Ocean Academy Charter School
Curriculum Guide
Grade 2 - Enrichment

Original Adoption:	August 2025
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OCEAN ACADEMY CHARTER SCHOOL **Enrichment Curriculum**	
Content Area: Enrichment	
Course Title: Explorations (Enrichment)	
Grade Level: 2	
Unit Title	**Pacing Guide in Days**
STEM Explorations -Animals and Their Habitats	12 days (48 minutes per day; one day per week)
Stem Explorations -Dinosaurs	12 days (48 minutes per day; one day per week)
STEM Explorations -Chocolate	12 days (48 minutes per day; one day per week)

OCEAN ACADEMY CHARTER SCHOOL **Unit 1 Overview**	
Content Area: Enrichment	
Unit Title: Unit 1 STEM Explorations--Animals and Their Habitats	**Duration:** 12 days (48 minutes per day; one day per week)
Target Course/Grade Level: Explorations (Enrichment) Grade 2	
Introduction/Unit Focus: In this dynamic unit, second grade learners will embark on an in-depth, inquiry-based exploration of the animal kingdom. With an emphasis on independent research, critical	

thinking, and effective communication, students will select an animal of personal interest and investigate its physical characteristics, behaviors, life cycle, and ecosystem. This project is designed to challenge learners to pursue their natural curiosity while making meaningful connections across science, math, reading, and writing.

Students will develop and refine their scientific thinking by asking thoughtful, open-ended questions and conducting guided research using age-appropriate texts, multimedia resources, and simple digital tools. They will examine essential questions such as: Where does this animal live, and how is it suited to that environment? What does it eat, and how does it get its food? How does it move, and what structures support its survival? What threats or challenges does it face in the wild?

As students gather and organize factual information, they will begin to analyze relationships between animals and their habitats, including the roles of adaptation and interdependence. They will learn how scientists categorize animals and will apply that knowledge to compare different species based on traits and behaviors.

Mathematical thinking will be integrated as students measure, compare, and graph data related to their animals such as size, weight, number of offspring, or travel distances. They may identify patterns in coloration, groupings, or movement and use these insights to deepen their understanding of survival strategies in the wild.

Throughout the unit, students will synthesize their research into a creative and informative final product, such as a digital presentation, illustrated field guide, or interactive display. In doing so, they will strengthen their ability to communicate complex ideas clearly and thoughtfully, while also developing empathy for living things and an appreciation for biodiversity.

Disciplinary Concepts for the Unit:

Standard 9.1 Personal Financial Literacy: This standard outlines the important fiscal knowledge, habits, and skills that must be mastered in order for students to make informed decisions about personal finance. Financial literacy is an integral component of a student's college and career readiness, enabling students to achieve fulfilling, financially-secure, and successful careers.

Standard 9.2 Career Awareness, Exploration, Preparation and Training. This standard outlines the importance of being knowledgeable about one's interests and talents, and being well informed about postsecondary and career options, career planning, and career requirements.

Standard 9.4 Life Literacies and Key Skills. This standard outline key literacies and technical skills such as critical thinking, global and cultural awareness, and technology literacy* that are critical for students to develop to live and work in an interconnected global economy.

Standard 8.1 Computer Science

Computer Science outlines a comprehensive set of concepts and skills, such as data and analysis, algorithms and programming, and computing systems.

Standard 8.2 Design Thinking
Technology, outlines the technological design concepts and skills essential for technological and engineering literacy. The framework design includes Engineering Design, Ethics and Culture, and the Effects of Technology on the Natural world among the disciplinary concepts

Amistad Law: N.J.S.A. 18A 52:16A-88 Every board of education shall incorporate the information regarding the contributions of African-Americans to our country in an appropriate place in the curriculum of elementary and secondary school students.

Holocaust Law: N.J.S.A. 18A:35-28 Every board of education shall include instruction on the Holocaust and genocide in an appropriate place in the curriculum of all elementary and secondary school pupils. The instruction shall further emphasize the personal responsibility that each citizen bears to fight racism and hatred whenever and wherever it happens.

Diversity and Inclusion

C.18A:35-4.36a Curriculum to include instruction on diversity and inclusion.

1. The instruction shall:
   (1) highlight and promote diversity, including economic diversity, equity, inclusion, tolerance, and belonging in connection with gender and sexual orientation, race and ethnicity, disabilities, and religious tolerance;
   (2) examine the impact that unconscious bias and economic disparities have at both an individual level and on society as a whole; and
   (3) encourage safe, welcoming, and inclusive environments for all students regardless of race or ethnicity, sexual and gender identities, mental and physical disabilities, and religious beliefs.

Asian Americans and Pacific Islanders (AAPI)

Ensures that the contributions, history, and heritage of Asian Americans and Pacific Islanders (AAPI) are included in the New Jersey Student Learning Standards (NJSLS) for Social Studies in kindergarten through Grade 12 (P.L.2021, c.416).

21st Century Themes and Skills

“Twenty-first century themes and skills” means themes such as global awareness; financial, economic, business, and entrepreneurial literacy; civic literacy; health literacy; learning and innovation skills, including creativity and innovation, critical thinking and problem solving, and communication and collaboration; information, media, and technology skills; and life and career skills, including flexibility. Career readiness, life literacies, and key skills education provides students with the necessary skills to make informed career and financial decisions,

engage as responsible community members in a digital society, and to successfully meet the challenges and opportunities in an interconnected global economy.”
Focus Standards (Major Standards) https://www.nj.gov/education/cccs
Content Standards: New Jersey Student Learning Standards
NJSLSA.R1. Read closely to determine what the text says explicitly and to make logical inferences and relevant connections from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text. NJSLSA.R2. Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas. NJSLSA.R3. Analyze how and why individuals, events, and ideas develop and interact over the course of a
NJSLSA.R4. Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and analyze how specific word choices shape meaning or tone. NJSLSA.R5. Analyze the structure of texts, including how specific sentences, paragraphs, and larger portions of the text (e.g., a section, chapter, scene, or stanza) relate to each other and the whole. NJSLSA.R6. Assess how point of view or purpose shapes the content and style of a text.
RL.CR.2.1. Ask and answer questions to demonstrate understanding of key details in a literary text, referring explicitly to the text as the basis for the answers.
RI.CR.2.1. Ask and answer questions to demonstrate understanding of key details in an informational text, referring explicitly to the text as the basis for the answers.
RI.CI.2.2. Recount a text in oral and written form and determine the main topic (in multi-paragraph informational text, focusing on specific paragraphs).
RI.AA.2.7. Describe and identify the logical connections of how reasons support specific points the author makes in a text.
New Jersey Student Learning Standards: Interdisciplinary Connections https://www.nj.gov/education/cccs
W.IW.2.2. Write informative/explanatory texts to examine a topic and convey ideas and information. A. Introduce a topic clearly. B. Develop a topic with facts definitions, concrete details, text evidence, or other

information and examples related to the topic.
C. Provide a conclusion.

W.WR.2.5. Generate questions about a topic and locate related information from a reference source to obtain information on that topic through shared and independent research.

SL.PE.2.1. Participate in collaborative conversations with diverse partners about grade 2 topics and texts with peers and adults in small and larger groups.

A. Follow agreed-upon norms for discussions (e.g., gaining the floor in respectful ways, listening to others with care, speaking one at a time about the topics and texts under discussion).
B. Build on others' talk in conversations by linking their explicit comments to the remarks of others.
C. Ask for clarification and further explanation as needed about the topics and texts under discussion.

New Jersey Student Learning Standards: Career Readiness, Life Literacies, and Key Skills	
Core Ideas	**Performance Expectations (Identified with Standard Number and statement)**
Brainstorming can create new, innovative ideas	9.4.2.CI.1: Demonstrate openness to new ideas and perspectives (e.g., 1.1.2.CR1a, 2.1.2.EH.1, 6.1.2.CivicsCM.2). 9.4.2.CI.2: Demonstrate originality and inventiveness in work (e.g., 1.3A.2CR1a).
Digital tools can be used to display data in various ways	9.4.2.IML.2: Represent data in a visual format to tell a story about the data
Collaboration can simplify the work an individual has to do and sometimes produce a better product.	9.4.2.TL.7: Describe the benefits of collaborating with others to complete digital tasks or develop digital artifacts (e.g., W.2.6., 8.2.2.ED.2).
New Jersey Student Learning Standards: Computer Science and Design Thinking	
Core Ideas	**Performance Expectations (Identified with Standard Number and Statement)**
Technology has changed the way people live and work. Various tools can improve daily tasks and quality of life	8.2.2.ITH.3: Identify how technology impacts or improves life. 8.2.2.ITH.4: Identify how various tools reduce work and improve daily tasks. 8.2.2.ITH.5: Design a solution to a problem affecting the community in a collaborative team and explain the intended impact of the solution.
New Jersey Student Learning Standards: Climate Change Mandate	

Core Ideas	Performance Expectations (Identified with Standard Number and Statement)
Populations live in a variety of habitats and change in those habitats affects the organisms living there. When the environment changes in ways that affect a place's physical characteristics, temperature, or availability of resources, some organisms survive and reproduce, others move to new locations, yet others move into the transformed environment, and some die.	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.

Knowledge and Skills

Unit Learning Targets (Objectives):
Students will be able to…

- Select and research an animal of interest using books, videos, and digital tools.
- Ask and refine meaningful questions to guide their investigation.
- Identify and describe key characteristics of their animal, including habitat, diet, adaptations, behaviors, and life cycle.
- Explain how an animal's body structures and behaviors help it survive in its environment.
- Record and organize research findings using notes, labeled diagrams, and graphic organizers.
- Compare their animal with other species using scientific categories (e.g., vertebrate/invertebrate, herbivore/carnivore, etc.).
- Use measurement and data (e.g., size, weight, number of young, lifespan) to make comparisons or graphs.
- Synthesize and present information clearly through writing, visual displays, or digital presentations.
- Reflect on the interdependence of animals and their environments and the impact of environmental change.
- Use the series Amazing Animals of the World to complete their research project.

Unit Enduring Understandings:
Students will know…

- Animals have specific physical and behavioral adaptations that help them survive in their habitats.
- All living things depend on their environments and are part of larger ecosystems.
- Scientists study and organize information about animals by asking questions, collecting data, and looking for patterns.
- Research and observation help us understand how animals live and what they need to thrive.
- Human actions can affect animal survival and the balance of natural systems.

Unit Essential Questions:

- What makes this animal unique, and how is it adapted to survive in its environment?
- How does where an animal lives affect what it eats, how it moves, and how it behaves?
- What patterns can we find when we compare different animals?
- Why is it important to learn about animals and the environments they depend on?
- How do scientists organize and share information about animals?

Instructional Plan

Brief narrative of the progression of the unit with suggested activities--include a variety of instructional, supplemental and intervention materials that support student learners at all levels

Part One:
Introduction
Students will be instructed they will become an expert on an animal of their choice as they partake in a virtual safari.

Part Two & Three: Investigation and Assignment
Students will
~ use tangrams to design their own animal
~Describe “All You Need to Know About My Animal~STEM LESSON: Make salt dough animals creating labels of various parts of animals
~Explain how habitat is vital to an animal's existence

Part Four: Present Your Animal/Habitat Report
Students will:
~present their findings using a trifold poster or other multimedia presentation

Evidence of Student Learning

Formative Assessments:

- Participation/Observation during discussion, small group, conferencing and white board activities
- Verbal questioning
- Running Records
- Anecdotal Notes
- Learning/Response Logs/journals
- Graphic Organizers
- Peer/Self Assessments/rubrics
- Presentations
- Work samples
- Kinesthetic Assessments
- Daily 5 activities
- Sight word assessments
- Fundations monitoring
- Graphic Organizers
- Hands on worksheets and assignments

Summative Assessments

- Teacher made assessments

Benchmark Assessments:

- Oral Presentations
- Rubric assessments
- Portfolio assessments

Alternative Assessments

- Based on IEP or 504 as needed

Performance Tasks:

- Teacher made activities

Suggested Options for Differentiation

Special Education

- ➢ Follow all IEP modifications.
- ➢ Use visuals, manipulatives, and models to explain concepts.
- ➢ Pre-teach and review key vocabulary.
- ➢ Provide small-group or one-on-one support.
- ➢ Assign a peer tutor or "learning buddy."
- ➢ Offer preferential seating.
- ➢ Reinforce vocabulary with gestures, songs, or movements.
- ➢ Allow extra time for projects and assessments.
- ➢ Accept oral or dictated answers.
- ➢ Provide large-print or digital/audio text when needed.
- ➢ Use scribes or augmentative communication devices.

Students with 504 Plans

- Follow the 504 plan.
- Provide extra time for tasks and assessments.
- Offer small-group or quiet settings for work.
- Provide preferential seating.
- Accept oral or dictated responses.
- Allow use of adapted tools or communication devices.

Students at Risk of Failure

- Provide visuals, word banks, and simple outlines.
- Pre-teach key vocabulary and check for understanding often.
- Break down assignments into smaller, manageable steps.
- Read aloud directions and model expectations.
- Provide tutoring, peer support, or a "buddy."
- Offer preferential seating.
- Give frequent encouragement and feedback.

Gifted and Talented

- Ask open-ended questions that promote curiosity and exploration.
- Encourage higher-order thinking through "why" and "what if" prompts.
- Provide opportunities for choice in projects, activities, or materials.
- Use enrichment centers, creative problem-solving tasks, or inquiry stations.
- Encourage independent exploration of topics of interest.
- Provide extension activities connected to lessons (e.g., designing, experimenting, storytelling).
- Allow students to present, share, or teach their discoveries to peers.
- Use flexible grouping for enrichment projects.
- Encourage reflection through drawings, journals, or group discussions.

Multilingual Learners

- Collaborate with ESL/MLL teachers.
- Provide small-group support.
- Pre-teach vocabulary using visuals, real objects, and cognates when possible.
- Use sentence frames or speaking prompts (e.g., "I noticed ___," "I created ___ because…").
- Pair words with pictures, gestures, or movement.
- Allow extended time and oral responses.

- Label classroom materials and visuals to reinforce vocabulary.

Diversity and Inclusion

- Highlight cultural traditions and perspectives in lessons and projects.
- Involve families in sharing cultural experiences.
- Provide alternative ways to complete assignments (artwork, oral, hands-on).
- Use visuals and simple, clear instructions.
- Assign supportive peers when appropriate.
- Collaborate with language professionals and support staff.
- Encourage families to maintain home language while building English skills.
- Establish respectful classroom routines and discussion norms.
- Use closed captioning for videos when available.
- Provide wait time before calling on students.
- Display word walls with relevant vocabulary.
- Foster a safe, nurturing environment that values all voices.

Supplemental Resources

- Teacher Computer w/ Internet connection
- Calculators
- Manipulatives
- Copies of handouts/worksheets for each student
- Teacher website
- Microsoft Office, Google Apps, StoryBoard That
- General Classroom Supply

Teacher Notes

OCEAN ACADEMY CHARTER SCHOOL Unit 2 Overview	
Content Area: Enrichment	
Unit Title: Unit 2 Dinosaur Explorations	**Duration:** 12 days (48 minutes per day; one day per week)
Target Course/Grade Level: Explorations (Enrichment) Grade 2	

Introduction/Unit Focus:

In this engaging unit, second grade students will explore the fascinating world of dinosaurs through a variety of research methods and multimedia sources. Students will develop both general and specific knowledge about dinosaurs by reading carefully selected books and navigating age-appropriate websites to find detailed information. They will also enhance their listening skills by watching educational videos and extracting key facts.

Through this multi-modal approach, students will practice locating and comprehending specific information from different types of texts and media. Using the knowledge they gather, students will organize their findings and prepare clear, informative oral reports. This process supports the development of critical research skills, effective communication, and digital literacy, all essential for advanced learners.

Disciplinary Concepts for the Unit:

Standard 9.1 Personal Financial Literacy: This standard outlines the important fiscal knowledge, habits, and skills that must be mastered in order for students to make informed decisions about personal finance. Financial literacy is an integral component of a student's college and career readiness, enabling students to achieve fulfilling, financially-secure, and successful careers.

Standard 9.2 Career Awareness, Exploration, Preparation and Training. This standard outlines the importance of being knowledgeable about one's interests and talents, and being well informed about postsecondary and career options, career planning, and career requirements.

Standard 9.4 Life Literacies and Key Skills. This standard outline key literacies and technical skills such as critical thinking, global and cultural awareness, and technology literacy* that are critical for students to develop to live and work in an interconnected global economy.

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Computer Science outlines a comprehensive set of concepts and skills, such as data and analysis, algorithms and programming, and computing systems.

Standard 8.2 Design Thinking

Technology, outlines the technological design concepts and skills essential for technological and engineering literacy. The framework design includes Engineering Design, Ethics and Culture, and the Effects of Technology on the Natural world among the disciplinary concepts

Focus Standards (Major Standards) https://www.nj.gov/education/cccs

RL.CR.2.1. Ask and answer questions to demonstrate understanding of key details in a literary text, referring explicitly to the text as the basis for the answers.
RI.CR.2.1. Ask and answer questions to demonstrate understanding of key details in an informational text, referring explicitly to the text as the basis for the answers.
RL.MF.2.6. With prompting and support, use information gained from the illustrations and words in a print or digital text to demonstrate understanding of its characters, setting, or plot.
RI.TS.2.4. Describe the overall structure of a text and effectively use various text features (e.g., graphs, charts, images, captions, bold print, subheadings, glossaries, indexes, electronic menus, icons) to locate key facts or information.
New Jersey Student Learning Standards: Interdisciplinary Connections **https://www.nj.gov/education/cccs**
2-PS1-2 Analyze data obtained from testing different materials to determine which materials have the properties that are best suited for an intended purpose.
2.MD.D.10 Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems using information presented in a bar graph

New Jersey Student Learning Standards: Career Readiness, Life Literacies, and Key Skills	
Core Ideas	**Performance Expectations (Identified with Standard Number and statement)**
Different types of jobs require different knowledge and skills	9.1.2.CAP.1: Make a list of different types of jobs and describe the skills associated with each job
Brainstorming can create new, innovative ideas	9.4.2.CI.1: Demonstrate openness to new ideas and perspectives (e.g., 1.1.2.CR1a, 2.1.2.EH.1, 6.1.2.CivicsCM.2). 9.4.2.CI.2: Demonstrate originality and inventiveness in work (e.g., 1.3A.2CR1a)
Digital tools and media resources provide access to vast stores of information that can be searched	9.4.2.IML.1: Identify a simple search term to find information in a search engine or digital resource.
Digital tools can be used to display data in various ways	9.4.2.IML.2: Represent data in a visual format to tell a story about the data (e.g., 2.MD.D.10)
Digital tools have a purpose.	9.4.2.TL.2: Create a document using a word processing application.

	9.4.2.TL.3: Enter information into a spreadsheet and sort the information
New Jersey Student Learning Standards: Computer Science and Design Thinking	
Core Ideas	**Performance Expectations (Identified with Standard Number and Statement)**
Data can be used to make predictions about the world.	8.1.2.DA.3: Identify and describe patterns in data visualizations. 8.1.2.DA.4: Make predictions based on data using charts or graphs
Real world information can be stored and manipulated in programs as data (e.g., numbers, words, colors, images)	8.1.2.AP.2: Model the way programs store and manipulate data by using numbers or other symbols to represent information.
Engineering design is a creative process for meeting human needs or wants that can result in multiple solutions	8.2.2.ED.2: Collaborate to solve a simple problem, or to illustrate how to build a product using the design process.
New Jersey Student Learning Standards: Climate Change Mandate	
Core Ideas	**Performance Expectations (Identified with Standard Number and Statement)**
Human activities affect environmental characteristics of places or regions resulting in positive and negative impacts.	6.1.5.GeoHE.1: Use a variety of sources from multiple perspectives, including aerial photographs or satellite images to describe how human activity has impacted the physical environment during different periods of time in New Jersey and the United States. 6.1.5.GeoHE.2: Cite examples of how technological advances have changed New Jersey and the United States (e.g., energy, transportation, communications). 6.1.5.GeoHE.3: Analyze the effects of catastrophic environmental and technological events on human settlements and migration.

Knowledge and Skills
Unit Learning Targets (Objectives): *Students will be able to…* • Explain what fossils are and how they help us learn about dinosaurs. • Describe the role of museums in preserving and displaying dinosaur artifacts. • Identify different types of dinosaurs by their physical characteristics.

- Compare and contrast how various dinosaurs look and how they are alike or different.

Unit Enduring Understandings:
Students will know…

- Fossils provide important clues about creatures that lived long ago.
- Paleontologists study dinosaurs to discover information about Earth's history.
- Museums are places where we can see and learn from objects from the past.
- Dinosaur names often describe their unique physical features.
- Dinosaurs share similarities with some animals living today.

Unit Essential Questions:

- How do we know dinosaurs once lived on Earth?
- Why do people study fossils and visit museums?
- What makes a dinosaur a dinosaur?
- In what ways are different dinosaurs alike and different?
- How are dinosaurs similar to animals we see today?

Instructional Plan

Brief narrative of the progression of the unit with suggested activities--include a variety of instructional, supplemental and intervention materials that support student learners at all levels

Part One:
Introduction
Students receive a letter from Dino explaining he needs help watching over the museum. Student task: Your job is to research various aspects of different dinosaurs in order to report back to "Dino."

Part Two & Three: Investigation and Assignment
Students will
~ use tangrams to design their own dinosaur
~Describe "All You Need to Know About Dinosaurs" based on viewing https://www.youtube.com/watch?v=G3gXWDYpLAE
~Act as paleontologists digging for fossils to gather information about the role of a paleontologist and their importance
~STEM LESSON: Make salt dough fossils to demonstrate over hundreds of years, the living thing's organic matter is traced or replaced by minerals. The fossil rock that remains can last for hundreds of millions of years, longer than any tissue from the living thing itself.
~Explore a 4D POV of the Smithsonian Museum.
~Create dinosaurs in macaroni drawings
~Integrate all concepts by completing a dinosaur research paper.

Part Four: Present Your Dinosaur Report
Students will:

~present their findings using a trifold poster or other multimedia presentation

Evidence of Student Learning

Formative Assessments:

- Participation/Observation during discussion, small group, conferencing and white board activities
- Verbal questioning
- Running Records
- Anecdotal Notes
- Learning/Response Logs/journals
- Graphic Organizers
- Peer/Self Assessments/rubrics
- Presentations
- Work samples
- Kinesthetic Assessments
- Graphic Organizers
- Hands on worksheets and assignments

Summative Assessments

- Portfolio review
- Teacher made assessments

Benchmark Assessments:

- Oral Presentations
- Rubric assessments
- Portfolio assessments

Alternative Assessments

- Based on IEP or 504 as needed

Performance Assessments

- Teacher created tasks

Suggested Options for Differentiation

Special Education

- ➢ Follow all IEP modifications.
- ➢ Use visuals, manipulatives, and models to explain concepts.
- ➢ Pre-teach and review key vocabulary.
- ➢ Provide small-group or one-on-one support.
- ➢ Assign a peer tutor or “learning buddy.”
- ➢ Offer preferential seating.
- ➢ Reinforce vocabulary with gestures, songs, or movements.
- ➢ Allow extra time for projects and assessments.
- ➢ Accept oral or dictated answers.
- ➢ Provide large-print or digital/audio text when needed.
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Students with 504 Plans

- Follow the 504 plan.
- Provide extra time for tasks and assessments.
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Students at Risk of Failure

- Provide visuals, word banks, and simple outlines.
- Pre-teach key vocabulary and check for understanding often.
- Break down assignments into smaller, manageable steps.
- Read aloud directions and model expectations.
- Provide tutoring, peer support, or a "buddy."
- Offer preferential seating.
- Give frequent encouragement and feedback.

Gifted and Talented

- Ask open-ended questions that promote curiosity and exploration.
- Encourage higher-order thinking through "why" and "what if" prompts.
- Provide opportunities for choice in projects, activities, or materials.
- Use enrichment centers, creative problem-solving tasks, or inquiry stations.
- Encourage independent exploration of topics of interest.
- Provide extension activities connected to lessons (e.g., designing, experimenting, storytelling).
- Allow students to present, share, or teach their discoveries to peers.
- Use flexible grouping for enrichment projects.
- Encourage reflection through drawings, journals, or group discussions.

Multilingual Learners

- Collaborate with ESL/MLL teachers.
- Provide small-group support.
- Pre-teach vocabulary using visuals, real objects, and cognates when possible.
- Use sentence frames or speaking prompts (e.g., "I noticed ___," "I created ___

because…").
- ➢ Pair words with pictures, gestures, or movement.
- ➢ Allow extended time and oral responses.
- ➢ Label classroom materials and visuals to reinforce vocabulary.

Diversity and Inclusion

- ➢ Highlight cultural traditions and perspectives in lessons and projects.
- ➢ Involve families in sharing cultural experiences.
- ➢ Provide alternative ways to complete assignments (artwork, oral, hands-on).
- ➢ Use visuals and simple, clear instructions.
- ➢ Assign supportive peers when appropriate.
- ➢ Collaborate with language professionals and support staff.
- ➢ Encourage families to maintain home language while building English skills.
- ➢ Establish respectful classroom routines and discussion norms.
- ➢ Use closed captioning for videos when available.
- ➢ Provide wait time before calling on students.
- ➢ Display word walls with relevant vocabulary.
- ➢ Foster a safe, nurturing environment that values all voices.

Supplemental Resources

- ➢ Teacher Computer w/ Internet connection
- ➢ Calculators
- ➢ Manipulatives
- ➢ Copies of handouts/worksheets for each student
- ➢ Teacher website
- ➢ Microsoft Office, Google Apps, StoryBoard That
- ➢ General Classroom Supply

Teacher Notes

OCEAN ACADEMY CHARTER SCHOOL Unit 3 Overview	
Content Area: Enrichment	
Unit Title: Unit 3 Stem Explorations Chocolate	**Duration:** 12 days (48 minutes per day; one day per week)
Target Course/Grade Level: Explorations (Enrichment) / Grade 2	

Introduction/Unit Focus:

In this unit, students will take a journey around the world to discover the story of chocolate, from bean to bar! They will explore the tropical regions where cacao trees grow best and learn why these places provide the perfect conditions for growing cacao. Students will investigate how ancient cultures, such as the Maya and Aztec, were the first to grow and use cacao, and how it was an important part of their daily life and traditions.

As young global explorers, students will also follow the path of cacao through time and across continents to understand how chocolate is made today, from harvesting cacao pods to producing chocolate in factories and shops. They will compare how chocolate is used in different cultures and explore how it connects people all over the world.

This unit encourages students to think like geographers, historians, and scientists as they make connections between climate, culture, and commerce. Through hands-on activities, mapping, and creative projects, students will gain a deeper appreciation for the origins of chocolate and the global journey it takes to become a treat we enjoy today.

Disciplinary Concepts for the Unit:

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Holocaust Law: N.J.S.A. 18A:35-28 Every board of education shall include instruction on the Holocaust and genocide in an appropriate place in the curriculum of all elementary and secondary school pupils. The instruction shall further emphasize the personal responsibility that each citizen bears to fight racism and hatred whenever and wherever it happens.

Diversity and Inclusion

C.18A:35-4.36a Curriculum to include instruction on diversity and inclusion.

1. The instruction shall:
   (1) highlight and promote diversity, including economic diversity, equity, inclusion, tolerance, and belonging in connection with gender and sexual orientation, race and ethnicity, disabilities, and religious tolerance;
   (2) examine the impact that unconscious bias and economic disparities have at both an individual level and on society as a whole; and
   (3) encourage safe, welcoming, and inclusive environments for all students regardless of race or ethnicity, sexual and gender identities, mental and physical disabilities, and religious beliefs.

Asian Americans and Pacific Islanders (AAPI)

Ensures that the contributions, history, and heritage of Asian Americans and Pacific Islanders (AAPI) are included in the New Jersey Student Learning Standards (NJSLS) for Social Studies in kindergarten through Grade 12 (P.L.2021, c.416).

21st Century Themes and Skills

“Twenty-first century themes and skills” means themes such as global awareness; financial, economic, business, and entrepreneurial literacy; civic literacy; health literacy; learning and innovation skills, including creativity and innovation, critical thinking and problem solving, and communication and collaboration; information, media, and technology skills; and life and career skills, including flexibility. Career readiness, life literacies, and key skills education provides students with the necessary skills to make informed career and financial decisions, engage as

responsible community members in a digital society, and to successfully meet the challenges and opportunities in an interconnected global economy.”
Focus Standards (Major Standards) https://www.nj.gov/education/cccs
RL.CR.2.1. Ask and answer questions to demonstrate understanding of key details in a literary text, referring explicitly to the text as the basis for the answers.
RI.CR.2.1. Ask and answer questions to demonstrate understanding of key details in an informational text, referring explicitly to the text as the basis for the answers.
RL.CI.2.2. Recount a text in oral and written form and determine the central message (in literary texts, e.g. fables and folktales from diverse cultures).
RI.CI.2.2. Recount a text in oral and written form and determine the main topic (in multi-paragraph informational text, focusing on specific paragraphs).
W.IW.2.2. Write informative/explanatory texts to examine a topic and convey ideas and information. A. Introduce a topic clearly. B. Develop a topic with facts definitions, concrete details, text evidence, or other information and examples related to the topic. C. Provide a conclusion.
W.WR.2.5. Generate questions about a topic and locate related information from a reference source to obtain information on that topic through shared and independent research.
W.SE.2.6. Prioritize information provided by different sources on the same topic while gathering ideas and planning to write about a topic.
New Jersey Student Learning Standards: Interdisciplinary Connections https://www.nj.gov/education/cccs
SL.PE.2.1. Participate in collaborative conversations with diverse partners about grade 2 topics and texts with peers and adults in small and larger groups. A. Follow agreed-upon norms for discussions (e.g., gaining the floor in respectful ways, listening to others with care, speaking one at a time about the topics and texts under discussion). B. Build on others' talk in conversations by linking their explicit comments to the remarks of others. C. Ask for clarification and further explanation as needed about the topics and texts under discussion.

New Jersey Student Learning Standards: Career Readiness, Life Literacies, and Key Skills	
Core Ideas	**Performance Expectations (Identified with Standard Number and statement)**
Different types of jobs require different	9.1.2.CAP.1: Make a list of different types of jobs and describe the skills associated with each job

knowledge and skills	
There are benefits and drawbacks to being an entrepreneur	9.1.2.CAP.3: Define entrepreneurship and social entrepreneurship
Brainstorming can create new, innovative ideas	9.4.2.CI.1: Demonstrate openness to new ideas and perspectives (e.g., 1.1.2.CR1a, 2.1.2.EH.1, 6.1.2.CivicsCM.2). 9.4.2.CI.2: Demonstrate originality and inventiveness in work (e.g., 1.3A.2CR1a).
Individuals from different cultures may have different points of view and experiences.	9.4.2.GCA:1: Articulate the role of culture in everyday life by describing one's own culture and comparing it to the cultures of other individuals (e.g., 1.5.2.C2a, 7.1.NL.IPERS.5, 7.1.NL.IPERS.6)
New Jersey Student Learning Standards: Computer Science and Design Thinking	
Core Ideas	**Performance Expectations (Identified with Standard Number and Statement)**
Individuals collect, use, and display data about individuals and the world around them.	8.1.2.DA.1: Collect and present data, including climate change data, in various visual formats.
Engineering design is a creative process for meeting human needs or wants that can result in multiple solutions	8.2.2.ED.2: Collaborate to solve a simple problem, or to illustrate how to build a product using the design process.
Limitations (constraints) must be considered when engineering designs.	8.2.2.ED.4: Identify constraints and their role in the engineering design process
New Jersey Student Learning Standards: Climate Change Mandate	
Core Ideas	**Performance Expectations (Identified with Standard Number and Statement)**
Engineering design requirements include desired features and limitations that need to be considered.	8.2.5.ED.4: Explain factors that influence the development and function of products and systems (e.g., resources, criteria, desired features, constraints). 8.2.5.ED.5: Describe how specifications and limitations impact the engineering design process. 8.2.5.ED.6: Evaluate and test alternative solutions to a problem using the constraints and trade- offs identified in the design process.

Knowledge and Skills

Unit Learning Targets (Objectives):
Students will be able to…

- Use a digital map to explore South America and identify where cacao trees grow and why the region is ideal for cacao farming.
- Explain each step in the process of turning cacao beans into chocolate, from harvesting to final product.
- Compare and contrast the lives and contributions of Milton Hershey and John Cadbury using a Venn Diagram.
- Take a virtual tour of a chocolate factory to observe how chocolate is made today.
- Create a Google Form to survey classmates about their favorite chocolate bar.
- Collect, organize, and display data using bar graphs to show chocolate preferences.
- Predict which chocolate bars are most popular and test their predictions using real class data.

Unit Enduring Understandings:
Students will know…

- Cacao grows best in warm, tropical climates near the equator, especially in parts of South America.
- Ancient civilizations, like the Maya and Aztec, used cacao in important cultural and religious traditions.
- Chocolate-making has changed over time, from early hand-made methods to modern factory production.
- Chocolate plays a significant role in history, culture, and the global economy.
- Technology and data collection help us understand trends, such as which chocolate bars are most liked.

Unit Essential Questions:

- What kind of environment does a cacao tree need to grow?
- How did people in ancient American cultures use cacao?
- What are the steps in making chocolate from cacao beans?
- How has the way we make and enjoy chocolate changed over time?
- What can we learn by collecting and organizing data about chocolate preferences?

Instructional Plan

Brief narrative of the progression of the unit with suggested activities--include a variety of instructional, supplemental and intervention materials that support student learners at all levels

Part One: Introduction

SW will list as many chocolate items as possible using Pear Deck.
SW will listen to and discuss
where chocolate comes from
Cocoa bean pods
How the bean travels to chocolate makers
How chocolate gets blended
Chocolate is “fair trade” to understand working conditions of farmers
SW will conduct a STEM activity: How Many Kisses Long? (Measurement activity)

Part Two: Take a Tour
SW tour Hershey Park virtually and be able to explain how chocolate is made.
SW will draw their own “Chocolate Ride.”

Part Three: Tour a Chocolate Factory
SW write a journal entry to summarize what they learned on their chocolate tour.
SW create their own chocolate bar and design a wrapper

Part Four: Milton Hershey and John Cadbury
SW fil in biographical information about both Hershey and Cadbury into their chocolate brochure
SW create a timeline of Cadbury’s life

Part Five: STEM Activity: Chocolate Slime

Part Six: Chocolate for Breakfast?
SW read and view a video to analyze the pros and cons of having chocolate for breakfast.
SW summarize in writing their findings of the nutritional value of chocolate for breakfast
Part Seven: Chocolate Survey
SW create a Google Form and survey their classmates about their favorite chocolate candy.
SW generate a bar graph from information gathered.

STEM ACTIVITIES:
How Many Kisses Long? (Math)
Chocolate Slime (Science)
Floating M’s (Science)
Candy v. Apple (Math)
Candy Bingo (Math)

Evidence of Student Learning

Formative Assessments:

- Participation/Observation during discussion, small group, conferencing and white board activities
- Verbal questioning
- Running Records
- Anecdotal Notes

- Learning/Response Logs/journals
- Graphic Organizers
- Peer/Self Assessments/rubrics
- Presentations
- Work samples
- Kinesthetic Assessments
- Graphic Organizers
- Hands on worksheets and assignments

Summative Assessments

- Portfolio review
- Teacher made assessments

Benchmark Assessments:

- Oral Presentations
- Rubric assessments
- Portfolio assessments

Alternative Assessments

- Based on IEP or 504 as needed

Performance Tasks:

- Teacher made activities

Suggested Options for Differentiation

Special Education

- ➢ Follow all IEP modifications.
- ➢ Use visuals, manipulatives, and models to explain concepts.
- ➢ Pre-teach and review key vocabulary.
- ➢ Provide small-group or one-on-one support.
- ➢ Assign a peer tutor or "learning buddy."
- ➢ Offer preferential seating.
- ➢ Reinforce vocabulary with gestures, songs, or movements.
- ➢ Allow extra time for projects and assessments.
- ➢ Accept oral or dictated answers.
- ➢ Provide large-print or digital/audio text when needed.
- ➢ Use scribes or augmentative communication devices.

Students with 504 Plans

- ➢ Follow the 504 plan.
- ➢ Provide extra time for tasks and assessments.
- ➢ Offer small-group or quiet settings for work.
- ➢ Provide preferential seating.
- ➢ Accept oral or dictated responses.

- Allow use of adapted tools or communication devices.

Students at Risk of Failure

- Provide visuals, word banks, and simple outlines.
- Pre-teach key vocabulary and check for understanding often.
- Break down assignments into smaller, manageable steps.
- Read aloud directions and model expectations.
- Provide tutoring, peer support, or a "buddy."
- Offer preferential seating.
- Give frequent encouragement and feedback.

Gifted and Talented

- Ask open-ended questions that promote curiosity and exploration.
- Encourage higher-order thinking through "why" and "what if" prompts.
- Provide opportunities for choice in projects, activities, or materials.
- Use enrichment centers, creative problem-solving tasks, or inquiry stations.
- Encourage independent exploration of topics of interest.
- Provide extension activities connected to lessons (e.g., designing, experimenting, storytelling).
- Allow students to present, share, or teach their discoveries to peers.
- Use flexible grouping for enrichment projects.
- Encourage reflection through drawings, journals, or group discussions.

Multilingual Learners

- Collaborate with ESL/MLL teachers.
- Provide small-group support.
- Pre-teach vocabulary using visuals, real objects, and cognates when possible.
- Use sentence frames or speaking prompts (e.g., "I noticed ___," "I created ___ because…").
- Pair words with pictures, gestures, or movement.
- Allow extended time and oral responses.
- Label classroom materials and visuals to reinforce vocabulary.

Diversity and Inclusion

- Highlight cultural traditions and perspectives in lessons and projects.
- Involve families in sharing cultural experiences.
- Provide alternative ways to complete assignments (artwork, oral, hands-on).
- Use visuals and simple, clear instructions.
- Assign supportive peers when appropriate.
- Collaborate with language professionals and support staff.
- Encourage families to maintain home language while building English skills.
- Establish respectful classroom routines and discussion norms.
- Use closed captioning for videos when available.
- Provide wait time before calling on students.
- Display word walls with relevant vocabulary.
- Foster a safe, nurturing environment that values all voices.

Supplemental Resources

- Teacher Computer w/ Internet connection
- Calculators
- Manipulatives
- Copies of handouts/worksheets for each student
- Teacher website
- Microsoft Office, Google Apps, StoryBoard That
- General Classroom Supply

Teacher Notes