

Curriculum & Student Development Committee Meeting

Tuesday, October 14, 2025 5:00 PM

Town Campus Hammonasset Room/Zoom, 10 Campus Drive , Madison, CT 06443

I. Unit Adoptions:

- **Social Studies, Grades 4 and 5**
- **STEAM, Grades K-5**
- **ELA Units 1 and 2, Grades K-3**
- **Geometry**

II. International Trip Presentation: Bermuda

III. Public Comment

- IV. The Town of Madison does not discriminate on the basis of disability, and the meeting facilities are ADA accessible. Individuals who need assistance are invited to make their needs known by contacting the Town ADA/Human Resources Director, Debra Ferrante, at 203-245-6310 or by email at ferranted@madisonct.org at least five (5) business days prior to the meeting.**



Curriculum Adoption

October 14, 2025

Profile of a Graduate & Curriculum Development

Our curriculum isn't just about what students learn—it's about who they become.

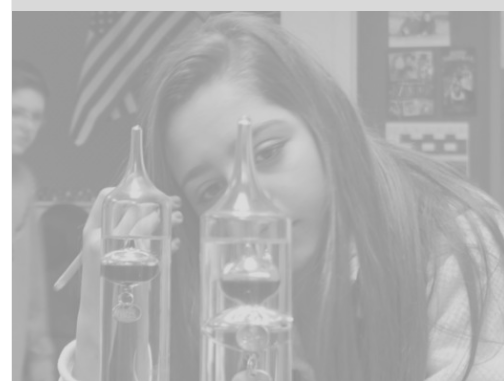
Our units are backward-designed to align learning experiences and performance assessments with the capacities.



Emphasis is on real-world application, interdisciplinary learning, and student agency.



Learning is not just about content mastery, but about developing the skills, habits, and mindsets students need to thrive.



K-3 ELA Revision Highlights



- Adoption of Bookworms
- Adoption of Geodes
- Continue with Foundations and Heggerty

Vocabulary

Explicitly taught, not just picked up incidentally.

Instruction includes direct teaching of word meanings, strategies for figuring out unknown words (context, morphology, affixes), and exposure to rich oral and written language.

Comprehension

Instruction is explicit, systematic, and scaffolded — teaching students how to monitor understanding, ask/answer questions, summarize, infer, and integrate information.

Background knowledge is critical.

Small-group Rotations

Practice opportunities in the five pillars after the initial direct teaching.

Allows for differentiation within Tier 1.

Helps build oral language and engagement structures (discussion, collaboration, independent work) that reinforce vocabulary and comprehension.

Grades 4 & 5 Social Studies Revision Highlights

GRADE 4

- Unit 1** Geography Foundations
- Unit 2** Good Morning, U.S.A!: Understanding Regions
- Unit 3** Connecting Communities
- Unit 4** Changemakers in the United States
(Interdisciplinary Unit)

GRADE 5

- Unit 1** Migration & Settlement
- Unit 2** The American Revolution *(Interdisciplinary Unit)*
- Unit 3** The United States Constitution & Civic Participation

➤ Alignment to Connecticut Elementary & Secondary Social Studies Standards (2023)

➤ Interdisciplinary Approach

➤ Performance-Based Assessments

➤ Student Agency & Voice

➤ Preparation for Civic Life

K-5 STEAM



Why This Matters

Alignment to our Profile of a Graduate

Future-Ready Skills

Science of Doing and Making



Looking Ahead

Vertical Alignment

Innovation Pipeline

Career Pathways



What's New

Lego Education Science & Spike

Makerspace Integration

Interdisciplinary STEAM Units



This is How We
Learn & Grow in
STEAM



DHHS: Geometry Revision Highlights

Incorporates Investigative Tasks

Designed to balance depth and breadth of geometric concepts

Blends geometric and algebraic concepts to reinforce foundational algebra skills

Aligns with district initiative to remove Level 3 Geometry

Unit A

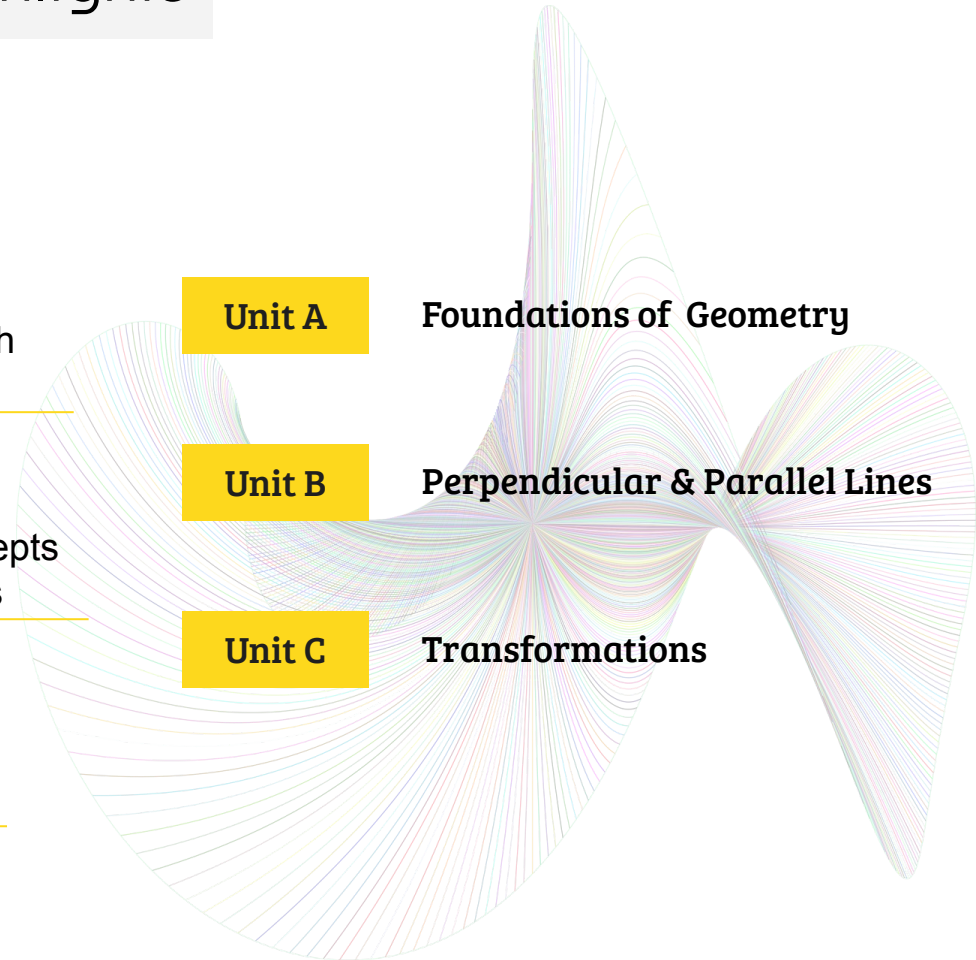
Foundations of Geometry

Unit B

Perpendicular & Parallel Lines

Unit C

Transformations





Adoption in June

- K-12 Art
- K-3 ELA
- K-2 & 6-8 Social Studies

**STEAM
(K-5)**

Amy Casey
Meghan Foster

**ELA
(K-3)**

Erin Chester
Lisa Caldwell
Christina Zarotney
Alli Salamone
Deana Perillo
Tara Vitale
Amy Santoro
Alicia Dunbar
Brenda Schull
Jasmine Patel
Clare Peterlik
Christa Laragy

**SOCIAL STUDIES
(4 & 5)**

Chris Pagliuco
Christina Zarotney
Tracey Soboleski
Erin Smith
Dana Townsend
Rachel Secondino
Holly Merullo
Kristen Raccio
Lynn Prendergast
Travis LaPointe
Lauren Warner

**MATH
High School**

Christine Justice
Keith Hajus
Lauren White
Danielle Carboni
Danielle Fragoso
Erin Neviasser
Joann Scavacini
Erin Leviness



Curriculum Unit Overviews

Courses Ready for Board of Education Adoption in October 2025

ELA	Math	Social Studies	STEAM
<ul style="list-style-type: none">• <i>Kindergarten Unit 1 & 2</i>• <i>Grade 1 Unit 1 & 2</i>• <i>Grade 2 Unit 1 & 2</i>• <i>Grade 3 Unit 1 & 2</i>	<ul style="list-style-type: none">• <i>Geometry</i>	<ul style="list-style-type: none">• <i>Grade 4</i>• <i>Grade 5</i>	<ul style="list-style-type: none">• <i>Kindergarten</i>• <i>Grade 1</i>• <i>Grade 2</i>• <i>Grade 3</i>• <i>Grade 4</i>• <i>Grade 5</i>

Kindergarten ELA Curriculum Overview

<p>Unit 1 <i>Building a Community of Readers and Writers</i></p>	<p>In our kindergarten reading and writing unit, we build a strong foundation for lifelong literacy by focusing on foundational skills, vocabulary, and writing development. Students learn phonics through the Foundations program, which teaches letter formation and keyword sounds, and develop phonological awareness with the Heggerty curriculum through activities like rhyme and syllable work. Reading comprehension is built by reading books like <i>Mrs. Bindergarten Gets Ready for Kindergarten</i> by Joseph Slate and <i>How Rocket Learned to Read</i> by Tad Hills where students learn to identify characters and problems by asking and answering questions. Vocabulary is taught through explicit word instruction, fostering word consciousness, and book embedded instruction, using student-friendly definitions and activities like acting out words or drawing pictures. Bookworms and Geodes decodable books are used to build comprehension, vocabulary, and fluency. The writing block introduces different tools, teaches students to write their names, and encourages them to use shapes to draw and label their pictures. To make practice fun, we use bear buddies to help students with reading skills and feel more comfortable in the classroom.</p> <p>Profile of a Graduate Capacities: Self-Awareness, Decision Making</p>
<p>Unit 2 <i>Using Patterns to Read the World</i></p>	<p><i>Using Patterns to Read the World</i> is a six-week Kindergarten unit that serves as a bridge from emergent literacy to foundational reading skills. The program is built on the Science of Reading, focusing on the explicit recognition and creation of text patterns to build reading confidence and comprehension.</p> <p>This unit integrates several specific programs to deliver its curriculum. To build phonological awareness, students engage in daily, structured Heggerty drills that focus on sounds, rhymes, and syllables without print. For phonics and decoding, the Foundations program provides systematic instruction on letter-keyword-sounds, handwriting, and encoding. This learning is applied through Geodes decodables, which are controlled-vocabulary readers tightly aligned with the phonics skills taught in Foundations, ensuring students are truly decoding.</p> <p>For reading comprehension and fluency, the Bookworms curriculum provides read-alouds and shared reading to build background knowledge and vocabulary. The unit also uses specific "pattern books" to teach predictable structures like repetition and surprise endings, which include <i>Brown Bear, Brown Bear What Do You See?</i> by Eric Carle, <i>We're Going on a Bear Hunt</i> by Michael Rosen and Helen Oxenbury, <i>I Went Walking</i> by Sue Williams, <i>Rosie's Walk</i> by Pat Hutchins, <i>Is Your Mama a Llama?</i> by Deborah Guarino, <i>There Was a Cold Lady Who Swallowed Some Snow</i> Lucille Colandro, <i>Go Away Big Green Monster!</i> by Ed Emberly, <i>That's Good, That's Bad</i> by Margery Cuyler, <i>Good News, Bad News</i> by Jeff Mack, <i>Polar Bear, Polar Bear What Do You Hear?</i> by Eric Carle, and <i>Are You My Mother?</i> P.D. Eastman. These books aid reading efficiency as students transition to full decoding. Ultimately, this comprehensive approach ensures that students can identify and use text patterns, apply known phonics skills, and use phonological awareness to decode and comprehend connected text.</p> <p>Profile of a Graduate Capacities: Analyzing, Product Creation, Self-Awareness</p>

Grade 1 ELA Curriculum Overview

<p>Unit 1 <i>Engaging Young Readers and Writers</i></p>	<p>Unit 1 offers a complete framework for fostering strong, independent readers and a genuine love for books. It skillfully combines explicit instruction, abundant practice, and effective resource use to ensure every student becomes a confident reader. Daily reading time follows a clear structure: "Listen and Learn" for shared reading and modeling, "Our Reading Toolbox" for direct strategy instruction, "Practice Power" for independent and partner reading, and "Share Our Stories" for reflection and discussion. This consistent routine helps students understand expectations and maximize their learning. A key focus is teaching students the difference between active, engaged reading — where they are truly making meaning—and positive behaviors, setting them on a path toward purposeful reading. Throughout this unit, students will learn to use key reading strategies to help them understand what they read. Students will learn to summarize a story in their own words, focusing on the main idea and key details. They will use story mapping to help identify the characters, setting, problem, and solution of a story. This will help them remember the important parts of what they read. Students will learn to ask and answer questions about the text before, during, and after reading. This active process helps them deepen their understanding of the story. A rich vocabulary is essential for reading comprehension. This unit will equip students with the tools to understand new words and develop a genuine curiosity about language using explicit word instruction, book embedded vocabulary and semantic mapping using the books <i>Don't Let the Pigeon Drive the Bus</i> and <i>Pigeon Wants a Hot Dog</i> by Mo Willems, <i>How to Read a Story</i> by Kate Messner, <i>No David</i> by David Shannon, <i>What if Everyone Did</i> by Ellen Javernick, <i>Biscuit Goes to School</i> by Alyssa Satin Capucilli and <i>Be You</i> by Peter Reynolds. The Bookworms reading program and Geodes decodable text will be used for instruction. The curriculum also emphasizes explicit phonics instruction, utilizing the programs Foundations and Heggerty, to empower students as "Word Detectives" who can confidently decode unfamiliar words using letter sounds, blending strategies, and initial sounds.</p> <p>The writing component of the unit focuses on foundational skills and the development of sentences and stories. This unit aims for students to be able to recall information to answer a question, recognize the features of a sentence, and understand that rules of grammar, spelling, and mechanics guide writers. Students will get ideas for their writing from their own experiences, and they will learn letter formation for lowercase letters via Foundations, as well as sentence dictation procedures, including capitalization, periods, and word spacing. They will also learn to read and write sight words. The writing block activities are designed to help students apply what they've learned about letters and words to their writing. Throughout this unit students are taught to use "Helper Words" (Who, What, When, Where, Why, How) to add details and make their sentences stronger and clearer. They work in groups to build sentences and then practice creating their own. This unit introduces a "five-finger" method for planning stories. Towards the end of the unit students work to choose and work toward a personal writing goal.</p> <p>Profile of a Graduate Capacities: Collective Intelligence, Self-Awareness</p>
<p>Unit 2 Reading <i>Understanding Characters and Story Structure</i></p>	<p>This unit will help students become readers by developing phonemic awareness and phonics skills while analyzing characters in stories. Using principles from the Science of Reading, students will learn to accurately and fluently decode words, enabling them to deeply comprehend a wide range of texts to address the grade-level standards: Describe characters, settings, and major events in a story, using key details in a plot mountain; Use illustrations and details in a story to summarize and describe its characters, setting, or events; Compare and contrast the adventures and experiences of characters in stories.</p> <p>To build vocabulary, students will have semantic mapping, explicit word instruction, and book-embedded vocabulary instruction through planned and specific read-alouds. Dedicated instruction on Tier 2 vocabulary will be a consistent focus. They will act as "story detectives," citing textual evidence to support their observations and differentiate between a character's external appearance and internal personality. The unit also transforms students into "author detectives," exploring recurring patterns in Henkes work, such as common character archetypes, relatable dilemmas, and repeated lessons, while making text-to-self connections. Throughout the unit, foundational reading</p>

Grade 1 ELA Curriculum Overview

	<p>skills will be reinforced through integrated Foundations and Heggerty activities, along with literacy rotations providing diverse reading materials and opportunities to practice decoding and encoding skills, fostering strong and fluent readers. Fluency work will continue as students practice new skills with decodable texts specifically aligned to the skills taught in the unit.</p> <p>Students will hear, read, write and speak about read-alouds as part of direct instruction from the following books: <i>Danny the Dinosaur</i> by Syd Hoff, <i>Pig the Pug</i> by Aaron Blaby, <i>Clark the Shark</i> by Bruce Hale, <i>The Pigeon Will Ride The Roller Coaster</i> Mo Willems, <i>Betty Bunny Wants Everything</i> by Michael Kaplan, <i>Jabari Jumps</i> by Gaia Cornwall, <i>The Invisible Boy</i> by Trudy Ludwig, <i>Chrysanthemum</i>, <i>Chester's Way</i>, <i>Wemberly Worried</i>, <i>Sheila Rae the Brave</i> and <i>Lilly's Purple Plastic Purse</i> by Kevin Henkes. The Bookworms reading program and Geodes decodable books will be used to support learning.</p> <p>Profile of a Graduate Capacities: Analyzing</p>
<p><u>Unit 2</u> <u>Writing</u> <i>Just a Moment, Please</i></p>	<p>Students will write using words and pictures about a time they did something. As they zoom in on that moment, they will include an interesting beginning and ending, use transition words, and stretch a story across three pages. Students will use their editing checklist to revise and edit their work and to fix up spelling, listen for the sounds of words, and to use parts of words they know to spell new words. Writers will bring many pieces through the writing process. Building the habit of rereading for clarity and to edit is an important strategy that will be modeled for students all year long. Writers will collaborate with partners to act out and orally rehearse important moments and compliment and question each other to help make their work even better. Reading and writing instruction continue to integrate while students notice how writers develop characters with description and elaboration.</p> <p>Profile of a Graduate Capacities: Product Creation</p>

Grade 2 ELA Curriculum Overview

<p>Unit 1 <i>Foundations for Second Grade Literacy</i></p>	<p>During this first literacy unit, teachers establish classroom routines and expectations built around explicit and systematic reading instruction. While setting goals and promoting reflection are part of this process, the main focus is on a direct, skill-based approach to literacy. Students are introduced to the classroom library with a primary goal of learning how to choose and apply their skills to decodable texts, which contain the specific phonics patterns being taught in the unit. This unit serves as a vital bridge, building upon the foundational skills students learned in grade 1.</p> <p>Whole-group instructional time is designed to be highly focused on foundational skills. Using the Foundations program, phonics instruction is both direct and systematic, providing practice with digraphs and blends, closed syllables, closed syllable exceptions, r-controlled vowels, bonus letters, and glued sounds. At the same time, Bookworms is used to build students' background knowledge and explicitly teach new academic vocabulary using semantic mapping, semantic feature analysis, and fostering word consciousness. The teacher models fluent reading with a strong focus on the three elements of fluency—prosody, accuracy, and rate—to provide a clear example of what proficient reading sounds like.</p> <p>Small-group instruction serves as a crucial time for differentiated and targeted practice of the five pillars of literacy. The primary resources used are Geodes decodables, which allow students to apply the learned phonics skills to connected text. Similarly, Rasinski's Megabook of Fluency and Foundations' storytime passages are some of the resources used to build fluency. The small-group structure also provides ample time for students to review and master Trick words and new vocabulary from read-alouds, ensuring all skills are practiced and become automatic.</p> <p>The writing component of this unit is directly connected to the reading instruction. Through writing poetry, students practice encoding with learned phonics patterns and build a deeper understanding of the relationship between sounds and letters. This work encourages students to experiment with self-generated ideas and creative expression while reinforcing the foundational skills of a strong writer.</p> <p>Students will hear, read, write, and speak about read-alouds as part of direct instruction from the following books: <i>Arthur's Back to School Day</i> by Lillian Hoban, <i>Goldsocks and the Three Libearians</i> by Jackie Mimms Hopkins, <i>I Can Do Hard Things</i> by Gaby Garcia, <i>Scaredy Squirrel</i> by Melanie Watt, <i>Hailstones and Halibut Bones</i> by Mary O'Neill, <i>Daniel Finds a Poem</i> by Micha Archer, <i>A Poke in the I</i> by Paul Janeszko and Chris Raschka, <i>Quick as a Cricket</i> by Audrey Wood, and <i>The Magical Yet</i> by Angela DiTerlizzi.</p> <p>Profile of a Graduate Capacities: Collective Intelligence, Self-Awareness</p>
<p>Unit 2 <i>Connecting Narrative Comprehension and Composition</i></p>	<p>This integrated unit leverages high-quality, engaging literature to build background knowledge and vocabulary while providing explicit, systematic instruction in both reading and writing skills. Motivation is driven by the use of compelling texts that allow students to explore character relationships and universal themes. Reading instruction includes (standards and skills here)</p> <p>Whole-group instructional time is designed to be highly focused on foundational skills to ensure students can decode increasingly complex text and vocabulary, promoting automaticity. Using the Foundations program, phonics instruction is both direct and systematic, providing practice with suffixes, comparative suffixes, diphthongs, multisyllabic and compound words, and the -ic spelling rule. Teachers explicitly model how to analyze characters' motivations and emotions, which builds content knowledge about human behavior. Tier 2 academic vocabulary related to character traits and story elements is taught directly through semantic mapping and semantic feature analysis and</p>

Grade 2 ELA Curriculum Overview

fostering word consciousness. Repeated, close readings of texts are used to analyze story structure and determine how characters and their lessons reflect students' own experiences and the experiences of others.

Small-group instruction serves as a crucial time for differentiated and targeted practice of the five pillars of literacy. The primary resources used are Geodes decodables, which allow students to apply the learned phonics skills to connected text. Similarly, Rasinski's Megabook of Fluency and Foundations' storytime passages are some of the resources used to build fluency. The small-group structure also provides ample time for students to review and master Trick words and new vocabulary from read-alouds, ensuring all skills are practiced and become automatic. Both fiction and non-fiction texts provide targeted practice in decoding, fluency, and comprehension strategies based on student need. Student discussions about text are documented through structured note-taking (including drawing and labeling) which serves as rehearsal for composing a formal written text analysis.

Writing Instruction is focused on narrative writing and encoding application providing explicit, systematic teaching of narrative craft, directly tied to the foundational skills of encoding and composition. Students practice encoding by applying taught phonics patterns and grade-level high-frequency words to their writing. Writing time is used to reinforce the accurate and automatic recall of spelling conventions. Student writing drafts are analyzed to identify specific group and individual needs in narrative technique. Teachers then provide explicit, whole-class and targeted small-group instruction that models specific compositional moves. Students explicitly analyze how mentor authors use dialogue, precise description, action verbs, and internal thoughts to "stretch out" a moment. Students then immediately apply these identified craft elements to their own personal narratives, building on their prior knowledge of "small moments." Teachers deliver targeted, corrective feedback during writing time, ensuring students accurately apply the taught skills and correct foundational skill errors.

Students will hear, read, write, and speak about read-alouds as part of direct instruction from the following books: *Pinky and Rex* by James Howe, *Frog and Toad Are Friends* by Arnold Lobel, *Winners Never Quit* by Mia Hamm, *Jamaica's Blue Marker* by Juanita Havill, and *Chrysanthemum* by Kevin Henkes.

Profile of a Graduate Capacities: Analyzing, Product Creation, Alternate Perspectives

Grade 3 ELA Curriculum Overview

<p>Unit 1 <i>Foundations for Third Grade Literacy</i></p>	<p>This foundational literacy unit establishes a clear structure for explicit, systematic, and cumulative instruction in third grade. Its central purpose is to solidify students' foundational reading skills while simultaneously building the knowledge and vocabulary necessary for advanced comprehension. The unit's core principle is the direct connection between sound, print, and meaning, which prepares students to read and write more complex words and texts.</p> <p>During whole-group instruction, the focus is on two key areas. First, foundational skills are taught directly and explicitly using Foundations. This includes phonics and morphology, where students learn and apply spelling rules for suffixes (e.g., -s, -ed, -ing), plurals and irregular plurals, the doubling rule, and vowel-consonant-e (VCe) syllables. At the same time, daily, brief, and targeted practice reinforces students' phonological awareness, or their ability to manipulate the sounds within words, a crucial skill for both reading and spelling.</p> <p>Second, whole-group instruction is dedicated to reading comprehension and knowledge building. The Bookworms curriculum provides shared reading to build background knowledge, comprehension, vocabulary, and fluency. Complex fiction and non-fiction texts are used as read-alouds to build students' background knowledge and academic vocabulary. The teacher explicitly teaches and defines key Tier 2 vocabulary words that are critical for understanding the text using explicit word instruction, semantic mapping, and semantic feature analysis. The read-alouds also provide an opportunity for the teacher to model how proficient readers integrate their knowledge of phonics, vocabulary, and sentence structure to construct meaning. After the reading, rich, text-dependent discussions help students synthesize information and engage with the material on a deeper level.</p> <p>In small-group settings, students receive differentiated and targeted practice of the skills taught in the whole group. For example, students apply their developing phonics skills by reading decodable texts using Geodes, which are specifically structured to reinforce recent spelling patterns. This allows them to build fluency with connected text. Materials from sources like Rasinski are used to provide structured opportunities for repeated reading, which builds reading speed, accuracy, and prosody. The small group structure is also the primary time for students to review and master previously taught concepts, including trick words and new vocabulary, ensuring skills are retained and become automatic.</p> <p>Writing instruction is closely integrated with reading, with students applying their knowledge of phonics, spelling rules, and grammar to their own written compositions. The unit emphasizes encoding with learned phonics patterns and using correct grammar and mechanics. Students also practice writing about reading, which requires them to synthesize information and use evidence from texts, directly reinforcing their comprehension skills.</p> <p>Students will hear, read, write, and speak about read-alouds as part of direct instruction from the following books: <i>Fudge-a-Mania</i> by Judy Blume, <i>What is Climate?</i> by Ellen Lawrence, <i>The Raft</i> by Jim LaMarche, and <i>Jane Goodall</i> by Laura Hamilton.</p> <p>Profile of a Graduate Capacities: Collective Intelligence, Self-Awareness</p>
<p>Unit 2 <i>Traditional and Adapted Fairy Tales</i></p>	<p>In this Grade 3 unit, students are immersed in traditional and adapted tales to deepen both engagement and comprehension. Using principles from the Science of Reading, Foundations teaches students to accurately and fluently decode words and to deeply comprehend a wide range of texts to address the grade-level standards: Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers. Recount stories, including fables, folktales, and myths from diverse cultures; determine the central message, lesson, or moral and explain how it is conveyed through key details in the text; Describe characters in a story (e.g., their</p>

Grade 3 ELA Curriculum Overview

traits, motivations, or feelings) and explain how their actions contribute to the sequence of events. Distinguish their own point of view from that of the narrator or those of the characters.

In addition, students receive explicit instruction in narrative structure, including clear beginnings, rising action, climax, and resolution. With guidance, they examine how authors develop narrators and characters to convey deeper meanings and morals.

Through Bookworms, students have opportunities for oral discussion, repeated reading, and written response are woven throughout, supporting vocabulary development, background knowledge, and syntax awareness. To build vocabulary, students will use explicit word instruction by engaging in activities such as analyzing word meanings, practicing words in context, and applying them in speaking and writing tasks through planned and specific read-alouds. Students then transfer their knowledge by drafting and revising their own adapted tales.

In small-group settings, students receive differentiated and targeted practice of the skills taught in the whole group. For example, students apply their developing phonics skills by reading decodable texts using Geodes, which are specifically structured to reinforce recent spelling patterns. This allows them to build fluency with connected text. Materials from sources like Rasinski are used to provide structured opportunities for repeated reading, which builds reading speed, accuracy, and prosody. The small group structure is also the primary time for students to review and master previously taught concepts, including trick words and new vocabulary, ensuring skills are retained and become automatic.

Students follow the stages of the writing process—planning, drafting, elaborating, and revising—to create stories with a clear moral or lesson. They use graphic organizers and story maps to analyze texts and guide their own writing. Conventions and grammar are integrated into each stage, allowing students to practice accuracy and develop automaticity within meaningful reading and writing contexts.

By the end of the unit, students will not only have a strong appreciation of traditional and adapted tales, but they will also demonstrate control of narrative structure to create their own adapted tales.

Students will hear, read, write, and speak about read-alouds as part of direct instruction from the following books: *Lon Po Po* by Ed Young, *Red Riding Hood* by James Marshall, *Cinderella* by Barbara Karlin, *Paperbag Princess* by Robert Munsch, and *The True Story of the Three Little Pigs* by Jon Scieszka

Profile of a Graduate Capacities: Analyzing, Product Creation, Alternate Perspectives

Geometry Curriculum Overview

<p>Unit 1 <i>Foundations of Geometry</i></p>	<p>This unit provides students with the essential foundations for studying geometry through a blend of vocabulary, visual reasoning, and logical thinking. Chapter 1 introduces the building blocks of geometry, including undefined terms such as points, lines, and planes, as well as defined terms like segments, rays, and angles. Students learn how to use geometric tools for measuring and constructing figures and how to apply properties of segments and angles to solve problems. The chapter emphasizes the use of proper notation, visual models, and real-world connections to deepen conceptual understanding and accuracy. Students also begin developing logical reasoning through inductive thinking and are introduced to conditional statements and their converses. Chapter 2 builds on this foundation by focusing on reasoning and proof—critical components of mathematical thinking. Students explore the structure of logical arguments, and they begin to construct formal proofs using definitions, postulates, and previously established theorems. The chapter introduces the two-column proof format, providing a model for how students organize and justify their thinking. Together, these two chapters set the stage as building a foundation for geometry.</p> <p>Profile of a Graduate Capacities: Analyzing, Collective Intelligence</p>
<p>Unit 2 <i>Parallel and Perpendicular Lines</i></p>	<p>This unit focuses on identifying and working with parallel and perpendicular lines in the coordinate plane and in geometric diagrams. Students explore angle relationships formed by a transversal intersecting parallel line and use these relationships to solve problems and write geometric proofs. The chapter introduces slope as a measure of steepness and as a tool for identifying parallel and perpendicular lines algebraically. Students deepen their understanding of deductive reasoning as they apply theorems about parallel lines, perpendicular lines, and transversals to write formal proofs. This chapter reinforces the use of precise definitions, logical argumentation, and geometric modeling in both pure and applied contexts.</p> <p>Profile of a Graduate Capacities: Inquiry, Analyzing</p>
<p>Unit 3 <i>Transformations-Geometry</i></p>	<p>This unit introduces the concept of transformations and their role in defining geometric congruence. Students explore translations, reflections, rotations, and dilations on and off the coordinate plane. Through visual models and algebraic representations, students learn to describe transformations precisely and recognize sequences that produce congruent or similar figures. The unit builds toward formal definitions of congruence and lays the foundation for proof using rigid motions.</p> <p>Profile of a Graduate Capacities: Analyzing, Product Creation</p>

Grade 4 Social Studies Curriculum Overview

<p><u><i>Unit 1</i></u> <i>Geography Foundations</i></p>	<p>In this introductory geography unit, Grade 4 students build the foundational knowledge and skills needed to understand their place in the world. Through hands-on mapping activities and interactive lessons, students explore the five themes of geography, develop essential map skills, and learn how the world is organized into continents, countries, states, and regions. In a culminating performance-based assessment, they apply this knowledge to create a “My Place in the World” flipbook, illustrating their location from the broadest scale (planet) to the most personal (home).</p> <p>Profile of a Graduate Capacities: Product Creation</p>
<p><u><i>Unit 2</i></u> <i>Good Morning, U.S.A.!: Understanding Regions</i></p>	<p>In this unit, Grade 4 students explore the five regions of the United States—the Northeast, Midwest, Southeast, Southwest, and West—through hands-on, inquiry-based activities. They will investigate each region’s geography, climate, history, culture, natural resources, major landmarks, and key destinations, while learning to navigate nonfiction texts, analyze maps, and interpret diagrams and visuals. Students will also examine historical events, regional traditions, the contributions of First Peoples and other groups, and consider how humans interact with and adapt to their environment.</p> <p>Students will apply their learning by conducting research on an assigned region and synthesizing information through a variety of media. The unit culminates in a group performance-based assessment, where students create and present a multimedia “Regional News Show” to showcase the unique characteristics, challenges, and interconnections of their region. This project-based approach promotes critical thinking, collaboration, and effective communication while helping students understand the rich diversity and interdependence of U.S. regions.</p> <p>Profile of a Graduate Capacities: Product Creation</p>
<p><u><i>Unit 3</i></u> <i>Connecting Communities</i></p>	<p>In this Grade 4 unit, <i>Connecting Communities</i>, students explore the diverse regions and landmarks of the United States, learning about geography, human and physical characteristics, climate, natural resources, and how people interact with their environment. Through hands-on, inquiry-based activities, students examine maps, read nonfiction texts, analyze images, and investigate how human and environmental factors shape where people live, work, and travel. They explore the movement of people, goods, ideas, and technology across regions and consider the unique features that define each region.</p> <p>Students apply their learning by researching a specific landmark and synthesizing information through a variety of media. The unit culminates in a project-based assessment, where students create a travel brochure or multimedia presentation that demonstrates their understanding of location, place, movement, and human-environment interaction. This approach encourages critical thinking, collaboration, and communication while helping students recognize the interconnections and diversity across the United States.</p> <p>Profile of a Graduate Capacities: Product Creation</p>

Grade 4 Social Studies Curriculum Overview

<p><u>Unit 4</u> <i>Change-makers in the United States - An Interdisciplinary Unit</i></p>	<p>In this interdisciplinary unit, Grade 4 students explore the lives and legacies of historical change-makers. Students begin by listening to the teacher read <i>Who Was Louis Armstrong?</i> and then work in book clubs to investigate other change-makers from the <i>Who Was</i> series. Through guided research and collaborative discussion, students examine each figure's background, goals, obstacles, actions, and lasting impact, recording their learning step-by-step on a structured note-taking sheet.</p> <p>Throughout the unit, students develop critical skills in research, summarization, and visual literacy while also practicing organization, collaboration, and thoughtful presentation. Each student group synthesizes their findings into a final project, thoughtfully sharing their change-maker's story with the class. This culminating performance-based assessment invites peers to analyze and discuss what qualities make someone a change-maker, highlighting the enduring contributions of individuals who challenged the status quo and worked to make the world a better place.</p> <p>Profile of a Graduate Capacities: Analyzing</p>
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Grade 5 Social Studies Curriculum Overview

<p><u><i>Unit 1</i></u> <i>Migration & Settlement</i></p>	<p>This Grade 5 unit takes students on a journey through the early history of the United States, exploring the lives, cultures, and achievements of Native American tribes, European explorers, and the first colonies. Students begin by investigating the diverse regions and cultures of Native Americans, analyzing how geography shaped daily life, from food and shelter to recreation and social roles. They develop research and organizational skills by using text features to gather information, and they practice note-taking through structured graphic organizers. Through hands-on activities, gallery walks, and trade fair simulations, students deepen their understanding of cultural exchange, resourcefulness, and the ways communities adapt to their environments.</p> <p>As the unit progresses, students examine the Age of Exploration, studying figures such as Cabot and De Soto, and engaging in critical thinking about the impact and legacy of explorers. They refine their skills in identifying claims, supporting evidence, and creating organized presentations to communicate historical ideas effectively. The unit culminates in an immersive exploration of the 13 colonies, including Connecticut, where students research governance, early settlements, and the experiences of enslaved peoples. Through map activities, collaborative projects, and a summative travel brochure, students synthesize their learning, connecting geography, history, and culture to develop a rich understanding of the foundations of early America.</p> <p>Profile of a Graduate Capacities: Design, Collective Intelligence</p>
<p><u><i>Unit 2</i></u> <i>The American Revolution - An Interdisciplinary Unit</i></p>	<p>This interdisciplinary unit explores the causes, key events, and lasting impacts of the American Revolution. Students begin by examining the French and Indian War, the Proclamation of 1763, and British taxation policies, including the Sugar Act, Stamp Act, Townshend Acts, and Intolerable Acts. Through debates, journal entries, and case studies, students analyze how these events heightened tensions between the colonies and Britain and consider the perspectives of different groups—including women, African Americans, and Native American nations—on the challenges of the time.</p> <p>Students study the Revolutionary War itself, exploring major battles such as Bunker Hill, Trenton, Saratoga, and Yorktown, and learning about key figures. They analyze primary sources, poems, propaganda, and historical songs to evaluate evidence, understand multiple perspectives, and recognize bias.</p> <p>Language Arts is fully integrated into this unit through the historical novel <i>My Brother Sam Is Dead</i> by James Lincoln Collier. Reading this book allows students to experience the Revolution through the eyes of a family living in Connecticut, deepening empathy and providing a personal lens for understanding historical events. Students use the novel as a springboard for social studies learning, connecting story details to historical facts, making inferences, and drawing conclusions about how the Revolution affected people.</p> <p>Through hands-on activities—such as creating timelines, developing claims about Connecticut’s role in the war, designing propaganda, and producing visual sketches—students gain a comprehensive understanding of how the Revolution shaped</p>

Grade 5 Social Studies Curriculum Overview

	<p>American identity and democratic principles. By the end of the unit, students can explain both the causes and consequences of the Revolution and articulate how individuals and groups influenced its course.</p> <p>Profile of a Graduate Capacities: Design</p>
<p><i>Unit 3</i> <i>The United States Constitution & Civic Participation</i></p>	<p>In this unit, students embark on a journey to explore the foundations of the United States government and the principles that guide civic participation. They begin by examining why the colonists fought for independence and how the Declaration of Independence set forth powerful ideas about freedom, equality, and fundamental rights. Students then trace the evolution of governance, moving from the Articles of Confederation to the creation of the U.S. Constitution, discovering how it organizes government, separates powers, and defines the roles of federal, state, and local authorities.</p> <p>Learners investigate key democratic principles—including popular sovereignty, republicanism, checks and balances, and federalism—by analyzing historical documents and connecting them to real-world examples. They also explore how the Constitution and the Bill of Rights protect individual freedoms and limit government power. Through inquiry-based lessons, students examine how citizens in both the Revolutionary Era and today can influence change in their communities.</p> <p>Throughout the unit, students develop critical skills in reading and interpreting historical texts, analyzing primary sources, comparing perspectives, and constructing evidence-based arguments. By the end of the unit, learners not only understand the structure and purpose of the U.S. government but also recognize their role as informed, engaged participants in a democracy.</p> <p>Profile of a Graduate Capacities: Analyzing, Product Creation</p>

Kindergarten STEAM Curriculum Overview

<p><u>Unit 1</u> <i>Discovering STEAM: Exploring Science, Technology, Engineering, Art, and Math</i></p>	<p>In this unit, kindergarten students are introduced to the world of STEAM learning while building classroom routines, expectations, and curiosity. Through stories, songs, and hands-on exploration, students learn what each letter of STEAM stands for and what it means to be a respectful, creative problem-solver.</p> <p>Students will:</p> <ul style="list-style-type: none">● Learn routines and responsibilities for using materials safely and respectfully.● Explore each part of STEAM through engaging books, videos, and activities:<ul style="list-style-type: none">○ Science: observe and ask questions like real scientists.○ Technology: discover tools and inventions all around us.○ Engineering: build and test creative designs.○ Art: express ideas through different artistic tools and media.○ Math: play with numbers, shapes, and patterns.● Start their STEAM sketchbooks to capture ideas, designs, and discoveries.● Collaborate and create in their first experiences with the makerspace. <p>By the end, students will understand that STEAM is all around them—and that they, too, are scientists, engineers, artists, mathematicians, and creators ready to explore the world!</p> <p>Profile of a Graduate Capacities: Design, Collective Intelligence</p>
<p><u>Unit 2</u> <i>STEAM Fairytales: Building Solutions for Storybook Friends</i></p>	<p>This unit will integrate Science, Technology, Engineering, the Arts and Mathematics to guide student inquiry, dialogue, and critical thinking within the context of fairy tales.</p> <p>In this unit, kindergarten students step into the world of classic fairy tales—but with a twist! Instead of just listening to the stories, students become engineers, designers, and inventors who help the characters solve their biggest problems. Can they build a drawbridge for a castle, design a carriage for Cinderella, or create a zipline for Jack to escape the beanstalk?</p> <p>Through hands-on challenges, students will:</p> <ul style="list-style-type: none">● Read and explore fairy tales with familiar characters.● Design and test solutions using STEAM practices.● Work like engineers—planning, building, testing, and improving their ideas.● Collaborate and problem-solve to bring their storybook friends to safety. <p>By the end, students won't just know fairy tales—they'll have engineered new endings!</p>

Kindergarten STEAM Curriculum Overview

	Profile of a Graduate Capacities: Design, Collective Intelligence
<p><i><u>Unit 3</u></i> <i>Robots in Action: Building, Coding, and Problem-Solving</i></p>	<p>In this unit, kindergarten students dive into the exciting world of robots and coding through playful, hands-on challenges. They'll discover how robots can help people, how coding works, and how they can create their own inventions to solve real-world problems.</p> <p>Students will:</p> <ul style="list-style-type: none">● Design and build tools in the Maker Space, like a litter picker to help keep the environment clean.● Explore coding basics by giving step-by-step directions to help a mouse find its cheese.● Bring coding to life by programming robots to navigate obstacles and even create their own courses.● Invent and program their own robots, combining creativity, building skills, and coding knowledge in a final challenge. <p>By the end, students will see themselves as engineers, problem-solvers, and coders, ready to imagine how robots can make our world a better place.</p> <p>Profile of a Graduate Capacities: Design, Collective Intelligence</p>

Grade 1 STEAM Curriculum Overview

<p><u>Unit 1</u> <i>From Light to Sound: Creative Problem-Solving in STEAM</i></p>	<p>In this introductory STEAM unit, students will become designers and problem-solvers. They will explore materials, practice teamwork and communication, and use the design process to create and test solutions. Along the way, they will build understanding of computational thinking—breaking problems into smaller steps, sequencing, and recognizing cause and effect—while connecting science concepts of light and sound to real-world applications.</p> <p>Students will engage with LEGO® Education Spike Essential: Great Adventures. Through story-based challenges, they will create models that light up or make sound, learn how to build and test simple programs, and practice debugging when things don't work the first time. These activities not only strengthen problem-solving and collaboration but also give students a fun and meaningful introduction to the world of STEAM. They will also explore LEGO® Education Science investigations where they discover that objects can only be seen in the dark when illuminated and design instruments that use sound to communicate across a distance.</p> <p>The unit concludes in the MakerSpace, where students tackle open-ended challenges and design solutions to real-world problems. They will discover that there are many ways to solve a problem, that designs often need to be revised and retested, and that applying scientific knowledge can lead to stronger, more effective solutions.</p> <p>Profile of a Graduate Capacities: Collective Intelligence, Design</p>
<p><u>Unit 2</u> <i>Adapt, Design, Invent: STEAM Adventures in Nature and Technology</i></p>	<p>Using Lego Education Spike and Lego Education Science, Grade 1 students begin by designing a solution to a human problem by mimicking how animals use their external parts to meet their needs. This foundational activity introduces the connection between nature and problem-solving, helping students observe patterns and understand how animals adapt to survive.</p> <p>Next, students engage in the technology component of the engineering process, building prototypes and programming their functions. They learn to develop programs using sequencing and loops, test whether their programs work, and debug any issues that arise. Through these experiences, students see how technology and engineering can be used to solve real-world problems creatively.</p> <p>Alongside the engineering and technology work, students explore behavioral patterns in parents and offspring that support survival. They develop their collaborative discussion skills by referring to story elements, identifying a character's problem, and applying those insights to their design and programming tasks. Having a clear understanding of the problem helps students grow into effective problem-solvers.</p>

Grade 1 STEAM Curriculum Overview

	<p>Finally, the MakerSpace component brings students full circle, asking them to apply their scientific understanding of animal adaptations and create new defense mechanisms for plant or animal survival. This culminating activity integrates knowledge, creativity, and collaboration while highlighting the ways nature inspires innovation.</p> <p>Profile of a Graduate Capacities: Collective Intelligence, Design</p>
<p><i><u>Unit 3</u></i> <i>Investigating Light, Sound, and the Sky</i></p>	<p>In this hands-on science unit, students are introduced to physical and life science concepts while exploring the fascinating ways light, sound, and natural patterns affect our world. Using LEGO Education Spike and Lego Education Science, students build and test models, design solutions to real-world problems, and investigate patterns of the sun, moon, and stars.</p> <p>Students will discover that objects can only be seen when illuminated and that sounds are produced by vibrating materials. They will explore how different materials affect the transmission of light and sound and use this understanding to design tools that communicate over a distance. Students will also program light and sound sensors, integrating technology into their investigations.</p> <p>Throughout the unit, students develop self-regulation, perseverance, and a growth mindset as they engage in collaborative problem-solving. They consider ideas from others, work toward shared goals, and clearly articulate their design choices and reasoning. The MakerSpace allows students to combine their artistic creativity with scientific understanding by creating a mobile that represents the sun, moon, and stars.</p> <p>Profile of a Graduate Capacities: Collective Intelligence, Design</p>

Grade 2 STEAM Curriculum Overview

<p><u>Unit 1</u> <i>From Ideas to Innovation: Exploring Science and Engineering with LEGO</i></p>	<p>As their introductory unit to STEAM, students will explore Lego Education Spike and Lego Education Science materials and learn how to use them appropriately to innovate their own designs in response to presented problems. They will learn expectations for communication and engage in collaborative discussions as they work with peers to develop prototypes that meet shared goals. Students will be introduced to the engineering design process, understanding the importance of fully analyzing a problem before designing solutions, brainstorming multiple ideas, and testing and refining their prototypes. Through hands-on challenges, they will extend their science learning from the classroom by creating solutions that address the effects of changing land and by building models representing land and bodies of water. Along the way, students will practice observational skills to determine how to modify their solutions to best meet the needs of the Lego characters, apply science concepts in their design process, compare different designs, and evaluate their effectiveness.</p> <p>Students will also be introduced to the MakerSpace, where they will tackle open-ended problems and design solutions to science-related, real-world tasks. In this creative space, students will evaluate the effectiveness of different materials, observe how materials affect their prototypes, and make iterative changes as needed. Across the unit, they will develop critical STEAM skills, including problem-solving, collaboration, and design thinking, while building a strong foundation in science concepts, engineering practices, and innovation.</p> <p>Profile of a Graduate Capacities: Design, Collective Intelligence</p>
<p><u>Unit 2</u> <i>From Bridges to Ferris Wheels: Hands-On STEAM Adventures</i></p>	<p>In this STEAM unit, students engage in hands-on, collaborative learning to explore different materials, while evaluating their effectiveness. Using LEGO Education Spike and LEGO Education Science, along with MakerSpace materials, students tackle real-world problems and develop solutions through creativity, experimentation, and teamwork.</p> <p>Students begin by investigating how different materials behave, testing their properties, and building simple machines and structures such as bridges. They gradually apply these skills to more complex challenges, including creating spinning rides, Ferris wheels, and amusement park attractions. Throughout the unit, students learn to plan, test, and refine prototypes while observing how materials and designs affect performance.</p> <p>In the MakerSpace activities, students expand their problem-solving skills and use the engineering and design process to design an ice-insulating container and build a wind-powered boat. Throughout the unit, students develop critical skills such as collaboration, communication, perseverance, and creative problem-solving. They are encouraged to share ideas, give and receive feedback, and reflect on their learning.</p> <p>Profile of a Graduate Capacities: Collective Intelligence, Design</p>

Grade 2 STEAM Curriculum Overview

Unit 3

*Building in
Nature: Exploring
Animal, Plant, and
Environmental
Science Through
STEAM*

In this hands-on unit, students embark on an exciting journey to explore the natural world and apply scientific concepts through collaborative design and engineering challenges. Students start by working together to design solutions for science-related animal topics. They investigate the function of plant and animal behaviors, examine the diversity of life within habitats, and apply these observations to create their own models and solutions.

Next, students engage with Lego Education Spike and Lego Education Science that focus on a variety of scientific concepts, including animal and plant survival, seed dispersal, and wind erosion. Throughout these lessons, students practice the engineering design process: decomposing problems, redesigning solutions, and creating models that reflect what they have learned. They develop observational skills to select the best materials, refine prototypes, and design solutions that prevent or reduce wind damage. Students compare designs across the class, articulate their choices, and evaluate the effectiveness of different models.

Finally, students apply their science and engineering knowledge during MakerSpace activities, designing innovative solutions using the materials best suited for the task. This unit emphasizes the strong connection between science and engineering, helping students build confidence in using prior knowledge to generate ideas, persevere through challenges, and approach complex tasks independently. By the end of the unit, students become more skilled at tackling problems, testing solutions, and collaborating effectively with peers, all while deepening their understanding of the natural world.

Profile of a Graduate Capacities: Design, Collective Intelligence

Grade 3 STEAM Curriculum Overview

<p><u><i>Unit 1</i></u> <i>Creative Builders-Solving Problems with Science and Engineering</i></p>	<p>In this introductory STEAM unit, students will dive into hands-on challenges using LEGO Education Science kits and our MakerSpace. They will learn how to explore materials, design prototypes, and test their ideas while working together to solve a wide range of problems.</p> <p>From designing homes that can withstand heavy rain, racing bug bots, and even creating tools to measure the wind, each activity gives students the chance to think like engineers and scientists. They will learn the expectations for communication, collaborate in teams, and practice giving and receiving feedback as they design, test, and improve their work.</p> <p>As their introductory unit to STEAM, students will learn how to use materials appropriately to innovate their own designs for different challenges. They will construct prototypes for specific tasks, evaluate their effectiveness, and then refine their ideas by comparing them against criteria and constraints. This process helps students see the value of perseverance, creativity, and critical thinking. The unit concludes with time in the MakerSpace, where students will have greater autonomy to choose their designs, test materials, and make improvements based on results. These experiences immerse students in the design process and build their ability to problem-solve, innovate, and reflect—skills that will serve them well both in and beyond the classroom.</p> <p>Profile of a Graduate Capacities: Design, Collective Intelligence</p>
<p><u><i>Unit 2</i></u> <i>Innovators in Action!</i></p>	<p>In this exciting STEAM unit, students become young engineers, scientists, and computer scientists, tackling hands-on challenges that spark curiosity and creativity. Throughout the unit, students will explore how objects move, how forces interact, and how technology can help solve real-world problems.</p> <p>Students will deepen their understanding of programming using Lego Education Science and Lego Education Spike by creating sequences and loops, breaking problems into smaller parts, and improving programs to meet specific needs. They will develop critical thinking skills as they test, debug, and refine their programs, learning to describe the decisions they've made and how their choices impact their solutions. Students will practice generating multiple solutions and iteratively improving their designs, building both technical skills and problem-solving confidence.</p> <p>In the MakerSpace, students will apply scientific concepts to design devices that move objects, such as magnetic lifts and catapults. They will develop prototypes, test their designs, and make adjustments to improve function. By experimenting with forces, motion, and energy, students gain hands-on experience with the engineering design process while learning the importance of perseverance, collaboration, and creative thinking.</p>

Grade 3 STEAM Curriculum Overview

	<p>By the end of this unit, students will have strengthened their abilities to work collaboratively, think critically, and communicate their ideas effectively. They will have experienced the thrill of innovation firsthand—designing, testing, and refining solutions to real-world challenges—preparing them to be confident problem solvers and creative thinkers for years to come.</p> <p>Profile of a Graduate Capacities: Collective Intelligence, Design</p>
<p><i>Unit 3</i> <i>Animal Adaptations, Life Cycles, and Environmental Engineering</i></p>	<p>In this exciting unit, students explore the science of animals and their environments using LEGO Education Science and LEGO Education Spike. They will build animal prototypes that demonstrate their understanding of adaptations, genetics, and life cycles, from birth through adulthood. Students will use their models to support arguments about scientific concepts, make observations, and connect their learning to the real world.</p> <p>Throughout the unit, students will apply scientific concepts to the engineering design process, designing solutions to help animals survive weather-related hazards and constructing models that demonstrate scientific phenomena. To do this, students will continue their work writing, debugging, and evaluating the success of their programs, as they did in the previous unit. They will innovate, test, and refine their designs while learning to persevere, be flexible in their thinking, and practice a growth mindset—essential skills for problem-solving and real-world innovation.</p> <p>By the end of the unit, students will see themselves as environmental engineers and innovators, gaining confidence in their ability to make a positive impact. They will collaborate, communicate their ideas, and explore how creativity and science can work together to solve meaningful problems for animals and ecosystems.</p> <p>Profile of a Graduate Capacities: Collective Intelligence, Design</p>

Grade 4 STEAM Curriculum Overview

<p><u>Unit 1</u> <i>The Engineers' Challenge: From Energy to Innovation</i></p>	<p>In their first STEAM unit, students step into the role of young engineers and inventors! They explore a variety of materials and learn how to use them safely and creatively to solve real-world problems. As they build and test their own designs, students also practice communicating their ideas and explaining how science concepts influence their solutions.</p> <p>Using Lego Education Spike and Lego Education Science, students investigate energy and energy transfer, applying these concepts throughout the engineering and design process. They deepen their understanding of energy conversion as they develop prototypes that transform energy to make devices work.</p> <p>Through a hands-on, collaborative project in the MakerSpace, students are challenged to address an environmental problem. They take ownership of their design process, work as a team, and begin to see themselves as engineers making meaningful solutions.</p> <p>The unit also introduces digital literacy, helping students understand their rights and responsibilities as creators and consumers in the online world. By the end of the unit, students will have combined creativity, problem-solving, science, and technology skills to tackle challenges and bring their innovative ideas to life.</p> <p>Profile of a Graduate Capacities: Design, Collective Intelligence</p>
<p><u>Unit 2</u> <i>Energy and the Crazy Carnival</i></p>	<p>In this hands-on unit, students become engineers and inventors as they explore how energy works in the world around them. Using Lego Education Spike and Lego Science kits, students design, build, and test a variety of devices, discovering how potential and kinetic energy move objects and how energy can be converted from one form to another.</p> <p>Through exciting challenges, students collaborate in teams, share ideas, compare solutions, and improve their designs based on feedback. They investigate how objects interact and affect one another's movements, predict outcomes during collisions, and explore the relationship between energy and speed.</p> <p>Students continue Lego Spike Crazy Carnival, where they apply what they've learned about energy transfer and collisions to invent their own carnival games, testing and refining prototypes to make them work effectively.</p> <p>In addition to engineering and science, students continue digital literacy lessons, learning the difference between personal and private information and why it's important to protect private information online.</p> <p>By the end of this unit, students will have combined science, technology, engineering, and creativity to solve real-world problems, collaborate effectively, and develop critical thinking skills—all while having fun building and experimenting!</p>

Grade 4 STEAM Curriculum Overview

	Profile of a Graduate Capacities: Design, Collective Intelligence
<p><i><u>Unit 3</u></i> <i>Exploring Structure, Function, and Design</i></p>	<p>In this exciting STEAM unit, students will explore the connections between structure and function in both animals and man-made designs using Lego Education Science and Lego Education Spike. Through hands-on activities, they will build models that represent how internal and external structures help organisms survive, grow, and respond to their environment, while also examining how design choices in human-made structures meet specific needs.</p> <p>Students will apply this understanding to the engineering design process, creating devices and solutions whose structure directly supports their function. They will investigate how criteria and materials influence the success of their designs and, as the unit progresses, use evidence from experimentation and observation to make claims about their design choices.</p> <p>Collaboration is a key part of the unit. Students will engage in productive discussions, build on the ideas of their peers, and refine their own thinking based on feedback. The MakerSpace encourages creativity, allowing students to explore multiple materials and approaches to achieve the best structure and function for each challenge.</p> <p>In addition, students will explore digital citizenship, learning the characteristics of responsible online behavior and strategies to combat cyberbullying, helping them develop empathy and responsibility in both digital and real-world communities.</p> <p>By the end of the unit, students will have strengthened their problem-solving skills, cultivated a creative and collaborative mindset, and deepened their understanding of how science, technology, and engineering work together to solve real-world problems.</p> <p>Profile of a Graduate Capacities: Design, Collective Intelligence</p>

Grade 5 STEAM Curriculum Overview

<p><u>Unit 1</u> <i>Innovators in Action: Exploring STEAM Through Design and Discovery</i></p>	<p>In this introductory STEAM unit, students will become young innovators, exploring a variety of materials and tools to create, test, and refine their own solutions to engaging, real-world challenges. Using Lego Education Spike and Lego Education Science, students will investigate scientific concepts while applying the engineering design process to develop inventive devices and prototypes.</p> <p>Throughout the unit, students will collaborate and communicate effectively, honoring the ideas of all group members while comparing the effectiveness of diverse solutions. They will engage in hands-on design challenges, creating imaginative inventions, problem-solving with unique criteria, and iteratively testing and refining their designs. Students will also explore MakerSpace opportunities, designing devices that connect directly to scientific principles such as light, motion, and communication.</p> <p>In addition, digital literacy will be integrated as students analyze online news articles to understand structure, purpose, and credibility, with a focus on distinguishing sponsored content from trustworthy information. By the end of the unit, students will have strengthened their problem-solving, collaboration, and digital literacy skills while gaining confidence in designing, testing, and improving their creations, understanding that innovation grows from curiosity, experimentation, and learning from both successes and challenges.</p> <p>Profile of a Graduate Capacities: Collective Intelligence, Design</p>
<p><u>Unit 2</u> <i>Investigating Energy, Gravity, and Innovation</i></p>	<p>In this exciting STEAM unit, students explore scientific concepts and engineering through hands-on experiences with Lego Education Science and Lego Education Spike. Using the engineering design process, students build and program devices that set objects into motion, applying scientific principles to complete real-world tasks. They experiment with motors to power their creations, learning how design, testing, and iteration can improve their solutions.</p> <p>Throughout the unit, students investigate evidence that matter is made of particles too small to see, explore the effects of gravitational forces on Earth, and analyze how the number of daylight hours changes over the year. They deepen their understanding of energy flow by creating models that show how animals obtain energy from the sun through the food they eat. Students also engage in a culminating project to research and design solutions for protecting the environment, learning how communities apply science to real-world challenges.</p> <p>In addition to science and engineering, students enhance their digital literacy skills by examining online behavior, identifying cyberbullying, and practicing strategies to respond safely and responsibly in digital spaces.</p> <p>By the end of the unit, students will have developed critical thinking, collaboration, and problem-solving skills. They will be able to design, test, and refine innovative solutions, communicate their ideas effectively, and make connections between scientific</p>

Grade 5 STEAM Curriculum Overview

	<p>concepts and the technology they build. This hands-on unit empowers students to see themselves as scientists, engineers, and responsible digital citizens.</p> <p>Profile of a Graduate Capacities: Collective Intelligence, Design</p>
<p><u><i>Unit 3</i></u> <i>Problem Solvers at Work: Engineering Meets the Environment</i></p>	<p>In this engaging STEAM unit, fifth graders will step into the roles of engineers, scientists, and problem-solvers as they design creative solutions to real-world challenges. Using LEGO Education Spike and Lego Education Science kits, students will build and test prototypes such as a Trash Monster Machine, a Winning Goal, and a Literary Randomizer. They will apply the engineering design process to invent classroom creations, tackle a performance-based task, and create models to explore how energy flows through food chains and how matter cycles among plants, animals, and decomposers. Students will also take on a MakerSpace challenge where they brainstorm and design inventions to address pressing environmental issues like plastic pollution, food waste, or biodiversity loss.</p> <p>Throughout the unit, students will develop their engineering and design skills as they identify problems, brainstorm solutions, and refine prototypes. They will strengthen problem-solving skills by working within constraints, improving on others' ideas, and evaluating solutions using clear success criteria. By connecting scientific concepts to real-world issues, students will see how innovation can make a difference in their communities and beyond. The unit concludes with a digital literacy lesson on clickbait, where students learn to recognize and avoid misleading online content, building their capacity to be thoughtful, responsible digital citizens.</p> <p>Profile of a Graduate Capacities: Collective Intelligence, Design</p>



Office of the Superintendent
Madison Public Schools
Madison, CT 06443

School Trip Proposal / Request Form Student International Travel

School: DHHS Principal: Mr. Salutaris
 Date(s) of Trip: April 2026 Trip Organizer(s): Mrs. Braho
 Destination of Trip: Bermuda
 Grade level of student participants: 9-12 No. of Students: 12-18
 Educational Objectives including related classroom activities prior to / following the trip: _____
- Hands-on and authentic scientific research opportunities
- Experiential learning in a naturalistic setting
 Funding Source(s): _____

Complete if students are paying for all or part of the trip.
 Total fees required from each student: Tour Fee = _____ } \$3000 (Approx)
 Transportation Fee = _____

Name of Tour Company: BIOS (Bermuda Institute of Ocean Sciences)
 Name of transportation service vendor: TBD
 No. of buses required: _____ Cost per bus: _____
 Date / Time of trip: Departing Madison: April 11/12, 2026 Returning to Madison April 17/18, 2026
 Number of chaperones on trip: 2

Include the information below when submitting this approval form. (Place a check mark by each item indicating its inclusion in the approval packet.)

- Information outlining parental financial responsibility should there be an emergency cancellation
- Parent / Guardian letter explaining the trip and travel itinerary
- Parent / Guardian Permission and Acknowledgment of Risk for Student International Travel Form
- Emergency Plan (Includes arrangements for medical needs, parent / guardian contact information, access to communication devices, and procedures for general potential emergency situations)
- List of Chaperone Names and Phone Numbers with MPS employees noted
- Telephone Tree in the event of an emergency

Be sure the school administrator has a list of those students participating in the activity and a copy of the emergency contact numbers.



Office of the Superintendent
 Madison Public Schools
 Madison, CT 06443

School Trip Proposal / Request Form Student International Travel

I / We certify that this trip proposal is in accordance with Madison Public Schools policies #5100.8 and #6100.16.1 and corresponding regulations:

Elisa Paha
 Signature, Trip Organizer(s)

Trip approved

[Signature] 10/9/25
 Signature, Principal / Assistant Principal Date

[Signature] 10/9/25
 Signature, Superintendent or Designee Date

Trip Denied

Reason: _____

 Signature, Superintendent or Designee Date

International Travel Checklist

- Obtained approval at least six (6) months prior to the trip.
- Submitted list of participating students to Principal and Health Office at least three (3) months prior to the trip.
- Submitted an updated list of participating students to Principal and Health Office one (1) month prior to trip.
- Submitted flight, hotel, charter bus, and airport information one (1) month prior to trip.
- Arranged appropriate number of chaperones and provided orientation
- Clearly explained expectations of students
- Received parent permission forms and emergency medical forms

Educational Expeditions: Student Science Programs in Bermuda



**Bermuda Institute
of Ocean Sciences**



**Julie Ann Wrigley
Global Futures Laboratory™**
Arizona State University

Group:	Daniel Hand High School	Nights:	6
Contact:	Elisa Brako	Students:	16
Dates:	April 11-17, 2026	Leaders:	2

Time	Saturday April 11	Sunday April 12	Monday April 13	Tuesday April 14	Wednesday April 15	Thursday April 16	Friday April 17
7:45-8:30		Breakfast	Breakfast	Breakfast	Breakfast	Breakfast	Breakfast
9:00-11:30		Public Bus to Bermuda, Aquarium, Museum and Zoo	Walsingham Limestone Caves + Jumps at Blue Hole	Coopers Island (Natives and Endemics Restoration)	Coopers Island Microplastics Sampling	ROV Pool Test Course + Circuits Lab	Pack up Departures
11:45-12:30	Packed Lunch	Packed Lunch	Lunch	Lunch	Lunch	Lunch	
1:00-4:30	Arrivals Orientation Walk to Whalebone for Required Swim Check	Public Bus (or walk 20 minutes) to Shelly Bay Shelly Bay Swim! Public Bus back to BIOS	Nonsuch Island Boat Trip	North Rock Boat Trip	1pm Microplastics Lab 3:30pm Crystal and Fantasy Caves	Warwick Long Bay + Horseshoe Bay + Gibbs Hill Lighthouse	
5:45-6:30	Dinner	Dinner	Dinner	Dinner	Dinner out at Swizzle Inn**	Dinner	
Start at 6:30pm	Intro to Bermuda Lecture	Nonsuch Movie	Plankton: Lecture, Tow + Lab	Glider Lecture	Swizzle Inn Dinner	Night Snorkel at Tobacco Bay	



**Bermuda Institute
of Ocean Sciences**

ASU Julie Ann Wrigley
Global Futures Laboratory™
Arizona State University

Agenda



Why Bermuda and ASU BIOS?

**What does a Visiting Group
look like?**

Timeline



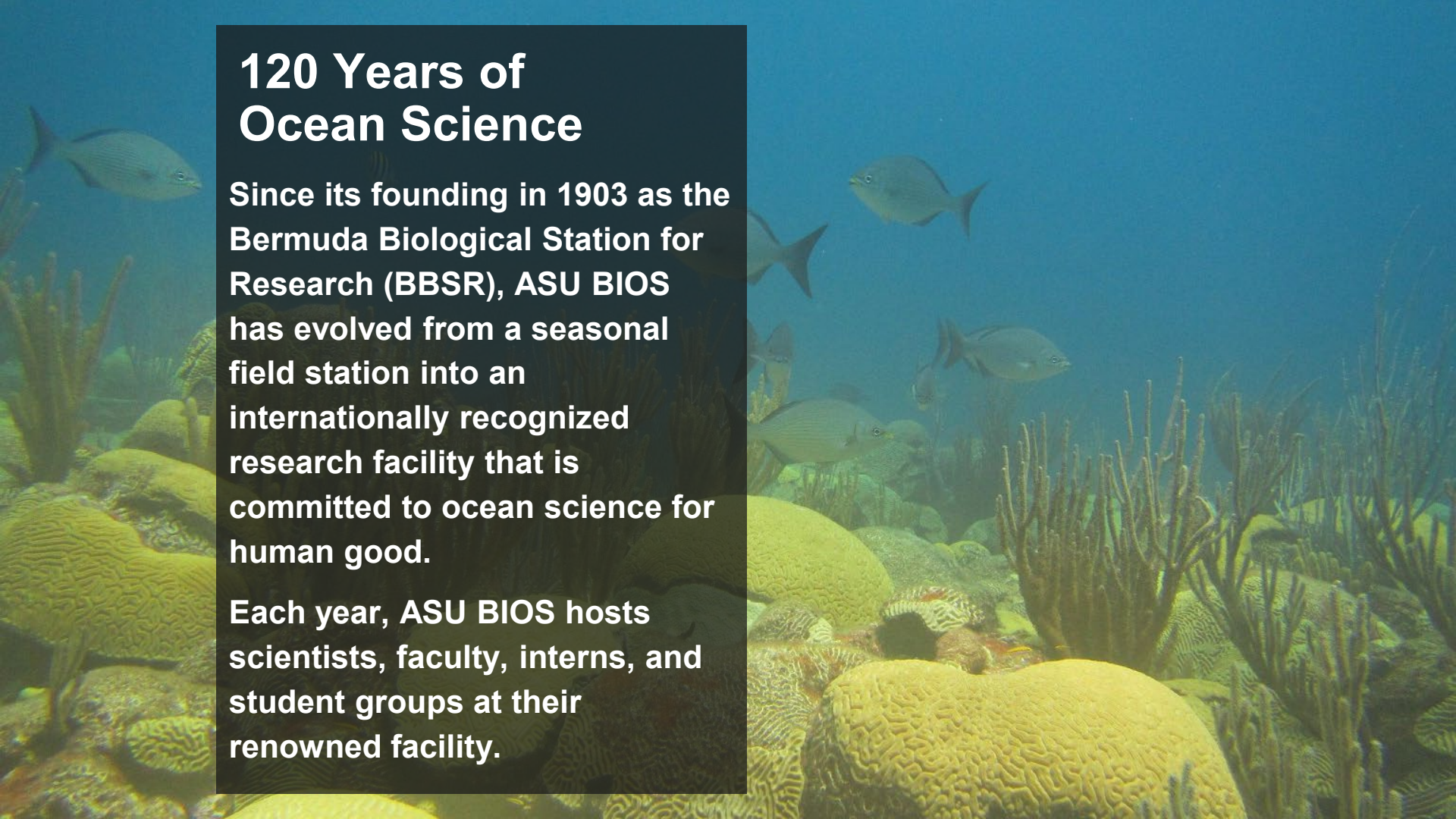
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120 Years of Ocean Science

Since its founding in 1903 as the Bermuda Biological Station for Research (BBSR), ASU BIOS has evolved from a seasonal field station into an internationally recognized research facility that is committed to ocean science for human good.

Each year, ASU BIOS hosts scientists, faculty, interns, and student groups at their renowned facility.



Why Bermuda?

There are many international locations to visit– what makes Bermuda special?

Proximity

Bermuda is a convenient 2 hour flight from the east coast of the United States (~700 miles).

Accessibility

Bermuda is a small island (21.5 square miles) so any location can be reached within an hour.

Geological History

The island originated as a seamount. There are many interesting geological formations to see.

Coral Reefs

Bermuda is home to the northernmost coral reefs in the world; a hotspot for science with global warming

Why ASU BIOS?

What opportunities are available for my students?

Laboratory Equipment

The Institute has state-of-the-art scientific equipment for students to get an introduction to the practical side of research.

Dormitories and Buffets

Living arrangements at BIOS are comfortable and reasonably priced. Three hearty meals are provided daily, as well as packed lunches for field visits.

Endless Excursions

BIOS bus is available for student transport around the island and for scientific excursions

Snorkels and Sampling

Access to research vessels such as R/V Stommel for snorkel trips and coring cruises.



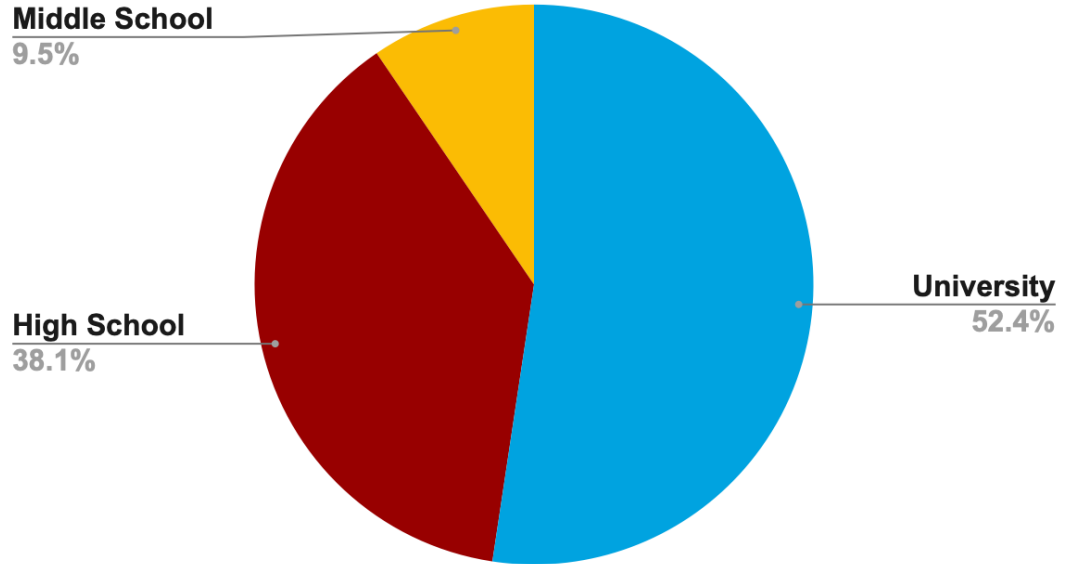
BIOS has been welcoming Education Groups for decades. Our Educational Expeditions program is targeted at 5-14 day trips to our research facility—giving students time to immerse themselves in the island and it's important ecological history.

Educational Expeditions by Age Group

Educational Expeditions are mainly from the United States, with annual groups from the United Kingdom and Canada.

In 2024, we welcomed over 350 students through our Visiting Groups program.

Group Attendance in 2023





The opportunities to not only learn about, but actively participate in research on marine plastics, the removal of invasive plants and the restoration of endemic plants was beyond engaging, it was transformative; providing our students with first-hand experiences that introduced them to importance of biodiversity and to possible career paths.”

– Dr. Martin Connaughton
Washington College



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with Ann Wingrey
Global Futures Laboratory

Arizona State University

Boat Trips

Our small boats team is available to take students out for plankton tows, coring cruises, and exploring off-shore snorkel sites. All of our boats staff is safety trained and very used to the Bermuda weather!



Plankton Identification

Students often know about whales and dolphins, but haven't heard about plankton. Through a boat trip with a plankton tow, plankton lecture from ASU BIOS staff, and plankton identification in the laboratory, students come away with significant understanding of the base of the food web.



Coral Reef Research

We have a dedicated team of trained professionals to take students snorkeling to see Bermuda's coral reef ecosystem as well as practice hands-on research skills.



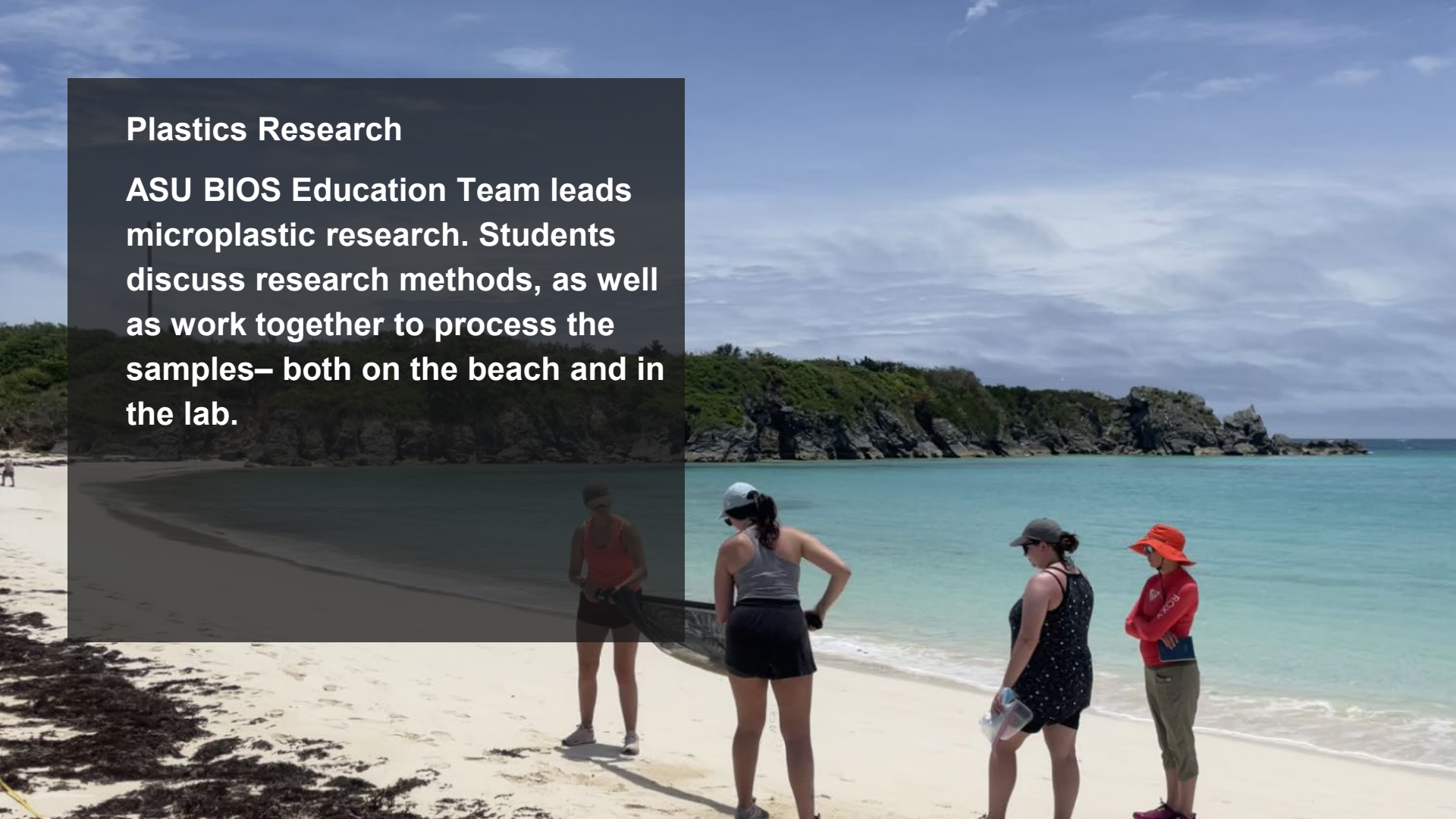
Native and Invasive Species

ASU BIOS Staff give practical examples of endemic, native, introduced, and invasive species that students will identify throughout their time at BIOS.



Plastics Research

ASU BIOS Education Team leads microplastic research. Students discuss research methods, as well as work together to process the samples— both on the beach and in the lab.



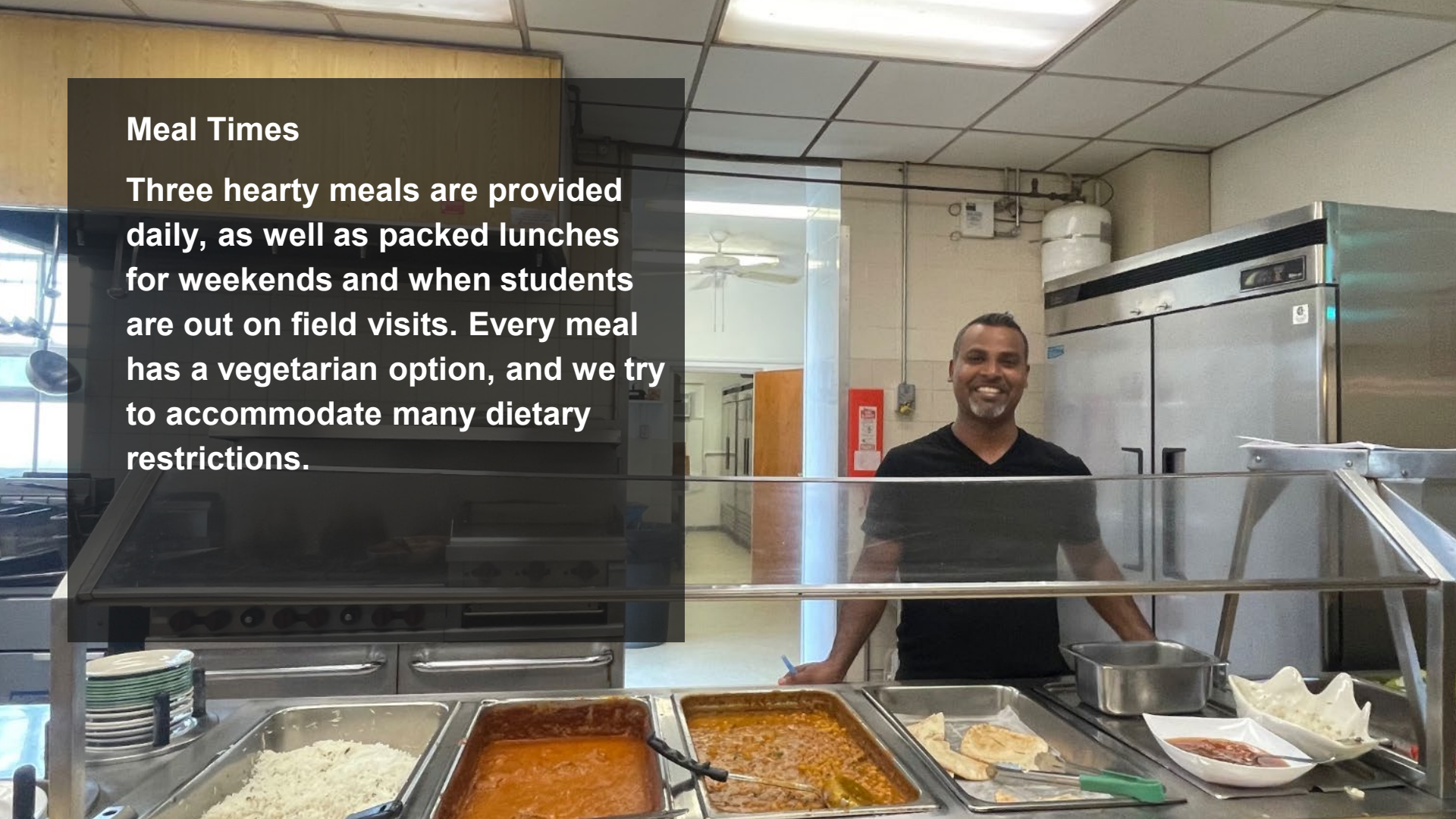


Learn from Experts

Students can tour ASU BIOS laboratories or have guest lectures from BIOS staff who work in the field. All BIOS guest lecturers have experience giving lectures to our high school and college groups— and making them as hands-on and accessible as possible.

Meal Times

Three hearty meals are provided daily, as well as packed lunches for weekends and when students are out on field visits. Every meal has a vegetarian option, and we try to accommodate many dietary restrictions.



Accommodations

Living arrangements at BIOS are comfortable and reasonably priced. We are not a fancy hotel, we are a research institution with easy access to laboratories, classrooms, and swim spots.

