CACS Curriculum Map — Grade 3 Science (FOSS Kit-Based)

Built around the three FOSS Next Generation kits used for Grade 3 — Motion and Matter; Structures of Life; and Water and Climate — one per trimester, aligned to the 2026 NJSLS-Science standards (NGSS Performance Expectations).

Pacing Overview

When	FOSS Kit	Focus
September – Mid-October (Weeks 1–6)	FOSS Motion and Matter	Forces and Interactions
Mid-October – October	— *gap* —	Reinforcement / reteaching / other instruction, not detailed in this map
November – Mid-January (Weeks 1–8, spanning winter break)	FOSS Structures of Life	Inheritance and Variation of Traits · Interdependent Relationships in Ecosystems
Mid-January – February	— *gap* —	Reinforcement / reteaching / other instruction, not detailed in this map
March – Mid-April (Weeks 1–6)	FOSS Water and Climate	Weather and Climate · Engineering Design
Mid-April – June	— *gap* —	Reinforcement / reteaching / other instruction, not detailed in this map

Standards Key

Key	What It Means
NGSS / NJSLS-Science	2026 New Jersey Student Learning Standards for Science (readoption effective 2025–2026), aligned to the Next Generation Science Standards (NGSS). Grade 3 Performance Expectations span 3-PS2 (Physical Science), 3-LS1, 3-LS2, 3-LS3, 3-LS4 (Life Science), 3-ESS2, 3-ESS3 (Earth and Space Sciences), and the shared 3-5-ETS1 (Engineering Design).
FOSS Grade 3 Kits	FOSS Motion and Matter; FOSS Structures of Life; and FOSS Water and Climate — the three FOSS Next Generation (2018) kits this map is built around, one per trimester.
IG / EA	IG = Investigations Guide page reference. EA = Embedded Assessment (FOSS's built-in Performance Assessment), cited from the FOSS Next Generation K–5 NGSS Correlation (May 2019).
FOSSweb	FOSS's official companion website (fossweb.com), source for this map's named digital resources (e.g., “Life Cycles,” “Weather Grapher”).

Grade 3 Science Curriculum Map

Month / FOSS Kit	Content Standards & Objectives	Instructional Concepts / Areas of Focus	Activities	Assessment	Resources
September – Mid-October (Weeks 1–6) **FOSS Motion and Matter** *Forces and Interactions*	***NGSS Performance Expectations — 2026 NJSLS-Science*** • 3-PS2-1 — Plan and conduct an investigation to provide evidence of the effects of balanced and unbalanced forces on the motion of an object. • 3-PS2-2 — Make observations and/or measurements of an object's motion to provide evidence that a pattern can be used to predict future motion. • 3-PS2-3 — Ask questions to determine cause and effect relationships of electric or magnetic interactions between two objects not in contact with each other. • 3-PS2-4 — Define a simple design problem that can be solved by applying scientific ideas about magnets. ***Learning Objectives*** • 3-PS2-1: I can investigate how balanced and unbalanced forces affect an object's motion. • 3-PS2-2: I can use observations or measurements of motion to find a pattern that predicts future motion. • 3-PS2-3: I can ask questions about how electric or magnetic forces affect objects that aren't touching. • 3-PS2-4: I can define a design problem that can be solved using what I know about magnets.	***Areas of Focus*** • Each force acting on an object has a strength and a direction; the effect of multiple forces on an object depends on how they add together. • Objects in contact exert forces on each other, and patterns in an object's motion can be observed, measured, and used to predict future motion. • Electric and magnetic forces between a pair of objects don't require them to be touching; the size of the force depends on the properties of the objects and how far apart they are. • For forces between two magnets, the direction of the force also depends on the magnets' orientation relative to each other. ***ESL Accommodations (WIDA ELD Standard 4 — Language for Science)*** • Pre-teach and post key vocabulary for this unit with visuals, realia, and student-friendly definitions before whole-group instruction (explaining the cause-and-effect of forces and arguing evidence for magnetic interactions). • Use the WIDA Key Language Use of Explain and Argue as the language focus: provide sentence frames (e.g., “I notice ___.” “This happens because ___.”) to scaffold explain and argue in both the interpretive (listening/viewing) and expressive (speaking/representing) modes. • Pair verbal explanations with visual models, real objects, and hands-on materials (photos, charts, FOSS kit materials) so multilingual learners can access content independent of English proficiency level. ***Enrichment***	***Investigations*** • 3-PS2-1: Plan and conduct an investigation — using a fair test that controls variables — to provide evidence of the effects of balanced and unbalanced forces on an object's motion; explore the FOSSweb digital resource “All About Motion and Balance.” • 3-PS2-2: Make observations and/or measurements of a repeating motion (e.g., a swinging pendulum) to find a pattern that predicts future motion; explore the FOSSweb digital resource “Roller Coaster Builder.” • 3-PS2-3: Ask questions to investigate the cause-and-effect relationships of electric or magnetic forces between two objects that are not touching; explore the FOSSweb digital resources “Magnetic Poles” and “All About Magnets.” • 3-PS2-4: Define a simple design problem (e.g., a latch or a way to keep two moving objects from touching) that can be solved by applying scientific ideas about magnets.	***Assessment Components (FOSS Next Generation embedded Performance Assessments)*** • 3-PS2-1: FOSS Motion and Matter: EA Performance Assessment, IG p. 106 (Step 6); EA Response Sheet, IG p. 107, SNM No. 3 • 3-PS2-2: FOSS Motion and Matter: EA Performance Assessment, IG p. 155 (Step 13); EA Notebook Entry, IG p. 139 (Step 17); EA Response Sheet, IG p. 145, SNM Nos. 6–7 • 3-PS2-3: FOSS Motion and Matter: EA Notebook Entry, IG p. 99 (Step 14); EA Performance Assessment, IG p. 200 (Step 6) • 3-PS2-4: FOSS Motion and Matter: EA Performance Assessment, IG p. 200 (Step 6)	• FOSS Motion and Matter Investigations Guide • FOSSweb (fossweb.com) digital resources: “All About Motion and Balance,” “Roller Coaster Builder,” “Magnetic Poles,” “All About Magnets” • Magnets, ropes/pulleys, balls, and other force/motion materials • Appropriate literature on forces and magnetism

Month / FOSS Kit	Content Standards & Objectives	Instructional Concepts / Areas of Focus	Activities	Assessment	Resources
		• Have students design and test an additional investigation isolating a second variable affecting an object's motion (e.g., surface texture), beyond the strength/direction of a push or pull used in class. • Challenge students to design and build a simple device that uses a magnet to solve a real problem (e.g., a latch, or a way to keep two objects apart), then explain their design choices.			
November – Mid-January (Weeks 1–8, spanning winter break) **FOSS Structures of Life** *Inheritance and Variation of Traits · Interdependent Relationships in Ecosystems*	***NGSS Performance Expectations — 2026 NJSLS-Science*** • 3-LS1-1 — Develop models to describe that organisms have unique and diverse life cycles, but all have in common birth, growth, reproduction, and death. • 3-LS2-1 — Construct an argument that some animals form groups that help members survive. • 3-LS3-1 — Analyze and interpret data to provide evidence that plants and animals have traits inherited from parents and that variation of these traits exists in a group of similar organisms. • 3-LS3-2 — Use evidence to support the explanation that traits can be influenced by the environment. • 3-LS4-1 — Analyze and interpret data from fossils to provide evidence of the organisms and the environments in which they lived long ago. • 3-LS4-2 — Use evidence to construct an explanation for how the variations in characteristics among individuals of the same species may provide advantages in surviving, finding mates, and reproducing.	***Areas of Focus*** • Reproduction is essential to the continued existence of every kind of organism; plants and animals have unique and diverse life cycles. • Many characteristics of organisms are inherited from their parents; other characteristics result from individuals' interactions with their environment. • Being part of a group helps some animals obtain food, defend themselves, and cope with change. • Fossils provide evidence about the types of organisms that lived long ago and the environments they lived in; when an environment changes, some organisms survive, some move, and some do not survive. ***ESL Accommodations (WIDA ELD Standard 4 — Language for Science)*** • Pre-teach and post key vocabulary for this unit with visuals, realia, and student-friendly definitions before whole-group instruction (describing life cycles and traits and explaining evidence from fossils). • Use the WIDA Key Language Use of Inform and Explain as the language focus: provide sentence frames (e.g., “I notice ___.” “This happens because ___.”) to scaffold	***Investigation Set A — Life Cycles and Inherited Traits*** • 3-LS1-1: Develop a model describing the unique life cycle of an organism studied in class, showing that all life cycles include birth, growth, reproduction, and death; explore the FOSSweb digital resources “Life Cycles” and “All About Animal Life Cycles.” • 3-LS3-1: Analyze and interpret data comparing the traits of parent organisms and their offspring to provide evidence of inherited traits and variation within a group. • 3-LS3-2: Use evidence from an investigation (e.g., the “Walking Stick Survival” resource) to support an explanation of how an organism's traits can be influenced by its environment. ***Investigation Set B — Ecosystems, Fossils, and Adaptation*** • 3-LS2-1: Construct an argument, using evidence from observations, that some animals form groups that help members survive; explore the FOSSweb digital resource “All About Animal Behavior and Communication.” • 3-LS4-1: Analyze and interpret data from fossils to provide evidence of the organisms and	***Assessment Components (FOSS Next Generation embedded Performance Assessments)*** • 3-LS1-1: FOSS Structures of Life: EA Notebook Entry, IG p. 170 (Step 13) • 3-LS2-1: FOSS Structures of Life: EA Response Sheet, IG p. 257, SNM No. 23 • 3-LS3-1: FOSS Structures of Life: EA Performance Assessment, IG p. 309 (Step 10) • 3-LS3-2: FOSS Structures of Life: EA Response Sheet, IG p. 257, SNM No. 23 • 3-LS4-1: FOSS Structures of Life: EA Reading in Science Resources, IG p. 311 (Steps 17–18), IG p. 313 (Step 22) • 3-LS4-2: FOSS Structures of Life: EA Answer the Focus Question, IG p. 237 (Step 38)	• FOSS Structures of Life Investigations Guide • FOSSweb (fossweb.com) digital resources: “Life Cycles,” “All About Animal Life Cycles,” “All About Animal Behavior and Communication,” “Humphrey, the Lost Whale: A True Story,” “Walking Stick Survival,” “All About Fossils,” “Where Does It Live?,” “What Doesn't Belong?” • Live organism materials (e.g., crayfish, land snails, plants) for classroom observation • Appropriate literature on life cycles, heredity, fossils, and adaptation

Month / FOSS Kit	Content Standards & Objectives	Instructional Concepts / Areas of Focus	Activities	Assessment	Resources
	• 3-LS4-3 — Construct an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all. • 3-LS4-4 — Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change. ***Learning Objectives*** • 3-LS1-1: I can build a model showing that living things have their own life cycle, but all include birth, growth, reproduction, and death. • 3-LS2-1: I can use evidence to argue that some animals live in groups that help them survive. • 3-LS3-1: I can use data to show that plants and animals inherit traits from their parents, and that these traits can vary. • 3-LS3-2: I can use evidence to explain how the environment can influence an organism's traits. • 3-LS4-1: I can use fossil data to explain what organisms and environments were like long ago. • 3-LS4-2: I can use evidence to explain how variations among individuals can help them survive, find mates, and reproduce. • 3-LS4-3: I can use evidence to argue that in a habitat, some organisms survive well, some survive less well, and some don't survive at all. • 3-LS4-4: I can make a claim about how well a solution addresses a problem caused by a changing environment.	inform and explain in both the interpretive (listening/viewing) and expressive (speaking/representing) modes. • Pair verbal explanations with visual models, real objects, and hands-on materials (photos, charts, FOSS kit materials) so multilingual learners can access content independent of English proficiency level. ***Enrichment*** • Have students research the life cycle of an organism not covered in class and compare it, in writing, to the class's example, noting which stages are shared and which are unique. • Challenge students to research a real fossil discovery and construct an evidence-based account of what the environment was like when that organism was alive.	environments that existed long ago; explore the FOSSweb digital resource “All About Fossils.” • 3-LS4-2: Use evidence (e.g., camouflage coloration, defensive structures) to construct an explanation for how variations among individuals of the same species can provide survival advantages. • 3-LS4-3: Construct an argument with evidence that in a particular habitat, some organisms survive well, some survive less well, and some cannot survive at all; explore the FOSSweb digital resources “Where Does It Live?” and “What Doesn't Belong?” • 3-LS4-4: Make a claim about the merit of a solution to a problem caused when an environment changes and the plants and animals living there must adapt, move, or die.	• 3-LS4-3: FOSS Structures of Life: EA, IG p. 237 (Step 38) • 3-LS4-4: FOSS Structures of Life: EA, IG p. 261 (Step 21)	
March – Mid-April (Weeks 1–6)	***NGSS Performance Expectations — 2026 NJSLS-Science***	***Areas of Focus***	***Investigations***	***Assessment Components (FOSS Next Generation***	• FOSS Water and Climate

Month / FOSS Kit	Content Standards & Objectives	Instructional Concepts / Areas of Focus	Activities	Assessment	Resources
FOSS Water and Climate *Weather and Climate · Engineering Design*	• 3-ESS2-1 — Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season. • 3-ESS2-2 — Obtain and combine information to describe climates in different regions of the world. • 3-ESS3-1 — Make a claim about the merit of a design solution that reduces the impacts of a weather-related hazard. • 3-5-ETS1-1 — Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost. • 3-5-ETS1-2 — Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem. • 3-5-ETS1-3 — Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved. ***Learning Objectives*** • 3-ESS2-1: I can use tables and graphs to describe typical weather for a season. • 3-ESS2-2: I can combine information to describe the climates of different regions of the world. • 3-ESS3-1: I can make a claim about how well a design solution reduces the impact of a weather-related hazard. • 3-5-ETS1-1: I can define a design problem, including what it needs to do and what limits I have to work within. • 3-5-ETS1-2: I can generate and compare more than one possible solution to a problem.	• Scientists record patterns of the weather across different times and areas to make predictions about what kind of weather might happen next. • Climate describes a range of an area's typical weather conditions and how much those conditions vary over years; different regions of the world have different climates. • A variety of natural hazards result from natural processes; humans cannot eliminate natural hazards, but they can take steps to reduce their impacts. • Possible solutions to a design problem are limited by available materials and resources; different proposed solutions can be compared based on how well each meets the specified criteria and constraints. ***ESL Accommodations (WIDA ELD Standard 4 — Language for Science)*** • Pre-teach and post key vocabulary for this unit with visuals, realia, and student-friendly definitions before whole-group instruction (describing weather and climate patterns and arguing the merit of a design solution). • Use the WIDA Key Language Use of Inform and Argue as the language focus: provide sentence frames (e.g., “I notice ___.” “This happens because ___.”) to scaffold inform and argue in both the interpretive (listening/viewing) and expressive (speaking/representing) modes. • Pair verbal explanations with visual models, real objects, and hands-on materials (photos, charts, FOSS kit materials) so multilingual learners can access content independent of English proficiency level.	• 3-ESS2-1: Represent weather data in tables and graphical displays (bar graphs, pictographs) to describe typical weather conditions for a particular season; explore the FOSSweb digital resource “Weather Grapher.” • 3-ESS2-2: Obtain and combine information from books and other reliable media to describe and compare the climates of different regions of the world; explore the FOSSweb digital resource “Climate Regions Map.” • 3-ESS3-1: Make a claim about the merit of a design solution (e.g., a flood barrier, a wind-resistant roof, a lightning rod) that reduces the impacts of a weather-related hazard. • 3-5-ETS1-1 / 3-5-ETS1-2 / 3-5-ETS1-3: Define a simple design problem with specified criteria and constraints; generate and compare multiple possible solutions; plan and carry out a fair test to identify what part of a model or prototype could be improved.	***embedded Performance Assessments)*** • 3-ESS2-1: FOSS Water and Climate: EA Performance Assessment, IG p. 212 (Step 13), IG p. 226 (Step 4); EA Notebook Entry, IG p. 269 (Step 13) • 3-ESS2-2: FOSS Water and Climate: EA Notebook Entry, IG p. 277 (Step 16) • 3-ESS3-1: FOSS Water and Climate: EA Notebook Entry, IG p. 285 (Step 16) • 3-5-ETS1-1: FOSS Water and Climate: EA Performance Assessment, IG p. 325 (Step 8) • 3-5-ETS1-2: FOSS Water and Climate: EA Performance Assessment, IG p. 325 (Step 26), IG p. 330 (Step 8) • 3-5-ETS1-3: FOSS Water and Climate: EA Performance Assessment, IG p. 325 (Step 8)	Investigations Guide • FOSSweb (fossweb.com) digital resources: “Weather Grapher,” “Climate Regions Map” • Weather data sets, thermometers, rain gauges, and climate maps • Appropriate literature on weather, climate, and weather-related hazards

Month / FOSS Kit	Content Standards & Objectives	Instructional Concepts / Areas of Focus	Activities	Assessment	Resources
	• 3-5-ETS1-3: I can plan and carry out a fair test to find what part of my design needs improvement.	***Enrichment*** • Have students collect and graph a local weather data set (e.g., daily temperature) across an extended period beyond the class investigation, then describe the pattern they find. • Challenge students to research a real weather-related hazard mitigation project (e.g., a levee, a storm-resistant roof design) and make a claim, with evidence, about its merit.			