STEMS² Unit Plan Template

BACKGROUND:

The unit is designed to bridge cultural, scientific, and personal aspects of navigation by integrating traditional Hawaiian wayfinding practices with modern educational standards in science, math, and literacy. Drawing on Indigenous knowledge systems such as Native Hawaiian and Polynesian wayfinding practices including the use of the star compass, ocean swells, environmental cues, and seasonal sky observations; Native American ecological knowledge rooted in relationships with land, plants, and animals; and Māori knowledge systems (mātauranga Māori) encompassing astronomy, oral histories, and environmental stewardship, alongside the Nā Hopena Aʻo (HĀ) framework, the unit fosters a deep understanding of the natural world and cultivates the cognitive and affective skills required to navigate both literal and metaphorical challenges in life. Place-based and culturally sustaining pedagogies are central to this design, aligning with research that demonstrates how grounding learning in students' own cultures and communities promotes engagement, identity, and academic success (Gay, 2018; Gruenewald, 2003).

Education Incubator was my community partner because of their deep commitment to uplifting Indigenous knowledge systems and their experience supporting educators in culturally grounded, place-based learning. In the early design phases of this unit, I worked closely with Education Incubator to conceptualize navigation not only as a scientific skill, but also as a metaphor for life. Through this collaboration, I was encouraged to consider how students could use traditional navigation principles such as observation, adaptability, and purpose to reflect on personal growth and emotional resilience. This directly aligns with the STEMS² framework, which emphasizes the integration of STEM learning with culture, sense of place, and social responsibility (Makaiau et al., 2017).

The partnership with Education Incubator shaped key lessons that ask students to synthesize environmental knowledge, personal decision-making, and cultural identity. While this unit was built in collaboration with one organization, it is adaptable and could be implemented with other groups that hold cultural expertise in voyaging and place-based education, such as Kānehūnāmoku Voyaging Academy or the Polynesian Voyaging Society. Research shows that collaborating with community cultural practitioners enhances relevance, accuracy, and student engagement in Indigenous and place-based units (Bang et al., 2014; Smith, 1999).

Having some background knowledge in Hawaiian culture and traditional navigation, like using a star compass or observing the wind, birds, and clouds, can definitely help when teaching this unit. But you don't need to be an expert or a navigator to get started. I learned right alongside my students, and that process made the experience even more meaningful. Teachers can grow their understanding over time and bring in community partners or cultural practitioners to support the learning. Organizations like the Polynesian Voyaging Society are great resources to connect with. Knowing about navigators like Mau Piailug and Nainoa Thompson, or being familiar with Hawaiian constellations and how they move throughout the seasons, can add depth to the lessons. But these are also things you and your students can discover together. Some basic knowledge of geometry, like how angles and degrees work in navigation, will help with making those math connections feel real and relevant. It’s also helpful to bring in values from Nā Hopena Aʻo, like Aloha (love and care), Laulima (working together), and Kuleana (responsibility). These values help create a learning environment that’s grounded in culture and relationships, which is at the heart of this unit.

The unit is designed to foster a strong sense of place by directly linking students' understanding of navigation and environmental observation to the unique cultural and geographical context of Hawaii. The use of traditional Hawaiian navigation methods emphasizes the importance of being in tune with one’s surroundings and understanding the relationship between the land, sea, and sky. Through Nā Hopena Aʻo, students are encouraged to develop their identity, understand their responsibility to the ʻāina (land), and recognize their role in their communities.

The unit integrates STEMS² pedagogy by combining science, technology, engineering, math, and social sciences in ways that connect to real-world challenges and culturally meaningful practices. Students explore a variety of technologies, including those often referred to as traditional and others considered modern. They are encouraged to think critically about these labels. For example, tools like the star compass or environmental observations may be seen as traditional, but they remain highly advanced and relevant today. This helps students understand that all technologies, no matter when they were developed, are systems of knowledge created to help people solve problems and find their way in both the natural world and in life. The unit is also grounded in Nā Hopena Aʻo, which supports a sense of belonging, excellence, and responsibility and helps guide students through their learning journey.

This unit supports the broader vision of STEMS² pedagogy, which integrates science, technology, engineering, math, social sciences, and sense of place. By encouraging students to think critically about what counts as “technology,” including traditional tools like the star compass, wind observation, and loko iʻa (fishponds), they begin to see Indigenous systems as sophisticated, innovative, and highly relevant. This reframing of technology challenges deficit-based narratives and honors Indigenous ways of knowing as STEM-rich and future-focused (McKinley, 2005; Ivey & Teasdale, 2013). Students explore how all technologies, whether ancient or modern, are problem-solving systems born out of careful observation, cultural knowledge, and human ingenuity.

References

Gay, G. (2018). *Culturally responsive teaching: Theory, research, and practice* (3rd ed.). Teachers College Press.

Gruenewald, D. A. (2003). The best of both worlds: A critical pedagogy of place. *Educational Researcher*, *32*(4), 3-12.

Hawaiʻi Department of Education. (2015). *Nā Hopena Aʻo (HĀ) Framework*.

Ivey, P., & Teasdale, G. R. (2013). *Indigenous education and the prospects for cultural sustainability*. Springer.

Makaiau, A., Kahalekulu, K. H., & Ragoonaden, K. (2017). STEMS²: A culturally grounded model for interdisciplinary and place-based learning. *Educational Perspectives*, *49*(1), 15-22.

McKinley, E. (2005). Locating the global: Culture, language, and science education for Indigenous students. *International Journal of Science Education*, *27*(2), 227-241.

Unit Overview:
The unit is designed to teach students how to navigate using both traditional and modern methods, integrating Hawaiian cultural navigation practices with environmental cues. Students will explore concepts like star compasses, weather, and emotions through the lens of Hawaiian wayfinding and apply them to both literal and metaphorical journeys.

STAGE 1:

Background Knowledge: This unit was originally implemented in Quarter 3, following a class visit to Hōkūleʻa and learning experiences centered on the life of a navigator. However, the unit is designed to be flexible and can be adapted to different times of the school year, with or without a physical visit to Hōkūleʻa. While that field experience was powerful for my students, it is not essential for successful implementation. Teachers may choose to connect with virtual resources, local community members, or cultural organizations to bring similar knowledge and inspiration into the classroom.

Before beginning the unit, it is helpful, but not necessary, for students to have a basic understanding of directionality (cardinal directions), some exposure to Hawaiian culture and geography, and an emerging awareness of how people use environmental observations to make decisions. Teachers can activate this prior knowledge through pre-unit discussions, videos, or hands-on activities. Students are often naturally curious about how people navigate with modern tools, how ancient knowledge connects to their lives today, and how stars can guide both movement and meaning.

Unit Plan Title: Using Navigation Skills to Overcome Obstacles

Essential Question:
How can observing our surroundings and learning from different knowledge systems help us adapt to challenges and navigate transitions in life?

Enduring Understanding(s):

- Careful attention to one's surroundings provides insights that support decision-making.
- Being open to learning different knowledge systems broadens perspectives and enhances problem-solving abilities.

Standard Benchmarks and Values

- Select standard benchmarks (HCPS III, CCSS, NGSS)
- Identify values to reinforce (culture-based, such as NHMO or other).
- Notate if students will be *introduced to,* will *practice,* or will *demonstrate mastery* of the standard during this unit.
- All assessed standards should be demonstrated mastery
- STEMS² Units are interdisciplinary and should address a minimum of standards across three content areas. Please list all standards addressed (i.e. *introduced to* and *will practice*) and assessed (*demonstrate mastery*) in the table below.

Science	Technology	Engineering	Mathematics	Social Science	Beyond
Standards Addressed **ELA:**					

CCSS.ELA-LITERACY.RI.5.3

CCSS.ELA-LITERACY.SL.5.1

CCSS.ELA-LITERACY.SL.5.4

CCSS.ELA-LITERACY.W.5.2

CCSS.ELA-LITERACY.W.5.3

CCSS.ELA-LITERACY.W5.1.D

CCSS.ELA-Literacy.W.5.8

CCSS.ELA-Literacy.L.5.5

Social Studies:

Content Standard SS.5.2.19.2

Technology:

HCPS III Technology Standard 2

HCPS III Technology Standard 3

Science:

NGSS 5-ESS1-2

NGSS 3-ESS3-1

NGSS 3-ESS2-2

Math:

CCSS.MATH.CONTENT.4.MD.C.5

CCSS.MATH.CONTENT.4.MD.C.5.A

CCSS.MATH.CONTENT.4.MD.C.5.B

CCSS.MATH.CONTENT.4.MD.C.6

CCSS.MATH.CONTENT.4.MD.C.7

CCSS.MATH.CONTENT.4.G.A.1

CCSS.MATH.CONTENT.4.G.A.2

CCSS.MATH.CONTENT.4.G.A.3

Nā Hopena Aʻo (HĀ):

Strengthening sense of place

Strengthening sense of belonging

Strengthening sense of excellence

Strengthening sense of Aloha

Strengthening sense of total well-being

Strengthening sense of Hawaii

Strengthening sense of Responsibility

Standards Assessed
NGSS 5-ESS1-2, HCPS III Technology Standard 2, NGSS 3-5-ETS1-1, Nā Hopena Aʻo (HĀ):

Strengthening sense of place, Nā Hopena Aʻo (HĀ):Strengthening sense of Responsibility, Nā Hopena Aʻo (HĀ):Strengthening sense of Aloha, CCSS.ELA-LITERACY.SL.5.4

Critical Skills:

- Understand what knowledge forms mean
- Develop the ability to notice and analyze patterns, changes, and key details in the environment.
- Apply observations to make informed decisions and solve problems creatively.
- Develop respect for and openness to learning from different cultural practices and knowledge systems

Concepts:

- Understanding the movements of Earth and celestial bodies and how they relate to navigation.
- Learning how problems can be solved through the design and use of technologies, both Indigenous and contemporary
- Exploring and comparing different navigation and knowledge systems, particularly Hawaiian wayfinding traditions
- Thinking critically about decisions and their potential consequences in navigation and in life.
- Building resilience, adaptability, and problem-solving skills through experiential and scenario-based learning
- Strengthening a sense of place and cultural identity by engaging with the land, sky, and ocean through a Hawaiian cultural lens
- Developing a deeper sense of responsibility and aloha for others, their environment, and themselves
- Practicing clear communication and explanation of ideas and information

STAGE 2:

Authentic Performance Tasks:

Students will create a personal navigational map and compass that integrates Hawaiian navigation principles with their own reflections on how they navigate challenges in life. This project encourages students to draw from traditional Hawaiian knowledge such as using the star compass, observing environmental cues, and applying cultural values, alongside strategies like goal-setting, planning, and flexibility. Instead of labeling these strategies as modern, students are encouraged to see all forms of knowledge as valuable and evolving. Their final product will represent both a literal understanding of navigation and a metaphorical map of how they approach personal growth and decision-making.

Authentic Audience:

At the end of the unit, students have the opportunity to share their personal navigational map and compass projects with an authentic audience. Rather than presenting their work solely for the teacher, students are encouraged to share their reflections and creations directly with their families, peers, and your chosen community partner connected to the voyaging and navigation work. This sharing can take the form of a gallery walk, student-led presentations, or reflective storytelling circles, where students explain the meaning behind their choices and how their map represents both what they learned and how they see themselves navigating life's challenges.

By giving students the space to present their own work in their own voice, the learning becomes more meaningful and empowering. It also helps build a stronger connection between the classroom and the community, allowing students to see that their growth, ideas, and cultural understanding matter beyond the walls of school. Sharing with our community partner not only honors the cultural knowledge shared with us but also gives students a chance to give back, demonstrate their learning, and take pride in the values they've explored throughout the unit.

Other Evidence:

- Star Compass Model: Design and build a star compass, labeling stars and directions.
- Constellation Picture: Students draw a Hawaiian constellation and write the importance of the constellation.

STAGE 3:

Learning Plan:

What is Navigation?- Lesson 1

Lesson Objective(s):
What standard(s) and understanding(s) will be developed?

- **CCSS.ELA-LITERACY.RI.5.3**: Explain the relationships or interactions between individuals, events, ideas, or concepts in a historical, scientific, or technical text.
- **CCSS.ELA-LITERACY.SL.5.1**: Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on *grade 5 topics and texts*, building on others' ideas and expressing their own clearly.
- **CCSS.ELA-LITERACY.SL.5.4**: Report on a topic, sequencing ideas logically and using appropriate facts and descriptive details to support main ideas.
- **CCSS.ELA-LITERACY.W.5.2**: Write informative/explanatory texts to examine a topic and convey ideas and information clearly.
- **HĀ (Nā Hopena A'o)**: Strengthening sense of place through an understanding of Indigenous navigation and technology.
- **Content Standard SS.5.2.19.2** Analyze the impact of European discovery and settlement on Native Americans
- **Benchmark CTE.5.1.1** Examine how different innovations have developed/evolved in various cultures over time to improve life and solve problems
- **NGSS 3-5-ETS1-1**: Define a problem and design a solution using criteria and constraints.
- **HCPS III Technology Standard 2**: Understand how technological systems are created to meet human needs.
- **Social Awareness**: Recognizing and respecting cultural contributions from Indigenous and Western perspectives.
- Navigation is a system developed by many cultures to move through space and environment.
- Indigenous and Western navigation systems reflect different types of knowledge and technology.
- Technology is not limited to electronics — it includes any innovations designed to solve problems or make life better.

Learning Intention: *We are learning to understand the concept of navigation and explore how different cultures use various systems to find their way. We will focus on comparing Indigenous navigation methods with Western ones and recognizing the value of both. We will also explore how loko iʻa (Hawaiian fishponds) are examples of Indigenous technology that combine science, observation, and community values like sustainability and care for the environment.*

Success Criteria: I know I got it when…

- I can understand the concept of navigation and how it has been used throughout history.
- I can explain the difference between Native Hawaiian and Western navigation.
- I can recognize that technology includes not only modern tools but also traditional knowledge and techniques.
- I can describe how loko iʻa show us that technology is not just electronic.
- I can explain how a fishpond works using natural materials and systems.

Pre-Survey (First 10 Minutes):

- Students take a pre-survey on what they think is considered technology. (Pre-test is linked)

Lesson Tasks, Problems, and Activities:

- Class discussion (10 minutes)
  - Show two images:
    - Hokulea & star compass
    - A modern GPS system
      1. Asking: Are both of these considered technology? Why or why not?
- Define technology
  - Technology is not only electronics, it can be any tool that helps you solve a problem
    - For example, a pencil is a type of technology.
- Activity: Technology sort (30 minutes)
  - Students are put into randomized groups and given different technology cards and sort them into “Western” and the different Indigenous categories of Hawaiian, Native Americans- Inuit, Navajo, and Cherokee, Maori
  - Discuss: What patterns do we see?
- Mini-Lecture (15-20 minutes) Unit Slides
  - Polynesian voyagers navigated using the star compass, ocean swells, and birds
    - Discuss on the other Indigenous technologies
  - Western explorers later developed maps and compasses
- Transition to Loko Iʻa
  - What is a Loko Iʻa?

        - Show a picture of it
            1. Discuss: What do you notice about how it's built?
            2. How is it a system? What does it need to work?
            3. Is this technology? Why or why not?
    - Show fish pond (loko iʻa) diagram and explain:
        - Break down the fishpond system (rock wall, sluice gate/mākāhā, tides, fish behavior).
- Students diagram the system and label the technological functions:
    - Observation
    - Design
    - Adaptation
    - Maintenance
- Optional: Link to modern aquaculture or compare to digital technologies (ex. How do both systems track and manage resources?)

Evidence of Success:

- Students explain key differences between Indigenous and Western navigation.
- Students sort tools accurately into cultural categories and justify their reasoning.
- Students label parts of a loko iʻa system and explain how it functions as a technology.
- Exit ticket shows understanding of navigation and types of tools used

Notes and Nuances:

- **Vocabulary:** navigation, technology, loko iʻa
- **Common Misconceptions:**
    - Technology only means electronics.
    - Indigenous navigation is less advanced than Western navigation.
    - Maps and GPS are the only ways to navigate.

Resources:

- Pre-survey Google Forms
- Pictures of traditional and modern navigation tools & Chart
- Unit Slides
- Exit Ticket

Lesson Closure Notes:

1. Exit Ticket (10 minutes)
    a. What is one thing you learned about navigation today?
    b. Can you give an example of both types of navigation tools?

Hawaiian Star Compass- Lesson 2

(Three-day lesson)

Lesson Objective(s):
What standard(s) and understanding(s) will be developed?

- **NGSS 5-ESS1-2**: Represent data in graphical displays to reveal patterns of daily changes in length and direction of shadows, day and night, and seasonal appearance of some stars in the night sky.
- **CCSS.ELA-LITERACY.RI.5.3**: Explain relationships between scientific ideas or concepts in a historical and technical text based on specific information in the text.
- **CCSS.ELA-LITERACY.SL.5.1**: Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on *grade 5 topics and texts*, building on others' ideas and expressing their own clearly.
- **CCSS.MATH.CONTENT.4.MD.C.5**: Recognize angles as geometric shapes that are formed wherever two rays share a common endpoint and understand concepts of angle measurement.
- **CCSS.MATH.CONTENT.4.MD.C.5.A**: An angle is measured with reference to a circle with its center at the common endpoint of the rays, by considering the fraction of the circular arc between the points where the two rays intersect the circle. An angle that turns through 1/360 of a circle is called a “one-degree.”
- **CCSS.MATH.CONTENT.4.MD.C.5.B**: An angle that turns through n one-degree angles is said to have an angle measure of n degrees.
- **CCSS.MATH.CONTENT.4.MD.C.6**: Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure.
- **CCSS.MATH.CONTENT.4.MD.C.7**: Recognize angle measure as additive. When an angle is decomposed into non-overlapping parts, the angle measure of the whole is the sum of the angle measures of the parts. Solve addition and subtraction problems to find unknown angles on a diagram in real world and mathematical problems, e.g., by using an equation with a symbol for the unknown angle measure.
- **CCSS.MATH.CONTENT.4.G.A.1**: Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.
- **CCSS.MATH.CONTENT.4.G.A.2**: Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size. Recognize right triangles as a category and identify right triangles.
- **CCSS.MATH.CONTENT.4.G.A.3:** Recognize a line of symmetry for a two-dimensional figure as a line across the figure such that the figure can be folded along the line into matching parts. Identify line-symmetric figures and draw lines of symmetry.
- **Nā Hopena Aʻo (HĀ):** Strengthening sense of place and cultural identity through understanding Hawaiian wayfinding.
- **Nā Hopena Aʻo (HĀ):** Strengthening sense of belonging: students will understand their place and make a connection to past, present, and future. They will understand the foundation in which modern-day cultural practices originate from. Students will be able to formulate their own opinions based on experiences and histories of traditional navigation/voyaging.

- **Nā Hopena A'o (HĀ):** Strengthening sense of excellence: students will believe they can succeed in school and life and will be inspired to care about the quality of their work. Students will demonstrate a love of learning and will pursue skills, knowledge and behaviors to reach their full potential. They will strive beyond what is expected.
- **Nā Hopena A'o (HĀ):** Strengthening sense of Aloha: Students will show care and respect for themselves, families, and communities. Students will demonstrate aloha through empathy and appreciation between all. They will build trust and lead in a way that will be positive for all.
- **Nā Hopena A'o (HĀ):** Strengthening sense of total well-being: Students will learn about and practice a healthy lifestyle. They will demonstrate this by making choices that improve the mind, body, heart and spirit. They will be able to meet the demands of school and life while contributing to the well-being of family, ʻāina, community, and world.
- **Nā Hopena A'o (HĀ):** Strengthening sense of Hawaii: Students will understand and appreciate the uniqueness of this land. Students will demonstrate this through an appreciation for its rich history, diversity and indigenous language and culture. They will be able to navigate effectively across cultures and communities and be a steward of the homeland.
- **Nā Hopena A'o (HĀ):** Strengthening sense of Responsibility: Students will understand their responsibility for self, family, community and the larger society. They will demonstrate a commitment and concern for others, and will be mindful of the values, needs and welfare of others.

Learning Intention: We are learning to identify the different parts of a star compass and understand how navigators use the stars for direction and wayfinding.

Success Criteria: I know I got it when…

- I can name the different parts of the star compass.
- I can explain how Polynesian wayfinders use the star compass for navigation.
- I can use the star compass in navigation simulation.

Lesson Launch Notes:

1. Discuss & Brainstorm (small groups first & whole class after): What are the modes of transportation, and discuss how people migrated to Honolulu if they were not born here.
2. Discuss traditional navigation what it was like long ago when airplanes were not available as a mode of transportation and share how people got from place to place.

Lesson Tasks, Problems, and Activities:

Day 1:

- Discuss influential master navigators such as Mau Pialilug and Nainoa Thompson (5-10 minutes)
  - Show video clips from the documentaries: "The Legend of Papa Mau" and "The Way of the Navigator."
- Discuss: What is a constellation? (3-5 minutes)

- Teach and introduce the Hawaiian Constellations (5 minutes)
    - Resources that may be helpful for someone who is not familiar with this topic:
        - https://www.bishopmuseum.org/planetarium/astronomy-resources/skymaps/
        - https://www.alohaeducation.us/our-work/hawaiian-star-compass
    - Show students a star map or sky chart highlighting these constellations
- Constellation Map (30 minutes)
    - Students will draw one constellation on black paper using white crayons and write a short paragraph about its significance in navigation

Day 2:

- Introduce the Hawaiian Star Compass (3 minute video)
- Building the Hawaiian Star Compass Lesson by Kuulei Tengan (45 minutes)
    - Students will create the Hawaiian Star Compass using a template of a circle which they will cut-out.
        - Review cardinal directions in English and Hawaiian as well as fractions using multiplication or division to find degrees and types of angles (review)
    - Directions for building
        - Fold the cut-out circle in half, and then half again, and then half again, until there are 32 equal parts of the circle.
        - With each fold, students will label on a separate paper the fraction and the degrees (ex. First fold = ½ = 180 degrees, second fold = ¼, = 90 degrees, until the last fold = 1/32 = 11.25 degrees)
        - Using the Hawaiian Star Compass displayed in the room & students will label each part of the compass

Day 3:

- Using the Hawaiian Star Compass (30-40 minutes)
    - Students will make a simple map leading to an item or place outside the classroom.
    - They will use the directional terms based on their star compass (example: "Walk toward ʻĀkau for 5 steps, then turn toward Komahana").
    - Students will swap maps and try another person's direction to reach the location/item.
- Small Group Reflective Discussion after the Star Map Activity: What worked well and what was challenging? What were you surprised about?

Lesson Closure Notes:

1. Exit Ticket (5 minutes)
    - What did you learn about navigating with the star compass?
    - Why is memorizing star positions important for wayfinders?

- What other types of knowledge do you use along with the stars when using the star compass?

Evidence of Success:

- Students correctly identify the parts of a star compass.
- Students successfully create and follow a navigation map.
- Students explain how stars help guide wayfinders/navigators.
- Students reflect on the connection between navigation and problem-solving.

Notes and Nuances:

- Cultural Sensitivity: Emphasize the historical and cultural significance of traditional navigation and wayfinding in Hawaiian culture. Encourage respectful dialogue about the contributions of master navigators.
- Differentiation: Provide additional scaffolding for students who may need extra help with the angles or star maps.
- Classroom Management: Monitor group work during the navigation map activity to ensure all students participate. Be prepared with follow up questions to deepen discussions about navigation and cultural identity.
- Extended Learning: For advanced learners, consider exploring more complex calculations with angles or additional cultural stories behind the constellations and navigation methods.

Resources:

- Hawaiian Star Compass Ethnomathematics Lesson by Kuulei Tengan
- Exit ticket
- Map Paper
- Unit Slides

Constellations Across Cultures: Lesson 3

STEMS²

(Two Day Lesson)

Lesson Objective(s):
What standard(s) and understanding(s) will be developed?

- **NGSS 5-ESS1-2**: Represent data in graphical displays to reveal patterns of daily changes in length and direction of shadows, day and night, and seasonal appearance of some stars.
- **CCSS.ELA-LITERACY.RI.5.3**: Explain relationships or interactions between individuals, events, ideas, or concepts in a historical or scientific text.
- **CCSS.ELA-LITERACY.W.5.3**: Write narratives to develop real or imagined experiences using descriptive details and clear sequences.
- **HCPS III Technology Standard 2 & 3**
- **Nā Hopena Aʻo (HĀ):** Strengthening sense of place, belonging, and responsibility.

Learning Intention: *We are learning how people from different cultures interpret the stars and use them to tell stories and navigate the world. We will also use technology to observe stars and compare cultural perspectives.*

Success Criteria: I know I got it when…

- I can identify and explain the meaning of at least one Hawaiian constellation and one from another culture.
- I can use technology to observe constellations in the night sky.
- I can describe how constellations reflect the values, environment, and needs of the culture they come from.
- I can create a story or artistic representation based on a constellation.

Lesson Launch Notes:
1. Discuss (5 minutes): "Why do you think people around the world have always looked up at the stars?"
2. Share a short moʻolelo about a Hawaiian constellation (e.g., **Ka Makau Nui o Māui**, **Manaiakalani**) and a short myth about a Western constellation (e.g., **Orion**). (5 minutes)
3. Show visuals or star maps side by side (5 minutes)

Lesson Tasks, Problems, and Activities:

Day 1:
- Constellations Gallery Walk (15-20 minutes)
    - Set up visuals around the room of constellations from various cultures: Hawaiian, Greek, Navajo, Māori, Inuit, etc.
        - Some resources to consider
            - https://figuresinthesky.visualcinnamon.com/
            - https://imiloahawaii.org/the-four-star-families

        - https://www.manoaheritagecenter.org/wp-content/uploads/2022/02/Hawaiian-Star-Lines-and-Names-for-Stars.pdf
    - Students rotate in pairs and take notes using a "See-Think-Wonder" graphic organizer:
        - What do you see in the constellation?
        - What do you think it represents?
        - What do you wonder about its story?
- Technology Integration: Stargazing Apps (20-25 minutes)
    - Use apps like Stellarium, SkySafari, or Star Walk 2 on iPads/tablets or project to whole class
- Tasks:
    - Locate Hawaiian stars (e.g., Hōkūleʻa, Hānaiakamalama).
    - Compare sky maps of other cultures if available in the app.
    - Screenshot and annotate a favorite constellation using labels, compass directions or constellation facts.
        - If you are unable to screenshot, students can draw their favorite constellation on paper or in a notebook.

Day 3:

- Creative Project: "Star Stories Across Cultures" (30-45 minutes)
    - Students choose one of the following options:
        - Option A: Write their own constellation myth based on a pattern they see in the sky. Must include:
            - What does the shape represent?
            - Why is it important to their imagined culture?
            - How does it help people navigate, remember something, or teach a lesson?
        - Option B: Create a comparison mini poster or digital slide comparing a Hawaiian constellation to another culture's constellation. Include:
            - Names and shapes
            - Moʻolelo or mythology
            - What each constellation tells us about that culture
        - Option C: Visual Storytelling or Skit (group option)
            - Create a short performance (e.g., narrated skit or tableau) OR
            - Design a constellation mural that tells the story visually
            - Represent the constellation, the characters in the story, and how it helped people
            - Include labels and cultural values in the artwork and performance

Lesson Closure Notes:

- Students present their work in a gallery walk or class performance.
- Reflect together:

    - What did we learn about the stars from different cultures?
    - How do constellations show us values, guidance, and connection to place?

Evidence of Success:

- Annotated stargazing app screenshots
- Completed writing, posters, murals, or performances
- Reflections and group discussions showing cross-cultural understanding

Notes and Nuances:

- **Cultural Sensitivity:** Emphasize that different cultures interpret the night sky through their own histories, values, and environments. Avoid positioning one story as more scientific or accurate than another. Highlight that both Indigenous and Western systems hold knowledge and significance.
- **Differentiation:**
    - Provide sentence frames or graphic organizers for students who need writing support (e.g., "This constellation is important because…").
    - Offer visual, verbal, and kinesthetic options (writing, art, drama) to support varied learning styles and language abilities.
    - For multilingual learners, allow storytelling in home language first before translating into English.
- **Technology Readiness:**
    - Test apps like Stellarium or Star Walk in advance and ensure devices are charged and functional
    - If limited tech is available, project the app for whole-class exploration and provide screenshots for group work.
- **Indigenous Knowledge Respect:**
    - If possible, invite a cultural practitioner, kūpuna, or community guest to share moʻolelo or speak about constellations.
    - Let students know that some stories are not always written down and may be shared only with permission or in specific contexts.
- **Extension Opportunities:**
    - Encourage students to go outside at night with family to identify a constellation using a stargazing app.
    - Invite students to interview a family member about their own cultural or ancestral stories about the stars.

Resources:

- Stargazing apps (Stellarium, Star Walk 2, SkySafari)
- Story samples of Hawaiian and global constellation myths
- Paper, markers, tablets, optional costumes or props for drama
- Chart Paper or digital art tools
- Gallery walk organizer and reflection sheet

- Unit Slides

Navigating Using Environmental Cues- Lesson 4
(Two Day Lesson)

Lesson Objective(s):
What standard(s) and understanding(s) will be developed?

- **NGSS 5-ESS2-1**: Develop a model using an example to describe ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact.
- **Nā Hopena Aʻo (HĀ):** Strengthening sense of place by observing and understanding natural surroundings.
- **Nā Hopena Aʻo (HĀ):** Strengthening sense of belonging: students will understand their place and make a connection to past, present, and future. They will understand the foundation in which modern-day cultural practices originate from.
- **HCPS III Technology Standard 2**: Use a variety of digital tools to gather and share information.
- **CCSS.ELA-LITERACY.SL.5.1**: Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on *grade 5 topics and texts*, building on others' ideas and expressing their own clearly.
- **CCSS.ELA-LITERACY.SL.5.4**: Report on a topic or text, sequencing ideas logically and using appropriate facts and relevant, descriptive details to support main ideas.
- Students will understand how Polynesian wayfinders used environmental cues to navigate across vast oceans without instruments.
- Students will practice making observations of the natural environment to build navigation skills.
- Students will reflect on how environmental observation skills can apply to everyday life.

Learning Intention: We are learning to navigate using environmental cues, just as Polynesian wayfinders do when sailing the ocean.

Success Criteria: I know I got it when…

- I can identify environmental navigation cues such as wind, waves, clouds, and birds.
- I can explain how these cues help Polynesian wayfinders navigate without instruments.
- I can apply this knowledge to navigate a path using environmental clues.
- I can use a digital tool to record and analyze navigation data.

Lesson Launch Notes:

4. Discussion (5 minutes)
   a. Ask: If you couldnʻt use a map, GPS, or stars, how could you find your way?

Lesson Tasks, Problems, and Activities:

Day 1:

- Brainstorm/Discussion (5 - 10 minutes)
  - Prompt 1 - Start with the Familiar:

        - "Imagine you're trying to find your way across campus or your neighborhood. What kinds of things would help you know where you are or where to go?
            - Have students call out responses like buildings, signs, sidewalks, fences, etc.
                - Record these under a column labeled "Man-Made Clues" on the board
    - Prompt 2 - Pivot to Natural Thinking
        - "What if none of those man-made things were around- no buildings, no roads, and no sign? What could you use to help you find your way?"
            - Have students call out responses such as sun, wind, trees, shadow, birds, clouds, hills, etc under a second column labeled "Natural Cues."
    - Transition
        - Polynesian wayfinders did not have maps, or phones, or buildings to guide them. They used their deep knowledge of natural cues, like wind direction, clouds, and birds to navigate thousands of miles across the ocean. Today, we're going to explore how they did that and try it ourselves.
- Mini Lecture (5-10 minutes)
    - Learning Key Environmental Navigational Cues: Ocean Swells, Cloud Formations, Wind Patterns, Bird Flight
- Watch this video as a class (5 minutes)
    - How did Polynesian wayfinders navigate the Pacific Ocean?
- Part 1 Activity: Outdoor Observing Environmental Cues (10 minutes)
    - Students will go outside the classroom and record natural environmental cues they observe that could help with navigating around. (ex. What direction is the wind blowing? What do the clouds look like? What birds flying in a certain direction?)
        - Optional: Use a weather app or Windy.com to compare real-time atmospheric data with students observations
    - Reflect How do the natural signs we observe relate to movement or direction?
- Part 2 Activity: Navigation Challenge Using Environmental Cues (15 minutes)
    - Students will work in pairs to navigate from one point to another using environmental cues/observations
    - The path will be determined by wind direction, shadows, natural landmarks (trees, building, hills, plants)
        - Example: "move in the direction where the wind is blowing from until you reach the big oak tree, then turn toward the gym."
    - Pairs take turns navigating using their partner's environmental directions.

Day 2:

- Part 3: Mini Challenge: Design a Route Using Natural and Celestial Cues (25 minutes)

    - In pairs, students design a route on your school's campus using both environmental and celestial cues using Google Earth or a map tool to overlay their route digitally.
        - Wind direction or cloud movement
        - Position of the sun or reference to a constellation
- Part 4: Sharing and Discussion (10 minutes)
    - Have students present their route maps and explain their reasoning.
        - Discussion prompts:
            - Which clues were most useful?
            - How could technology help confirm what we observe?
            - Why is it important to combine traditional and modern knowledge?

Lesson Closure Notes:

- **Exit Ticket:**
    - What was one natural sign you noticed today that could help you navigate?
    - What constellation or sky pattern do you think would help confirm your direction?
    - How could technology support you in future voyages or travels?

Evidence of Success:

- Students record accurate observations and apply them to route design.
- Clear verbal or written explanation of how environmental and celestial cues inform navigation.
- Thoughtful integration of digital tools or apps in planning or reflection.

Notes and Nuances:

- **Differentiation:**
    - Provide labeled diagrams or videos for students who need support identifying cloud types or star positions. Allow students to draw or act out their navigation path if writing is challenging.
- **Technology Integration:**
    - Make sure students know how to use the app or platform (e.g., Google Docs, Stellarium) beforehand. For limited devices, project simulations or rotate through stations.
- **Cultural Connection:**
    - Emphasize how Native Hawaiian navigators had deep relationships with land, ocean, and sky—developed through careful, long-term observation. Allow students to connect these skills to their own surroundings.
- **Extensions:**
    - Invite students to observe the sky at home one evening and journal their findings. They can bring in sketches or app screenshots the next day.

Resources:

- [How did Polynesian wayfinders navigate the Pacific Ocean? Video]()

- Exit Ticket
- Worksheet for observations and map
- Unit Slides

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Decoding the Sky for Guidance- Lesson 5

Lesson Objective(s):
What standard(s) and understanding(s) will be developed?

- **NGSS 3-ESS3-1:** Make a claim about the merit of a design solution that reduces the impacts of a weather-related hazard.
- **CCSS.ELA-LITERACY.SL.5.1**: Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 5 topics and texts, building on others' ideas and expressing their own clearly.
- **CCSS.ELA-LITERACY.SL.5.4**: Report on a topic or text, sequencing ideas logically and using appropriate facts and descriptive details to support main ideas.
- **CCSS.ELA-LITERACY.W.5.3**: Write narratives to develop real or imagined experiences using effective technique, descriptive details, and clear event sequences.
- **HE.5.2.1** Describe how thoughts and emotions influence behaviors.
- **HCPS III Technology Standard 2 & 3**
- **Self-Awareness**: Recognizing and accurately labeling emotions.
- **Self-Management**: Identifying strategies to manage and navigate emotions.
- **Nā Hopena Aʻo (HĀ):** Strengthening sense of Aloha: Students will show care and respect for themselves, families, and communities. Students will demonstrate aloha through empathy and appreciation between all. They will build trust and lead in a way that will be positive for all.
- **Nā Hopena Aʻo (HĀ):** Strengthening sense of Responsibility: Students will understand their responsibility for self, family, community and the larger society. They will demonstrate a commitment and concern for others, and will be mindful of the values, needs and welfare of others.
- Traditional navigators observed clouds to predict and prepare for changes in weather and sea conditions.
- Emotions, like weather, can change and influence our journey — learning to observe and navigate them is key to resilience.
- Preparation and awareness of emotional "storms" help individuals make positive decisions and maintain balance.

Learning Intention: *We are learning how traditional Hawaiian navigators used clouds to understand their environment, and how we can use a similar process to recognize and navigate our emotions.*

Success Criteria: I know I got it when…

- I can explain how traditional navigators observed clouds to prepare for travel.
- I can identify my emotions and describe how they feel inside and how they show outside.
- I can name at least one strategy to navigate difficult emotions, just like navigators prepare for storms.
- I can choose a constellation(s) that symbolizes strength, guidance, or resilience.

Lesson Launch Notes:
1. Discuss: How traditional Hawaiian Navigators observe clouds for weather predictions.
2. Ask: What do you think clouds can teach us about life?

Lesson Tasks, Problems, and Activities:

- Emotional Charades- Guess the Emotion (Accessed Via Education Incubator) (10 minutes):
  - Provide students with any number of emotions and write them on the board
    - Fear
    - Enjoyment
    - Sadness
    - Anger
    - Disgust
    - Joyful
    - Peaceful
    - Calm
    - Annoyed
    - Furious
    - Disappointed
    - Relieved
    - Grieving
    - Anxious
    - Panicked
    - Terrified
    - Proud
    - Upbeat
    - Grateful
  - Have a volunteer come up and try to convey an emotion from the list with facial expressions and gestures only.
  - The goal is for the rest of the class to guess which emotion they are expressing
  - Continue with 3-5 rounds.
- Cloud Charts (Accessed Via Education Incubator) (20-30 minutes)
  - On chart paper around the room, there are different emotional clouds with the feelings of anger, excited, awkward, sad, happy, and grateful
  - Students will think about a time where they experienced anger, excitement, awkwardness, sadness, happiness or gratefulness in the past.
    - On two different post-it, students will…
      - Sticky note 1: Write about what went on inside of you? (what thoughts you had? How did your body feel?)
      - Sticky Note 2: Write about what you showed on the outside? (what did you say? How did you act?)
    - On the back of the post-it, students will write their names.
  - Students will complete at least two of the emotional clouds around the room.
- Group Reflection & Discussion (15 minutes)
  - Ask: How do our “inside” feelings sometimes differ from what we show on the outside? Why is it important to understand and navigate our emotions effectively?

    - Relate this to how navigators prepare for weather changes by observing clouds and predicting conditions.
    - Discuss the importance of awareness and preparation for both weather and emotions.
- Navigating Emotional Storms (10 minutes)
    - Explore & have students share strategies for handling emotional storms
    - Have students share additional strategies they use to navigate challenging emotions.

Lesson Closure Notes:

1. Exit Ticket
    a. What is one new thing you learned about emotions today?
    b. What strategy will you use the next time you face an emotional storm?

Evidence of Success:

- Student engagement in charades and emotional cloud reflections
- Thoughtful responses one exit tickets.
- Willingness to share during discussions
- Students making personal connections between emotions and weather concepts.

Notes and Nuances:

- Some students may need sentence starters for support
- Consider offering quiet options (writing instead of speaking) during group reflections for students who prefer not to share aloud.
- Make connections to prior lessons in the unit to deepen understanding of how traditional knowledge can inform emotional learning.

Resources:

- Posters with labeled emotional clouds Accessed Via Education Incubator
- Post-it notes
- Emotion List for Charades Accessed Via Education Incubator on Unit Slides
- Unit Slides
- Exit Ticket

Navigating Through Unseen Problems- Lesson 6
(Three-Day Lesson)

Lesson Objective(s):
What standard(s) and understanding(s) will be developed?

- **NGSS 5-ESS2-1**: Develop a model using an example to describe ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact.
- **NGSS 5-ETS1-2:** Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.
- **NGSS 3-ESS2-2**: Obtain and combine information to describe climates in different regions of the world.
- **NGSS 3-ESS3-1:** Make a claim about the merit of a design solution that reduces the impacts of a weather-related hazard.
- **CCSS.ELA-LITERACY.W5.1.D**: Write informative/explanatory texts to examine a topic and convey ideas and information clearly.
- **CCSS.ELA-LITERACY.SL.5.4**: Report on a topic or text, sequencing ideas logically and using appropriate facts and relevant descriptive details to support main ideas.
- **Nā Hopena Aʻo (HĀ):** Strengthening sense of Responsibility: Students will understand their responsibility for self, family, community and the larger society. They will demonstrate a commitment and concern for others, and will be mindful of the values, needs and welfare of others.
- **Nā Hopena Aʻo (HĀ):** Strengthening sense of belonging: students will understand their place and make a connection to past, present, and future. They will understand the foundation in which modern-day cultural practices originate from.
- **HE.5.5.1** Use decision-making steps to make safe and healthy choices.
- **HE.5.2.1** Describe how thoughts and emotions influence behaviors.
- Understand how wind patterns and weather conditions influence navigation.
- Recognize how unseen forces impact decision-making and adaptability.
- Build emotional literacy by connecting internal experiences to natural weather patterns.

Learning Intention: We are learning how wind and weather influence navigation and decision making.

Success Criteria: I know I got it when…

- I can describe how wind patterns and weather affect travel.
- I can explain how navigators adapt to changing weather.
- I can connect how unseen forces in life influence my decision making.

Lesson Launch Notes:

1. Discussion (5 minutes)
    a. Ask: How do you think wind and weather affect travel?
    b. What happens when we can't see something but it still affects us?

c. Have you ever had to make a decision without all the information? What helped you?
d. Have you ever been caught in a storm either literal or emotional? What helped you get through it?

Lesson Tasks, Problems, and Activities:

Day 1:

- Show "Watch the Winds" (1:40) and highlighting how the crew uses observations of weather patterns and wind and ocean swells to navigate
  - Discussion (3-5 minutes): What natural signs do the navigators use to predict weather? How do they prepare for unpredictable conditions?
- Hands-on Challenge (30-45 minutes)
  - Students are in small groups of 3-4.
  - One student is blindfolded- they represent a navigator traveling through unpredictable weather.
  - The other team members are "weather forces" (they will gently guide using verbal cues or simulated wind with paper. There is no touching.)
  - The blindfolded student must navigate a path through a simple obstacle course based on cues and support from their group members.
    - Group Debrief (5-10 minutes)
      - After the activity, students will discuss:
        - What helped you the most when navigating without seeing?
        - What emotions came up?
        - What would have made it easier?
        - What does this say about how we move through challenges in life we can't always see coming?

Day 2:

- Identifying Weather (20 minutes)
  - Students identify their current weather and connect together how they're feeling
  - Write the different weather conditions around the room/what parts of the room represent the different weather conditions
  - Students can move or stand up to the weather condition that best represents their current inside weather.
    - Share that even if you are in the same weather condition as someone else, you're feelings can be different
  - Discuss in groups of three to five people and share why they choose this spot and weather.
  - Class Discussion: Why did you choose that spot and what does this weather mean to you? How are you currently feeling?

    - Class Discussion: How did it feel to check in on your internal weather? How did it feel to connect with others who experienced the same weather conditions as you did?
- Making Weather & Constellations= Emotions in groups (30-40 minutes)
    - If you were navigating through life, how would you describe your emotions as weather or a constellation?
        - What constellation would represent your guidance through a “life storm?”
            - Project images of real Hawaiian constellations (e.g., Manaiakalani, Ka Lupe o Kawelo, Hānaiakamalama) and Western ones (e.g., Orion, Ursa Major).
        - Discuss:
            - What does this constellation symbolize to you?
            - What kind of emotion or challenge might it represent?
            - If you could invent your own, what would it look like?
    - In groups of three, they will write down their weathers as emotions and choose and create a constellation to symbolize their emotional storm or guiding strength on the worksheet.
        - For the weathers:
            - Name the emotion
            - Draw it
        - For the constellation:
            - Name it
            - Draw its shape
            - Write a short paragraph explaining how it helps them navigate unseen problems
    - Make a class weather chart on the board. Have students share what type of emotional weather they have experienced recently and write it on the chart.

Day 3:

- Overcoming Storms (5-10 minutes)
    - Plan for predictable storms
        - Discuss: How Hokulea navigators make plans for predictable weather patterns
        - Ask: What are some “predictable storms” in life?
- Problem-Solving for Unpredictable Storms (45 minutes)
    - Explain that just as there are unpredictable storms in weather, there are also unexpected challenges in life
    - Ask: What do you think are important qualities or strategies for dealing with unpredictable storms?
    - Create scenarios where students must navigate an “unpredictable storm.” Have them brainstorm solutions.

Lesson Closure Notes:

1. Recap (5-10 minutes):

   a. Review the key connections between weather patterns and personal decision making.
   b. Invite students to reflect on how the discussion and activities relate to both navigation and life challenges
2. Exit Ticket (10-15 minutes)
   a. What constellation did you choose or create and why?
   b. What does it remind you to do or remember when things are hard?
   c. How is this similar to how voyagers navigate without full visibility?

Evidence of Success:

- Student Participation: Active Participant in class and group discussions, engagement in the "identifying weather" and "making weather = emotions" activities
- Demonstrating Understanding: Clear explanations of how wind patterns affect travel and articulation of adaptive strategies in response to changing conditions.
- Reflection & Application: Quality of written responses on the worksheet reflecting the connection between weather patterns and decision making. Ability to generate thoughtful solutions during the "Problem-Solving for Unpredictable Storms" activity.
- Students name an emotion and associate it with a constellation metaphor
- Reflection shows a personal connection to metaphor

Notes and Nuances:

Space:

For the hands-on activity, you will need a big area of space for your students to move around in (suggestions: field, gym, basketball court, etc) preferably not inside your classroom.

Differentiation:

- Be prepared with scaffolding or alternative activities for students who may need additional support with abstract concepts like internal weather and emotional states.

Classroom Dynamics:

- Encourage respectful sharing and validate diverse perspectives during discussions about feelings and experiences.
- Monitor group interactions to ensure every student has an opportunity to contribute.

Adaptability:

- Adjust time allocations based on the depth of discussion and the engagement level of the class.
- Use follow-up questions to further probe how natural observations can lead to improved personal decision-making.

Cultural Lens:

- Emphasize that Hawaiian and Indigenous constellations often serve as symbols of identity, place, and resilience, not just navigation. Encourage respectful exploration.

Resources:

- Unit Slides
- Weather, Constellation, and Emotion Mapping Worksheet
- Scenario Worksheet
- Blindfolds (depends on how many students you have)
- Paper/fans to simulate wind
- Obstacles: cones, chairs, string lines, boxes, etc.

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Navigating Life with Purpose- Lesson 7

Lesson Objective(s):
What standard(s) and understanding(s) will be developed?

- **W.5.3** — Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.
- **W.5.8** — Recall relevant information from experiences or gather relevant information from print and digital sources; summarize or paraphrase information in notes and finished work.
- **SL.5.1** — Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 5 topics and texts, building on others' ideas and expressing their own clearly.
- **SL.5.4** — Report on a topic or text or present an opinion, sequencing ideas logically and using appropriate facts and relevant, descriptive details to support main ideas or themes.
- **L.5.5** — Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.
- **Self-Awareness**: Identifying emotions, personal strengths, values, and purpose.
- **HE.5.5.1** Use decision-making steps to make safe and healthy choices.
- **Nā Hopena A'o (HĀ):** Strengthening sense of belonging: students will understand their place and make a connection to past, present, and future.
- **Nā Hopena A'o (HĀ):** Strengthening sense of excellence: students will believe they can succeed in school and life and will be inspired to care about the quality of their work. Students will demonstrate a love of learning and will pursue skills, knowledge and behaviors to reach their full potential. They will strive beyond what is expected.
- **Nā Hopena A'o (HĀ):** Strengthening sense of Responsibility: Students will understand their responsibility for self, family, community and the larger society. They will demonstrate a commitment and concern for others, and will be mindful of the values, needs and welfare of others.
- Students will develop an understanding of how personal values, strengths, and goals can serve as internal guidance tools, similar to how navigators use the Hawaiian Star Compass.
- Students will explore decision-making through a culturally grounded metaphor of navigation.
- Students will design and reflect on a personal wayfinding compass that connects to their identity and future aspirations.

Learning Intention: *We are learning how to create a personal compass that reflects our values and guides our decisions, similar to how navigators use the Hawaiian Star Compass.*

Success Criteria: I know I got it when…

- I can explain how the Hawaiian Star Compass is used for navigation.

- I can design a personal compass that incorporates my values, strengths, and life goals.
- I can use my compass to reflect on decisions and challenges in my life.

Lesson Launch Notes:

1. Discuss (5-10 minutes): What tools do you use in your life to make decisions and stay on the right path?
2. Review the Native Hawaiian Star Compass
3. Connect the Hawaiian Star compass to a metaphor for life: just like navigators use the star compass to find their way, we can create a personal compass to guide us in life.

Lesson Tasks, Problems, and Activities:

- Ask & Discuss: What guides you in life? (5 minutes)
    - Examples:
        - Values- Family, Kindness, Respect, Trustworthiness
        - Strengths- Creativity, Perseverance
        - Goals- Becoming a teacher, helping others, always trying new things
        - Influences- Friends, Family, Role Models
    - Students write down 4-8 personal “guiding stars” (one for each direction or segment of their compass)
- Designing a Personal Wayfinding Compass (30 minutes)
    - Provide students with a blank circle template
    - In each segment or direction:
        - Write one personal “guiding star” from the brainstorm list
        - Add a drawing or symbol to represent that value, strength, belief, or goal (example- heart represents family, tree represents growth, etc)
        - Use colors and designs that represent you
- Sharing & Reflection (10 minutes)
    - Students share their personal compass with a partner
        - Discussion Prompts
            - Why did you choose these guiding stars?
            - How can these help you navigate challenges in life?

Lesson Closure Notes:

1. Revisit the metaphor of navigation
    a. The Hawaiian star compass helps voyagers cross the ocean. How can your personal compass help you navigate life’s challenges?
2. Reflect: What does your compass tell you about yourself? How can it help you make good choices and overcome challenges in life?

Evidence of Success:

- Students’ completed personal wayfinding compasses.
- Students’ explanations during partner sharing and whole group discussions.

- Exit ticket reflections demonstrating understanding of the metaphor and personal connections.

Notes and Nuances:

- Some students may need more prompts or examples to help identify their values or strengths.
- Emphasize that a personal compass is flexible and can evolve over time, just like voyaging requires adjusting for changing conditions.

Resources:

- Unit Slides
- Personal Wayfinding Compass Worksheet
- Exit Ticket

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Navigating Life's Challenges- Lesson 8

Lesson Objective(s):
What standard(s) and understanding(s) will be developed?

- **W.5.3** — Write narratives to develop real or imagined experiences using effective technique, descriptive details, and clear event sequences.
- **W.5.8** — Recall relevant information from experiences and summarize in notes or finished work.
- **SL.5.1** — Engage effectively in collaborative discussions with diverse partners on grade 5 topics and texts.
- **SL.5.4** — Report on a topic or text, sequencing ideas logically and using relevant, descriptive details.
- **HE.5.5.1** Use decision-making steps to make safe and healthy choices.
- SEL: Self-Awareness, Responsible Decision-Making
- **Nā Hopena Aʻo (HĀ):** Strengthening sense of Responsibility: Students will understand their responsibility for self, family, community and the larger society. They will demonstrate a commitment and concern for others, and will be mindful of the values, needs and welfare of others.
- **Nā Hopena Aʻo (HĀ):** Strengthening sense of total well-being: Students will learn about and practice a healthy lifestyle. They will demonstrate this by making choices that improve the mind, body, heart and spirit. They will be able to meet the demands of school and life while contributing to the well-being of family, ʻāina, community, and world.

Learning Intention: *We are learning how to prepare for and navigate life's challenges by developing personal strategies, similar to how navigators use wayfinding maps to cross the ocean.*

Success Criteria: I know I got it when…

- I can identify predictable and unpredictable challenges I might face.
- I can create a personal wayfinding map showing strategies to navigate challenges.
- I can explain how preparing tools and strategies helps me make good decisions in difficult times.

Lesson Launch Notes:

1. Show video of "Two Storms" (clip about overcoming challenges — teacher selects appropriate video based on class context).
2. Discuss: How do you think people prepare for challenges in life?

Lesson Tasks, Problems, and Activities:

- Identifying Personal Challenges (15-20 minutes)

    - Ask students to reflect on their lives and think about both predictable and unpredictable challenges they may face.
        - For example- Predictable: Feeling nervous before a test, disagreements with friends, stress from school. Unpredictable: Sudden changes - Moving, illness, changes in family, etc.
    - Personal Reflection: Students write a short journal entry about a challenge they've faced or may face in the future.
    - Group Share (Optional): Students can share their entries with their small group/partner.
- Creating a Personal WayFinding Map (30-45 minutes)
    - Introduce the map and explain that they will create their own personal wayfinding map that will help them navigate challenges in life just as navigators use maps to help guide them.
        - Steps to create their map:
            - List Predictable Challenges: Write down some challenges they can predict happening.
            - List Unpredictable Challenges: Write down challenges they might not expect to encounter
            - Identify tools and strategies: for each challenge, think about what tools or strategies they can use to overcome it. Examples: mindfulness- taking deep breaths, problem solving- breaking the challenge down into smaller steps, supportive networks- talking to a friend/adult for advice, etc.
            - Destinations: Where are they headed?
    - Students create their maps by drawing their paths, tools, and emotional check-ins
- Personal Reflection (10-15 minutes)
    - Students write a brief summary of how their personal wayfinding tools will help them make decisions and stay on course during challenging times.
- Sharing and Reflection (5-10 minutes)
    - Class Discussion: Share part of your personal wayfinding map or one challenge they've planned for.
    - Encourage reflection: How can these tools help you in future challenges? How does creating a plan give you confidence in navigating storms in life?

Lesson Closure Notes:

1. Exit Ticket (10-15 minutes)
    a. Ask students: How does observing our surroundings and using our personal wayfinding tools help us make better decisions and navigate life's challenges?
    b. Remind students that we all have tools, like self-awareness, problem-solving, and support systems that help guide us through life's storms.

Evidence of Success:

- Completed personal wayfinding maps.

- Reflections that show thoughtfulness about challenges and strategies.
  Student participation in group discussions and exit ticket responses.

Notes and Nuances:

- Some students may need help thinking about unpredictable challenges — model examples as needed.
- Emphasize that planning does not prevent challenges but makes them easier to navigate.
- Encourage creativity in map designs — this is both personal and symbolic!

Resources:

- Unit Slides
- Journey Map Paper
- Exit Ticket

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<u>**Visualizing Our Journey: Showcasing What We Learned- Lesson 9**</u>

Lesson Objective(s):
What standard(s) and understanding(s) will be developed?

- **W.5.3** — Write narratives to develop real or imagined experiences using effective technique, descriptive details, and clear event sequences.
- **W.5.8** — Recall and summarize relevant information from experiences and present it clearly.
- **SL.5.4** — Report on a topic or text, sequencing ideas logically and using appropriate facts and relevant, descriptive details to support main ideas or themes.
- **SL.5.5** — Include multimedia components and visual displays in presentations to enhance the development of main ideas or themes.
- **Self-Awareness**: Identifying emotions, personal strengths, values, and purpose.
- **Responsible Decision-Making**: Making constructive, respectful choices based on ethical standards, safety, and social norms.
- **Nā Hopena Aʻo (HĀ):** Strengthening sense of Responsibility: Students will understand their responsibility for self, family, community and the larger society. They will demonstrate a commitment and concern for others, and will be mindful of the values, needs and welfare of others.
- **Nā Hopena Aʻo (HĀ):** Strengthening sense of total well-being: Students will learn about and practice a healthy lifestyle. They will demonstrate this by making choices that improve the mind, body, heart and spirit. They will be able to meet the demands of school and life while contributing to the well-being of family, ʻāina, community, and world.
- **Nā Hopena Aʻo (HĀ):** Strengthening sense of excellence: students will believe they can succeed in school and life and will be inspired to care about the quality of their work. Students will demonstrate a love of learning and will pursue skills, knowledge and behaviors to reach their full potential. They will strive beyond what is expected.

Learning Intention: *We are learning how to reflect on and share our learning journey through creative visual and written projects.*

Success Criteria: I know I got it when…

- I can identify and explain the most important ideas I learned during this unit.
- I can create a visual or written project that represents my learning and growth.
- I can reflect on how my understanding of navigation, problem-solving, and decision-making has developed.

Lesson Launch Notes:

1. Discuss (5-10 minutes): What were your favorite parts of this unit?
2. What did you learn about navigation, problem-solving, decision-making, and yourself?

3. Show teacher-made examples of posters and mini booklets for inspiration.
4. Activity (20-40 minutes)
    a. A scenery poster might include imagery like a starry sky, ocean waves, or clouds with labeled takeaways.

    b. A mini booklet might include pages for each lesson with drawings and written reflections.

    c. A presentation might include slides for each lesson with images and written reflections of learning experiences.
5. Set Purpose: We're creating a final project to showcase and share our learning journey.

Lesson Tasks, Problems, and Activities:

- Brainstorm Key Takeaways
    - Students will reflect and write down:
        - What was the most interesting thing you learned?
        - What did you learn about Hawaiian navigation?
        - What did you learn about overcoming challenges in life?
        - What will you take with you from this unit?
- Choose your format
    - Students will choose between creating a poster, mini booklet, or presentation
        - Poster Directions
            - Draw a scenery that represents what you learned (ex. Birds for environmental cues, stormy weather for overcoming challenges, clouds for emotions). Add a written reflection (short paragraph) on or in the back of the scenery.
        - Mini Booklet Directions
            - Create a page for each topic that you found interesting or one topic you really enjoyed. Include drawings and short reflections on each page.
        - Presentation Directions
            - Create a slideshow that represents what you learned or found interesting from this unit. Include pictures and short reflections on each slide.
- Design and Create
    - Students work on their projects, incorporating visuals and writing to express their ideas.
    - Encourage students to be creative
        - Symbols, quotes/phrases that they liked from the lessons, personal goals/reflections

Lesson Closure Notes:

1. Have students present their posters, booklets, or presentations. (15-20 minutes)

2. Reflect:
    a. What did you notice about other student's projects?
    b. How does it feel to look back on everything we've learned?
3. Take the post-survey & reflection (20 minutes)

Evidence of Success:

- Completed visual or written projects that demonstrate understanding of unit concepts.
- Student presentations and reflections showing ability to connect learning to personal growth.
- Post-survey and written reflections.

Notes and Nuances:

- Some students may need extra time or scaffolds (templates, sentence starters) for reflection writing.
- Allow flexibility for students who prefer artistic expression or written expression.
- Reinforce that everyone's journey looks different and that is a strength.

Resources:

- Unit Slides
- Paper
- Post-survey & Reflection