate that matter is conserved when mixtures such as soil and water or oil and water are formed

KEY VOCABULARY

matter	substance
physical properties	mixture
solution	dissolve
conserved	evaporates

SUGGESTED RECURRING THEMES

4.5E Investigate how energy flows and matter cycles through systems

4.5G Explain how factors or conditions impact stability and change

SUGGESTED SCIENCE & ENGINEERING PRACTICES

4.3A Develop explanations and propose solutions supported by data and models

4.3B Communicate explanations and solutions in a variety of formats

DAY-BY-DAY PACING

MON	TUE	WED	THU	FRI
Day 1 **Comparing Mixtures & Solutions** ENGAGEMENT	Day 2 **Comparing Mixtures & Solutions** STATION LAB (INPUT)	Day 3 **Comparing Mixtures & Solutions** STATION LAB (OUTPUT)	Day 4 **Comparing Mixtures & Solutions** PRESENTATION + INB	Day 5 **Comparing Mixtures & Solutions** PRESENTATION + INB **Mixtures & Solutions** WIKI TICKET
Day 6 **Mixtures & Solutions** WRITING PROMPT	Day 7 **Comparing Mixtures & Solutions** ASSESSMENT	Day 8 **Matter Conservation in Mixtures** ENGAGEMENT	Day 9 **Matter Conservation in Mixtures** STATION LAB (INPUT)	Day 10 **Matter Conservation in Mixtures** STATION LAB (OUTPUT)
Day 11 **Matter Conservation in Mixtures** PRESENTATION + INB	Day 12 **Matter Conservation in Mixtures** PRESENTATION + INB **Conservation of Mass** WIKI TICKET	Day 13 **Matter Conservation in Mixtures** STUDENT CHOICE	Day 14 **Matter Conservation in Mixtures** STUDENT CHOICE	Day 15 **Matter Conservation in Mixtures** ASSESSMENT

3 Force & Motion

8 days 1 standard: 4.7

CONTENT STANDARDS

TEKS 4.7
Plan and conduct descriptive investigations to explore the patterns of forces such as gravity, friction, or magnetism in contact or at a distance on an object

KEY VOCABULARY

- force
- push
- pull
- gravity
- friction
- magnetism
- motion
- inference
- observation

SUGGESTED RECURRING THEMES

4.5B Identify and investigate cause-and-effect relationships

SUGGESTED SCIENCE & ENGINEERING PRACTICES

4.1B Plan and conduct descriptive investigations and design solutions

DAY-BY-DAY PACING

MON	TUE	WED	THU	FRI
Day 1 **Investigate Patterns of Forces** ENGAGEMENT	Day 2 **Investigate Patterns of Forces** STATION LAB (INPUT)	Day 3 **Investigate Patterns of Forces** STATION LAB (OUTPUT)	Day 4 **Investigate Patterns of Forces** PRESENTATION + INB	Day 5 **Investigate Patterns of Forces** PRESENTATION + INB **Investigating Forces** WIKI TICKET
Day 6 **Investigate Patterns of Forces** STUDENT CHOICE	Day 7 **Investigate Patterns of Forces** STUDENT CHOICE	Day 8 **Investigate Patterns of Forces** ASSESSMENT		

4 Energy & Circuits

22 days 3 standards: 4.8A, 4.8B, 4.8C

CONTENT STANDARDS

TEKS 4.8A
Investigate and identify the transfer of energy by objects in motion, waves in water, and sound

TEKS 4.8B
Identify conductors and insulators of thermal and electrical energy

TEKS 4.8C
Demonstrate and describe how electrical energy travels in a closed path that can produce light and thermal energy

KEY VOCABULARY

energy transformation	wave
particles	vibration
sound	medium
amplitude	compressions
thermal energy	electrical energy
insulator	conductor
closed circuit	open circuit
energy source	

SUGGESTED RECURRING THEMES

4.5E Investigate how energy flows and matter cycles through systems

4.5F Explain the relationship between structure and function

SUGGESTED SCIENCE & ENGINEERING PRACTICES

4.2B Analyze data by identifying features, patterns, and sources of error

4.3A Develop explanations and propose solutions supported by data and models

4.4A Explain how scientific discoveries and innovations impact science and society

DAY-BY-DAY PACING

MON	TUE	WED	THU	FRI
Day 1 **Investigating Energy Transfer** ENGAGEMENT	Day 2 **Investigating Energy Transfer** STATION LAB (INPUT)	Day 3 **Investigating Energy Transfer** STATION LAB (OUTPUT)	Day 4 **Investigating Energy Transfer** PRESENTATION + INB	Day 5 **Investigating Energy Transfer** PRESENTATION + INB
Day 6 **Investigating Energy Transfer** STUDENT CHOICE	Day 7 **Investigating Energy Transfer** STUDENT CHOICE	Day 8 **Investigating Energy Transfer** ASSESSMENT	Day 9 **Identify Conductors & Insulators** ENGAGEMENT	Day 10 **Identify Conductors & Insulators** STATION LAB (INPUT)
Day 11 **Identify Conductors & Insulators** STATION LAB (OUTPUT)	Day 12 **Identify Conductors & Insulators** PRESENTATION + INB	Day 13 **Identify Conductors & Insulators** PRESENTATION + INB **Conductors & Insulators** WIKI TICKET	Day 14 **Conductors & Insulators** WRITING PROMPT	Day 15 **Identify Conductors & Insulators** ASSESSMENT

4 Energy & Circuits

Day-by-Day Pacing (continued)

MON	TUE	WED	THU	FRI
Day 16 Electricity in Closed Circuits ENGAGEMENT	Day 17 Electricity in Closed Circuits STATION LAB (INPUT)	Day 18 Electricity in Closed Circuits STATION LAB (OUTPUT)	Day 19 Electricity in Closed Circuits PRESENTATION + INB	Day 20 Electricity in Closed Circuits PRESENTATION + INB Electrical Circuits WIKI TICKET
Day 21 Electrical Circuits WRITING PROMPT	Day 22 Electricity in Closed Circuits ASSESSMENT			

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5 Space

15 days 2 standards: 4.9A, 4.9B

CONTENT STANDARDS

TEKS 4.9A
Collect and analyze data to identify sequences and predict patterns of change in seasons such as change in temperature and length of daylight

TEKS 4.9B
Collect and analyze data to identify sequences and predict patterns of change in the observable appearance of the Moon from Earth

KEY VOCABULARY

- sequence
- pattern
- seasons
- predict
- temperature
- precipitation
- lunar cycle
- revolution
- cycle
- new moon
- full moon
- first quarter
- third quarter

SUGGESTED RECURRING THEMES

4.5A Identify and use patterns to explain phenomena or design solutions

4.5B Identify and investigate cause-and-effect relationships

SUGGESTED SCIENCE & ENGINEERING PRACTICES

4.1G Develop and use models to represent phenomena and processes

4.2B Analyze data by identifying features, patterns, and sources of error

DAY-BY-DAY PACING

MON	TUE	WED	THU	FRI
Day 1 **Patterns of Change in Seasons** ENGAGEMENT	Day 2 **Patterns of Change in Seasons** STATION LAB (INPUT)	Day 3 **Patterns of Change in Seasons** STATION LAB (OUTPUT)	Day 4 **Patterns of Change in Seasons** PRESENTATION + INB	Day 5 **Patterns of Change in Seasons** PRESENTATION + INB **Patterns of Change in Seasons & Shadows** WIKI TICKET
Day 6 **Patterns of Change in Seasons** STUDENT CHOICE	Day 7 **Patterns of Change in Seasons** STUDENT CHOICE	Day 8 **Patterns of Change in Seasons** ASSESSMENT	Day 9 **Patterns of Change in the Moon** ENGAGEMENT	Day 10 **Patterns of Change in the Moon** STATION LAB (INPUT)
Day 11 **Patterns of Change in the Moon** STATION LAB (OUTPUT)	Day 12 **Patterns of Change in the Moon** PRESENTATION + INB	Day 13 **Patterns of Change in the Moon** PRESENTATION + INB WIKI TICKET	Day 14 **Patterns of Change** WRITING PROMPT	Day 15 **Patterns of Change in the Moon** ASSESSMENT

6 Weather

15 days 2 standards: 4.10A, 4.10C

CONTENT STANDARDS

TEKS 4.10A
Describe and illustrate the continuous movement of water above and on the surface of Earth through the water cycle and explain the role of the Sun as a major source of energy in this process

TEKS 4.10C
Differentiate between weather and climate

KEY VOCABULARY

- water cycle
- evaporation
- condensation
- solar energy
- precipitation
- runoff
- accumulation
- weather
- climate
- thermometer
- cloud cover
- wind speed
- wind direction

SUGGESTED RECURRING THEMES

4.5D Examine and model the parts of a system and their interdependence

4.5G Explain how factors or conditions impact stability and change

SUGGESTED SCIENCE & ENGINEERING PRACTICES

4.1G Develop and use models to represent phenomena and processes

4.2B Analyze data by identifying features, patterns, and sources of error

DAY-BY-DAY PACING

MON	TUE	WED	THU	FRI
Day 1 **Illustrating the Water Cycle** ENGAGEMENT	Day 2 **Illustrating the Water Cycle** STATION LAB (INPUT)	Day 3 **Illustrating the Water Cycle** STATION LAB (OUTPUT)	Day 4 **Illustrating the Water Cycle** PRESENTATION + INB	Day 5 **Illustrating the Water Cycle** PRESENTATION + INB **Water Cycle & Sun's Energy** WIKI TICKET
Day 6 **Water Cycle & Sun's Energy** WRITING PROMPT	Day 7 **Illustrating the Water Cycle** ASSESSMENT	Day 8 **Differentiate Weather & Climate** ENGAGEMENT	Day 9 **Differentiate Weather & Climate** STATION LAB (INPUT)	Day 10 **Differentiate Weather & Climate** STATION LAB (OUTPUT)
Day 11 **Differentiate Weather & Climate** PRESENTATION + INB	Day 12 **Differentiate Weather & Climate** PRESENTATION + INB **Weather & Climate** WIKI TICKET	Day 13 **Differentiate Weather & Climate** STUDENT CHOICE	Day 14 **Differentiate Weather & Climate** STUDENT CHOICE	Day 15 **Differentiate Weather & Climate** ASSESSMENT

7 Changes to Earth's Surface

8 days 1 standard: 4.10B

CONTENT STANDARDS

TEKS 4.10B
Model and describe slow changes to Earth's surface caused by weathering, erosion, and deposition from water, wind, and ice

KEY VOCABULARY

- landform
- weathering
- sediment
- erosion
- deposition

SUGGESTED RECURRING THEMES

4.5C Use scale, proportion, and quantity to compare or model systems

SUGGESTED SCIENCE & ENGINEERING PRACTICES

4.1G Develop and use models to represent phenomena and processes

DAY-BY-DAY PACING

MON	TUE	WED	THU	FRI
Day 1 **Model Slow Changes to Earth** ENGAGEMENT	Day 2 **Model Slow Changes to Earth** STATION LAB (INPUT)	Day 3 **Model Slow Changes to Earth** STATION LAB (OUTPUT)	Day 4 **Model Slow Changes to Earth** PRESENTATION + INB	Day 5 **Model Slow Changes to Earth** PRESENTATION + INB **Slow Changes of Earth** WIKI TICKET
Day 6 **Model Slow Changes to Earth** STUDENT CHOICE	Day 7 **Model Slow Changes to Earth** STUDENT CHOICE	Day 8 **Model Slow Changes to Earth** ASSESSMENT		

8 Earth's Natural Resources

22 days 3 standards: 4.11A, 4.11B, 4.11C

CONTENT STANDARDS

TEKS 4.11A
Identify and explain advantages and disadvantages of using Earth's renewable and nonrenewable natural resources such as wind, water, sunlight, plants, animals, coal, oil, and natural gas

TEKS 4.11B
Explain the critical role of energy resources to modern life and how conservation, disposal, and recycling of natural resources impact the environment

TEKS 4.11C
Determine the physical properties of rocks that allow Earth's natural resources to be stored there

KEY VOCABULARY

- renewable resources
- nonrenewable resources
- fossil fuels
- energy resources
- conservation
- disposal
- recycling
- natural resources
- environment
- porosity
- permeability

SUGGESTED RECURRING THEMES

4.5B Identify and investigate cause-and-effect relationships

SUGGESTED SCIENCE & ENGINEERING PRACTICES

4.1A Ask questions and define problems based on observations

4.3A Develop explanations and propose solutions supported by data and models

4.4A Explain how scientific discoveries and innovations impact science and society

DAY-BY-DAY PACING

MON	TUE	WED	THU	FRI
Day 1 **Compare Earth's Resources** ENGAGEMENT	Day 2 **Compare Earth's Resources** STATION LAB (INPUT)	Day 3 **Compare Earth's Resources** STATION LAB (OUTPUT)	Day 4 **Compare Earth's Resources** PRESENTATION + INB	Day 5 **Compare Earth's Resources** PRESENTATION + INB **Renewable & Nonrenewable Resources** WIKI TICKET
Day 6 **Renewable & Nonrenewable Resources** WRITING PROMPT	Day 7 **Compare Earth's Resources** ASSESSMENT	Day 8 **Impact of Energy Resources** ENGAGEMENT	Day 9 **Impact of Energy Resources** STATION LAB (INPUT)	Day 10 **Impact of Energy Resources** STATION LAB (OUTPUT)
Day 11 **Impact of Energy Resources** PRESENTATION + INB	Day 12 **Impact of Energy Resources** PRESENTATION + INB	Day 13 **Impact of Energy Resources** STUDENT CHOICE	Day 14 **Impact of Energy Resources** STUDENT CHOICE	Day 15 **Impact of Energy Resources** STUDENT CHOICE

8 Earth’s Natural Resources

Day-by-Day Pacing (continued)

MON	TUE	WED	THU	FRI
Day 16 **Impact of Energy Resources** ASSESSMENT	Day 17 **Rocks & Natural Resources** ENGAGEMENT	Day 18 **Rocks & Natural Resources** STATION LAB (INPUT)	Day 19 **Rocks & Natural Resources** STATION LAB (OUTPUT)	Day 20 **Rocks & Natural Resources** PRESENTATION + INB
Day 21 **Rocks & Natural Resources** PRESENTATION + INB	Day 22 **Rocks & Natural Resources** ASSESSMENT			

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9 Ecosystems

15 days 2 standards: 4.12A, 4.12B

CONTENT STANDARDS

TEKS 4.12A
Investigate and explain how most producers can make their own food using sunlight, water, and carbon dioxide through the cycling of matter

TEKS 4.12B
Describe the cycling of matter and flow of energy through food webs, including the roles of the Sun, producers, consumers, and decomposers

KEY VOCABULARY

- ecosystem
- organism
- energy
- photosynthesis
- carbon dioxide
- producer
- consumer
- decomposer
- food web

SUGGESTED RECURRING THEMES

4.5A Identify and use patterns to explain phenomena or design solutions

4.5D Examine and model the parts of a system and their interdependence

SUGGESTED SCIENCE & ENGINEERING PRACTICES

4.1A Ask questions and define problems based on observations

4.1B Plan and conduct descriptive investigations and design solutions

DAY-BY-DAY PACING

MON	TUE	WED	THU	FRI
Day 1 **Producers & Cycling of Matter** ENGAGEMENT	Day 2 **Producers & Cycling of Matter** STATION LAB (INPUT)	Day 3 **Producers & Cycling of Matter** STATION LAB (OUTPUT)	Day 4 **Producers & Cycling of Matter** PRESENTATION + INB	Day 5 **Producers & Cycling of Matter** PRESENTATION + INB **Producers & Consumers** WIKI TICKET
Day 6 **Producers & Cycling of Matter** STUDENT CHOICE	Day 7 **Producers & Cycling of Matter** STUDENT CHOICE	Day 8 **Producers & Cycling of Matter** ASSESSMENT	Day 9 **Matter & Energy in Food Webs** ENGAGEMENT	Day 10 **Matter & Energy in Food Webs** STATION LAB (INPUT)
Day 11 **Matter & Energy in Food Webs** STATION LAB (OUTPUT)	Day 12 **Matter & Energy in Food Webs** PRESENTATION + INB	Day 13 **Matter & Energy in Food Webs** PRESENTATION + INB **Energy Flow in a Food Web** WIKI TICKET	Day 14 **Energy Flow in a Food Web** WRITING PROMPT	Day 15 **Matter & Energy in Food Webs** ASSESSMENT

10 Fossils

7 days 1 standard: 4.12C

CONTENT STANDARDS

TEKS 4.12C
Identify and describe past environments based on fossil evidence, including common Texas fossils

KEY VOCABULARY

environment
fossils
amber

SUGGESTED RECURRING THEMES

4.5C Use scale, proportion, and quantity to compare or model systems

SUGGESTED SCIENCE & ENGINEERING PRACTICES

4.3B Communicate explanations and solutions in a variety of formats

DAY-BY-DAY PACING

MON	TUE	WED	THU	FRI
Day 1 **Fossil Evidence of Environments** ENGAGEMENT	Day 2 **Fossil Evidence of Environments** STATION LAB (INPUT)	Day 3 **Fossil Evidence of Environments** STATION LAB (OUTPUT)	Day 4 **Fossil Evidence of Environments** PRESENTATION + INB	Day 5 **Fossil Evidence of Environments** PRESENTATION + INB **Fossil Evidence** WIKI TICKET
Day 6 **Fossil Evidence** WRITING PROMPT	Day 7 **Fossil Evidence of Environments** ASSESSMENT			

11 Structures, Functions, & Traits

15 days 2 standards: 4.13A, 4.13B

CONTENT STANDARDS

TEKS 4.13A
Explore and explain how structures and functions of plants such as waxy leaves and deep roots enable them to survive in their environment

TEKS 4.13B
Differentiate between inherited and acquired physical traits of organisms

KEY VOCABULARY

- organism
- structure
- function
- inherit trait
- parent
- offspring
- learned behavior

SUGGESTED RECURRING THEMES

4.5F Explain the relationship between structure and function

SUGGESTED SCIENCE & ENGINEERING PRACTICES

4.1B Plan and conduct descriptive investigations and design solutions

4.1A Ask questions and define problems based on observations

DAY-BY-DAY PACING

MON	TUE	WED	THU	FRI
Day 1 **Structures & Functions of Plants** ENGAGEMENT	Day 2 **Structures & Functions of Plants** STATION LAB (INPUT)	Day 3 **Structures & Functions of Plants** STATION LAB (OUTPUT)	Day 4 **Structures & Functions of Plants** PRESENTATION + INB	Day 5 **Structures & Functions of Plants** PRESENTATION + INB
Day 6 **Structures & Functions of Plants** STUDENT CHOICE	Day 7 **Structures & Functions of Plants** STUDENT CHOICE	Day 8 **Structures & Functions of Plants** ASSESSMENT	Day 9 **Inherited & Acquired Traits** ENGAGEMENT	Day 10 **Inherited & Acquired Traits** STATION LAB (INPUT)
Day 11 **Inherited & Acquired Traits** STATION LAB (OUTPUT)	Day 12 **Inherited & Acquired Traits** PRESENTATION + INB	Day 13 **Inherited & Acquired Traits** PRESENTATION + INB **Exploring Traits** WIKI TICKET	Day 14 **Exploring Traits** WRITING PROMPT	Day 15 **Inherited & Acquired Traits** ASSESSMENT