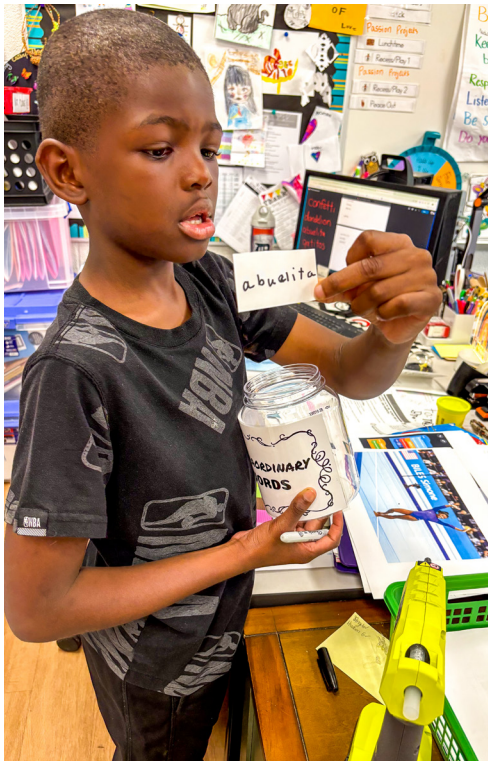
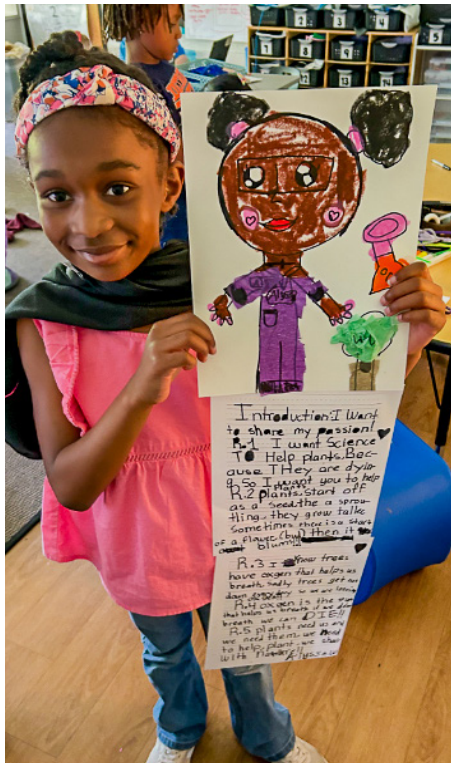
Second Grade Touring Guide

This Touring Guide is meant to be read in combination with the other information provided at GreatFirstEight.org.

Great First Eight is a groundbreaking, all-day, open educational resource (OER) curriculum for children from birth to age eight that is strengths-based and research-aligned. It is designed for classrooms with a number of children from historically underrepresented racial and ethnic backgrounds. Great First Eight provides children with the education they need to thrive and create a more just and caring society.





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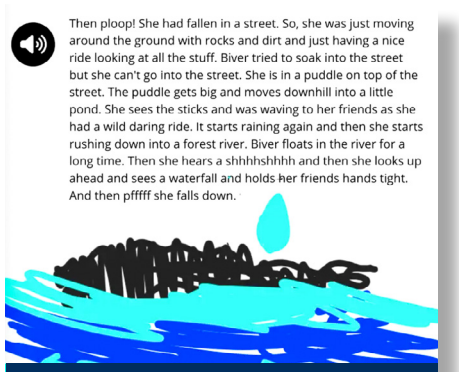
Project-Based Units

The Great First Eight Second Grade Curriculum provides 165 full days of instruction divided across a launch week and six project-based units.

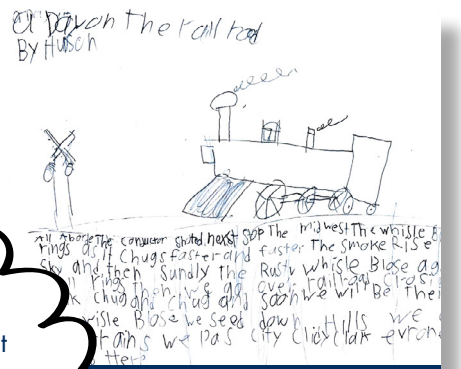
Art Matters



Water World

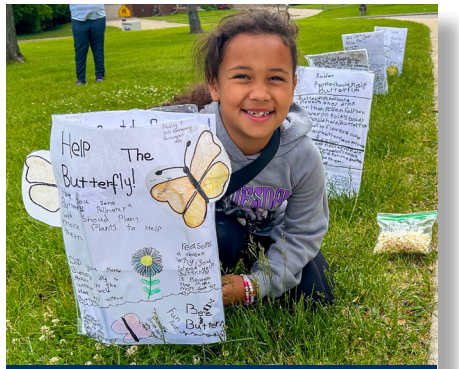
QR codes take shoppers to informational texts written by Great First Eight second graders!

Roots of Rice



A child's poem about transportation

All Aboard



Pollinator Pathways

Future Figures

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Project-Based Units: Driving Questions

Art Matters	**How can art help us learn about properties of matter and connect with each other?**
Water World	**How can we use what we know about land and water to understand water events and design solutions?**
Roots of Rice	**How can we use the study of rice to teach others about heritage, histories, and a community's fight for justice?**
All Aboard	**How do people and goods move from place to place, and how have movement and access to transportation changed over time?**
Pollinator Pathways	**How do pollinators support us and how can we support pollinators?**
Future Figures	**What is a passion each of us can use to solve a problem when we are older?**

Project-Based Units: Primary Project Product(s) **with focal writing genre(s) in bold**

Launch Week	• (The first five days of the year are focused solely on launching the year)
Art Matters	• A brochure for a local library or tourist center that tells about a piece of art in the local community including how it's made aesthetically and scientifically **(informative/explanatory writing)**
Water World	• Story of a water droplet's journey to inform and entertain kindergartners **(narrative that conveys information)** • A solution to a water problem in our community
Roots of Rice	• Texts to accompany a type of rice in a local grocery store explaining the type of rice, what it represents to that community, and some uses **(informative/explanatory text with descriptive text structure)**
All Aboard	• Poems about transportation for a poetry celebration **(poetry)** • An anthology of informational articles about a topic in the history of transportation and civil rights for people who are taking public transportation or visiting a museum about transportation **(informative/explanatory text)**
Pollinator Pathways	• Posters that persuade people in the local community to make pollinator pathways in urban areas **(persuasive text)**
Future Figures	• Write-ups and trifold boards to teach families and members of the local community about their passion and a problem they want to address in the future, including an argument about why that's a problem **(persuasive text)**

Project-Based Units: Examples of Interdisciplinary Connections

Art Matters	• Each discipline/domain makes direct or indirect contributions to the project. The concept of **community** is addressed across multiple domains. For example, children examine art in their community and the science behind how it is made.
Water World	• Each discipline/domain makes direct or indirect contributions to the project. **Water experiences** are addressed across multiple domains. For example, children read about experiences with water, investigate how to address water problems, and solve water-related mathematics problems.
Roots of Rice	• Each discipline/domain makes direct or indirect contributions to the project. **Rice** is addressed across multiple domains. For example, it is used as a doorway for learning about history, heritage, commerce, and plant science.
All Aboard	• Each discipline/domain makes direct or indirect contributions to the project. **Study of historical events** draws on multiple domains. For example, children refine their literacy skills in reading primary and secondary sources in order to learn about historical events.
Pollinator Pathways	• Each discipline/domain makes direct or indirect contributions to the project. The **intersection of humans and their environment** draws on multiple domains. For example, children consider how pollinators meet their needs and how to take civic action to protect pollinators and plants in their community.
Future Figures	• Each discipline/domain makes direct or indirect contributions to the project. The concept of **pursuing passions and solving problems** is addressed across multiple domains. For example, children learn about computer scientists who have made important contributions to society.

Project-Based Units: Examples of Addressing Identity

Art Matters	• Children share their personal and group identities with one another as part of understanding who forms their classroom community and considering how they will make their vision a reality. • Children explore diverse identities and practices of people who do art and develop identities as artists.
Water World	• Developing identity as a problem-solver; responsive to local community needs. • Developing identity as an inquirer (both into scientific and historical questions).
Roots of Rice	• Developing an identity as a scientist; sharing observations to lead to new questions about seeds and plants. • Developing an identity as a writer; carefully thinking about their audience and making thoughtful decisions in word choice that may help them honor all cultures.
All Aboard	• Developing an identity as an inquirer who poses questions, gathers and analyzes data, and then responds to the question. • Children develop historical thinking skills and build historical knowledge which provide a deeper identity as a member of the community and country.
Pollinator Pathways	• Children develop identities as observers and people who have relationships with the natural world (building from World Watchers and Birding Adventures). • Children develop identities as experts who can inform community members and support change.
Future Figures	• Children identify and develop their passions, which are informed by their identities. • Children develop their identities as problem-solvers who will make positive contributions to their communities.

Standards Addressed in Great First Eight

Science & Engineering

The Next Generation Science Standards, including practices, crosscutting concepts, and disciplinary core ideas

Social Justice

A modified version of the Learning for Justice standards, augmented to include environmental justice

Social Studies

The College, Career, and Civic Life (C3) Framework for Social Studies State Standards, with grade bands converted to grade-level-specific standards and greater specificity added to standards

Social & Emotional Learning

Developed in alignment with the Collaborative for Academic, Social, and Emotional Learning (CASEL) Framework—self-awareness, self-management, social awareness, relationship skills, responsible decision-making—with an additional strand devoted to agency, cultural identity, and creativity

Literacy

The Common Core State Standards for English Language Arts and Literacy in History/Social Studies, Science, & Technical Subjects, with some additions, for example in handwriting (these standards can be crosswalked with other state standards)

Math

The Common Core State Standards for Mathematics, with some additions, for example, regarding recognizing and valuing the contributions of mathematicians from varied cultural backgrounds (these standards can be crosswalked with other state standards)

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Standards Addressed in Great First Eight

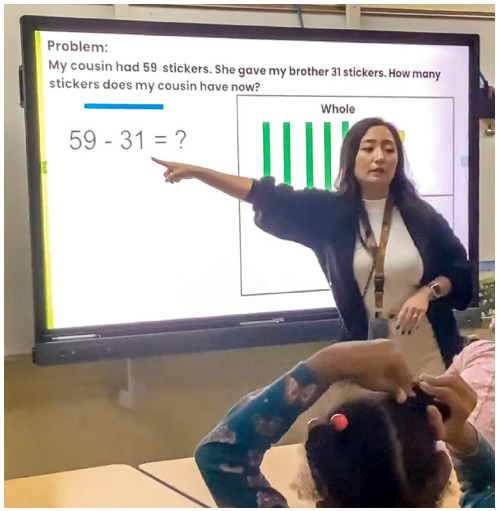
A Standards Crosswalk identifies which standards are addressed in each unit of the curriculum.

Standards: C3 Framework	Art Matters	Water World	Roots of Rice	All Aboard	Pollinator Pathways	Future Figures
Civics & Government						
D2.Civ.8.K-2. Describe democratic principles such as equality, fairness, and respect for legitimate authority and rules.						
D2.Civ.10.K-2. Compare their own point of view with others' perspectives.						
D2.Civ.14.K-2. Describe how people have tried to improve their communities over time.						
Economics						
D2.Eco.9.K-2. Describe the role of banks in an economy.						
D2.Eco.10.K-2. Explain why people save.						
D2.Eco.12.K-2. Describe examples of the goods and services that governments provide.						
D2.Eco.14.K-2. Describe why people in one country trade goods and services with people in other countries.						
Geography						
D2.Geo.1.K-2. Construct maps, graphs, and other representations of familiar places.						
D2.Geo.3.K-2. Use maps, globes, and other simple geographic models to identify cultural and environmental characteristics of places.						
D2.Geo.4.K-2. Explain how weather, climate, and other environmental characteristics affect people's lives in a place or region.						
D2.Geo.5.K-2. Describe how human activities affect the cultural and environmen- tal characteristics of places or regions.						
D2.Geo.9.K-2. Describe the connections between the physical environment of a place and the economic activities found there.						
D2.Geo.10.K-2. Describe changes in the physical and cultural characteristics of various world regions.						
D2.Geo.12.K-2. Identify ways that a catastrophic disaster may affect people living in a place.						
History						
D2.His.4.K-2. Compare perspectives of people in the past to those of people in the present.						
D2.His.6.K-2. Compare different accounts of the same historical event.						

Daily Schedule: Introduction

The Great First Eight Second Grade Curriculum daily schedule has been carefully designed to enact the Principles of the Great First Eight initiative. We have built significant flexibility into the schedule. We encourage you to schedule the components of the day in any order that works for you with the exceptions laid out in The Daily Schedule in GF8 Second Grade Professional Learning Module.

- **Connect and Launch**
- **Word Wonders**
- **Wonder Co-Lab**
- **Recess/Play 1**
- **Math Marvels**
- **Lunch & Recess/Play 2**
- **Community Time**
- **Self Time**
- **Quest Co-Lab**
- **Arts, Movement, or Media**
- **Peace Out**



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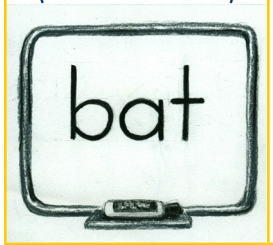
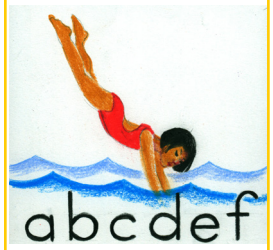
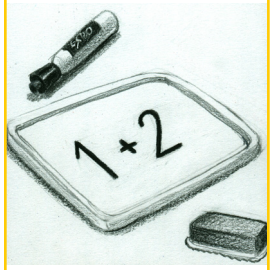
Daily Schedule

Part of Day and Length*	Description
Connect and Launch (20 minutes) 	Connect and Launch is a daily opportunity for children to: • store their belongings • indicate their attendance and their lunch choice, if applicable in your setting • talk with one another and with the teacher to build relationships • process events happening in their community, if needed • write and/or draw in personal journals, if they choose • eat breakfast, if that is aligned with your school scheduling • transition smoothly from home to school We encourage the teacher to stay focused on these important activities. Some other activities that are commonly used in classrooms in the morning are not well-aligned with research (e.g., worksheets, daily oral language, morning message).
Word Wonders (20-30 minutes) 	The Word Wonders portion of the day targets children's development of literacy foundational skills, particularly phonological awareness, phonics, spelling, fluency, and morphology. This portion of the day also addresses vocabulary development to some degree. Word Wonders is taught in a whole-group format. The approach involves a combination of explicit instruction, structured inquiry, and application during reading and writing.

Daily Schedule

Part of Day and Length*	Description
Wonder Co-Lab (60-70 minutes) 	Wonder Collaborative or Co-Lab engages children in small-group and individual activities that foreground literacy development, although other domains are also entailed. This portion of the day involves three kinds oflearning opportunities: 1) ***Small-group instruction with the teacher, which we call "Meet with the Teacher."*** The teacher meets with children in small groups that are formed and reformed flexibly based on children's instructional needs, strengths, and/or interests for differentiated instruction and experiences reading and writing project-related texts. Each week there are two Meet with the Teacher lessons focused on reading a trade book or Wonder Book and one Meet with the Teacher lesson focused on teaching research skills and carrying out research related to a project. In addition, the teacher may meet with subsets of children additional times to reteach or review key content. Depending on the length of the group meeting, class size, and the distribution of instructional needs, each child is seen by a teacher in a small group three to five times per week. 2) ***Small-group and individual experiences, which we call "Dives."*** In frequently changed groups intentionally formed such that children have complementary strengths and needs, working alone or with their group-mates to varying degrees, children engage in a series of Dives that fall into two categories: Definitely-Dos and Up-to-Yous. 3) ***Whole-class reflection.*** The teacher concludes Wonder Co-Lab with either a short reflection period in which children reflect on routines, Dives, or what they learned about reading or writing or closes with Goal Time, where children set, work on, and reflect on literacy child-centered goals. Goal Time does not start until the second unit of the year.
Recess/ Play 1** (20 minutes) 	This recess takes place outdoors whenever possible. When possible, research-supported training in the facilitation of play (e.g., by Playworks) should be provided to the staff members involved, and equipment made available on the playground should be informed by relevant research. In addition, children are never denied Recess/Play for disciplinary reasons.

Daily Schedule

Part of Day and Length*	Description
Math Marvels (50 minutes) 	The Math Marvels portion of the day begins by targeting children's development of number sense, computational skills, and mathematical argumentation. The approach involves a combination of structured inquiry and experiences, such as engagement with number talks that strengthen children's understanding of numbers and operations, algebraic reasoning, and spatial orientation. Periodically, a read aloud anchors the Math Marvels time. Within the Math Marvels block, a Marvel Activity engages children in small-group and individual activities that foreground mathematics development, although many other domains are also entailed. This portion of the day involves three kinds of learning opportunities: 1) **Whole-class activities.** During whole-group instruction, the teacher elicits children's mathematical thinking around project-related topics. For example, the class might engage in a whole class discussion to reflect on the different 2-D and 3-D shapes that are used to make different forms of art, or the teacher might conduct an interactive read aloud to connect noticing and wondering about numbers, patterns, or shapes with a theme from the current project. 2) **Small-group and individual experiences.** Working alone or with their group-mates to varying degrees, children engage in activities selected by the teacher. For example, the teacher might facilitate a high-level, cognitively demanding mathematics task in which small groups use children-generated strategies to solve a problem from the current project. Children who qualify for math intervention services receive them when they would otherwise be working on small-group experiences. 3) **Whole-class reflection.** The teacher concludes Math Marvels with a reflection time in which children evaluate the accuracy and efficiency of multiple problem-solving strategies, try these strategies, and draw connections between their mathematical activity and themes from the current project. During this time, the teacher may also provide additional scaffolds and support based on observations and interactions.

Daily Schedule

Part of Day and Length*	Description
Lunch (30 minutes) & **Recess/Play 2** (20 minutes) 	Children engage in a lunch period of up to 30 minutes followed by a period of recess/play of at least 20 minutes. This recess takes place outdoors whenever possible. When possible, research-supported training in the facilitation of play (e.g., by Playworks) should be provided to the staff members involved, and equipment made available on the playground should be informed by relevant research. In addition, children are never denied Recess/Play for disciplinary reasons.
Community Time (20 minutes) 	In this portion of the day, children engage in instruction designed to support their development of self-awareness, self-management, social awareness, relationship skills, responsible decision-making, as well as agency, creativity, and cultural identity. These competencies are integrated in and across academic domains throughout the entire day. Standards for reading literature are also frequently addressed during this time. Instruction is largely whole-group, often includes read alouds of narrative text, and sometimes incorporates small-group, partner, or individual learning activities.
Self Time (10 minutes) (This may be longer early in the year.)	During Self Time, children spend time by themselves, quietly sitting or snuggling into a spot in the classroom while calming music plays to either look through books, draw, or engage in other quiet activities individually. Individual quiet time helps children develop their independence, and it gives them an opportunity to relax and learn how to entertain themselves.

Daily Schedule

Part of Day and Length*	Description
Quest Co-Lab (80 minutes) (This may be less time early in the year if Self Time is longer.) 	In this portion of the day, children focus especially heavily on the unit's project. Science and/or social studies lead this time, but there is also considerable involvement of literacy, mathematics, and social emotional learning. Quest Co-Lab has three major components: 1) ***Opening Co-Lab (30 minutes):*** This is a whole-group time that includes an experience with an informational text that builds content knowledge, typically through a read aloud, but at times, through presentations provided by experts related to the project or other activities. Reading Informational Text and Listening standards are also addressed during this time. 2) ***Co-Lab Quests (round one: 20 minutes, round two: 20 minutes):*** These involve children in working toward a project goal, typically in collaborative small groups or pairs. In some cases, all children work on the same task ("Quest") that serves the project. In a typical week, five Quests are available, with each child doing a given Quest twice. During the Quests, the teacher provides small-group instruction, targeting specific content or skills in the context of the project. During one of the five days, there are no Quests. Instead, children will engage in extended activities related to the project. 3) ***Walking Reflection or Dance Party (10 minutes):*** To help get to 60 minutes of physical activity per day in Great First Eight Second Grade (more on days with PE), children engage in either Walking Reflection or Dance Party. ***Walking Reflection:*** Children walk, outdoors when possible, as they reflect on a question related to that day's Quest Co-Lab. We provide information about the rationale for and approach to Walking Reflection. ***Dance Party:*** Children have an opportunity to engage in physical movement to music.
Arts, Movement, or Media (50 minutes)	This model schedule assumes that there is a daily 50-minute block, including transitions, devoted to art, music, gym/physical education, library/media, and/or other activities (commonly called "specials"). We provide a document that suggests ways that art, music, and physical education teachers can coordinate with Great First Eight projects.

Daily Schedule

Part of Day and Length*	Description
Peace Out (5 minutes) 	Peace Out is an opportunity to close out the day with intentionality. With the children, establish a routine for each day's end that is positive, efficient, and fosters connection (e.g., a song, a specific cheer, or a class gesture as each child goes out the door). The highest priority is to conclude the day on a positive or hopeful note with all children. For example, even if there is something that did not go well during the day, we encourage you to cast it in a positive orientation, such as, "Tomorrow, I look forward to us continuing to help each other during Dives."

* We realize that the length of school days varies considerably from district to district and state to state. This schedule is close in length to the average length of a school day in the United States, which is six hours and 38 minutes. **We intend for the length and description of each part of the day to remain as close as possible to what is indicated here.** If you find that your school day is not long enough to accommodate the Great First Eight daily schedule, we recommend that you slightly shorten each part of the day rather than cutting any part of the day entirely. Also, please note that children should transition, with movement, between each part of the day.

** Great First Eight requires that children get an average of 60 minutes of physical activity each day. That includes a morning recess (20 minutes), a lunch recess (a minimum of 20 minutes), a walking reflection or dance party (10 minutes), and one or more physical education periods per week (listed as "Arts, Movement, or Media").

† The CDC recommends children have a minimum of 20 minutes of "seat time" (i.e., time seated with their meals) to eat and socialize. To ensure children meet this recommendation, and in alignment with research, we have built in a 30-minute lunch period that allows additional time for children to get their meals, as well as take their seats, while accommodating transition time to and from lunch and recess.

Daily Schedule: Dives

e-Games

Imagine It

Research

Digital Design

Computer-Adaptive Program

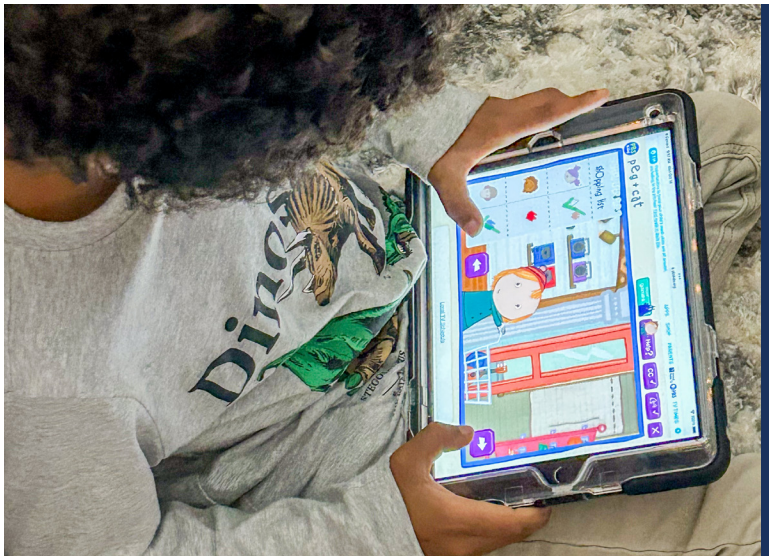
Play with Words

Record a Response

Reading

Keep Reading

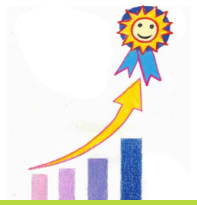
Write What You Want



e-Games

During the e-Games Dive, children build or apply their background knowledge for the project through digital games, such as select games available at pbskids.org.

Daily Schedule: Dives



e-Games

Imagine It

Research

Digital Design

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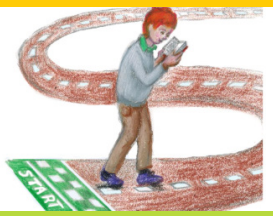
Reading



Keep Reading

Write What You Want

Imagine It

During the Imagine It Dive, children engage in activities such as writing plays, re-reading Readers' Theater scripts, and writing and performing poetry, orations, and songs. This Dive can support language development, creative writing, and fluency development.

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Daily Schedule: Dives

e-Games

Imagine It

Research

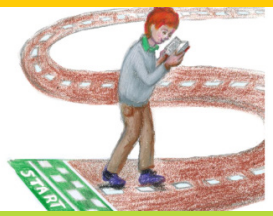
Digital Design

Computer-Adaptive Program

Play with Words

Record a Response

Reading



Keep Reading

Write What You Want

Research

During the Research Dive, children engage with a variety of print and digital sources to build knowledge that will support them in answering the project's driving question and developing their writing product.

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Daily Schedule: Dives

e-Games

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Digital Design

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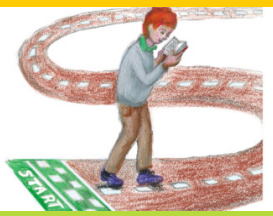
Reading



Keep Reading

Write What You Want

Digital Design

During the Digital Design Dive, children use word processing platforms to customize the design of their writing product and make it visually appealing for an audience.

Daily Schedule: Dives

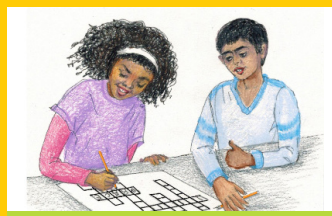
e-Games

Imagine It

Research

Digital Design

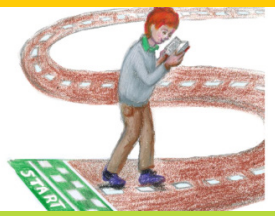
Computer-Adaptive Program



Play with Words

Record a Response

Reading



Keep Reading

Write What You Want

Computer-Adaptive Program

During the Computer-Adaptive Program (CAP) Dive, children develop their literacy foundational skills through research-aligned computer-adaptive software.

Daily Schedule: Dives

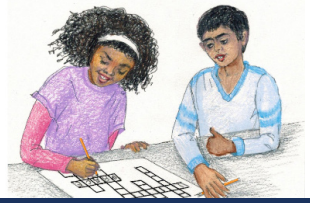
e-Games

Imagine It

Research

Digital Design

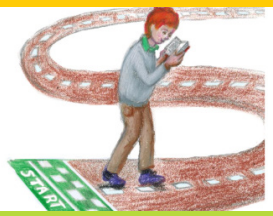
Computer-Adaptive Program



Play with Words

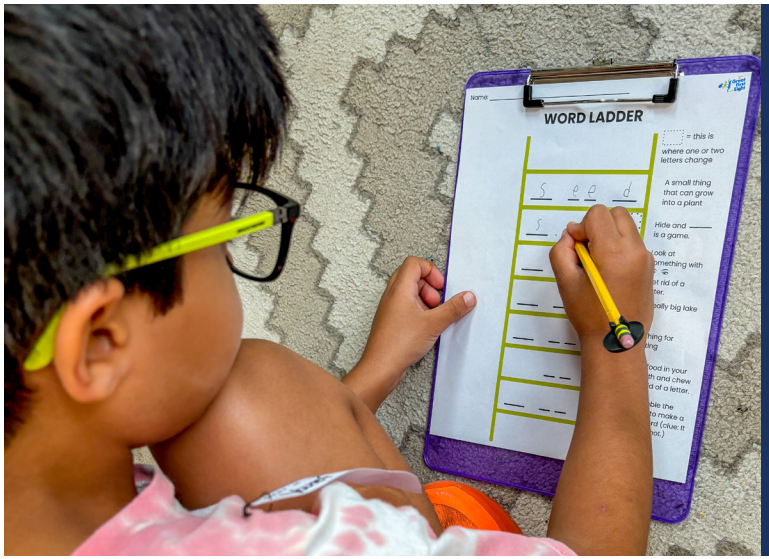
Record a Response

Reading



Keep Reading

Write What You Want



Play with Words

During the Play with Words Dive, children reinforce their literacy foundational skills from Word Wonders by working independently or with peers to solve word puzzles. These puzzles follow up on instruction from the previous week of Word Wonders.

Daily Schedule: Dives

e-Games

Imagine It

Research

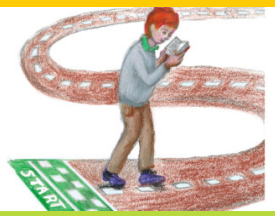
Digital Design

Computer-Adaptive Program

Play with Words

Record a Response

Reading



Keep Reading

Write What You Want

Record a Response

During the Record a Response Dive, children rehearse and express themselves in response to a unit-related prompt using the tools in Seesaw™.

Daily Schedule: Dives

e-Games

Imagine It

Research

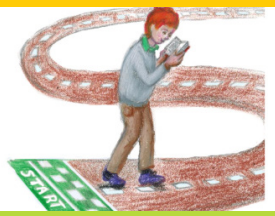
Digital Design

Computer-Adaptive Program

Play with Words

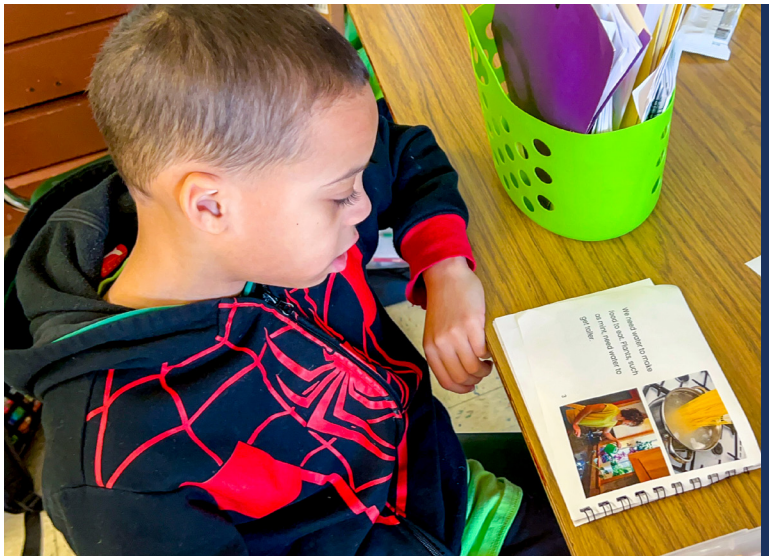
Record a Response

Reading



Keep Reading

Write What You Want



Reading

During the Reading Dive, children build their identities and skills as readers by rereading Wonder Books and trade books they have studied with the teacher. Children are encouraged to use tools to help them reread, such as the Great First Eight Vowel Sounds & Spellings Card. We also provide a Book Reading Menu to motivate a variety of ways to reread.

Daily Schedule: Dives

e-Games

Imagine It

Research

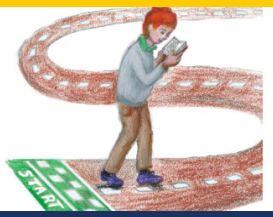
Digital Design

Computer-Adaptive Program

Play with Words

Record a Response

Reading



Keep Reading

Write What You Want

Keep Reading

During the Keep Reading Dive, children will continue reading texts they were introduced to in Meet with the Teacher.

Daily Schedule: Dives

e-Games

Imagine It

Research

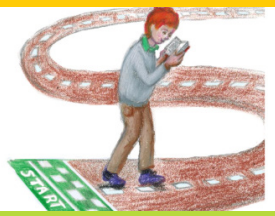
Digital Design

Computer-Adaptive Program

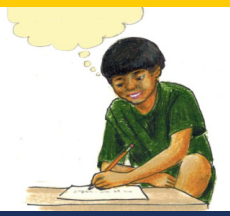
Play with Words

Record a Response

Reading



Keep Reading

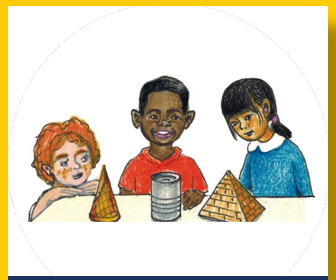


Write What You Want

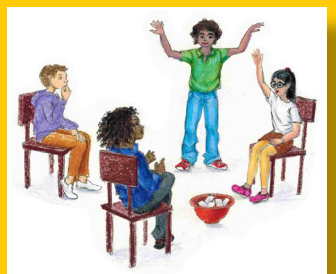
Write What You Want

During the Write What You Want Dive, children will develop their identities and skills as writers through freewriting opportunities of their choice across a variety of genres. Templates are provided to support children with writing in genres that they have learned about previously in the curriculum, such as templates for book reviews and procedural texts as well as story-planning organizers.

Daily Schedule: Quests



Math Minds



Play & Learn

Message-Making

Exploration/ Investigation

Makerspace

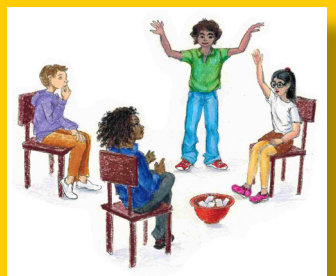
Quest with the Teacher

Math Minds

The Math Minds Quest is mathematics focused. Children engage in activities that use games or puzzles to foster fluency. They may pose and solve their own problems related to the theme of a project or try out others' problem-solving strategies.

Daily Schedule: Quests

Math Minds



Play & Learn

Message-Making

Exploration/ Investigation

Makerspace

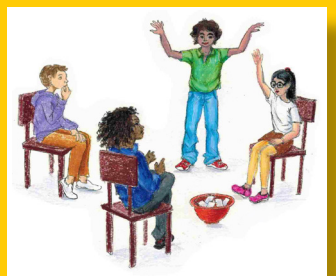
Quest with the Teacher

Play & Learn

During the Play & Learn Quest, children engage in group games that promote their social and emotional learning and the development of civic qualities.

Daily Schedule: Quests

Math Minds



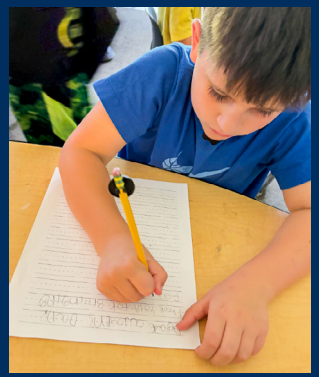
Play & Learn

Message-Making

Exploration/ Investigation

Makerspace

Quest with the Teacher

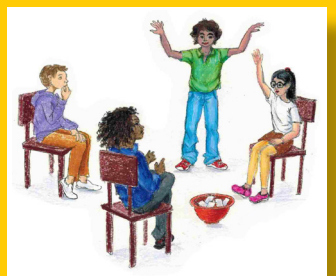


Message-Making

The Message-Making Quest is composed of project-related writing and literacy activities. For example, children write thank-you notes to guest speakers who have helped them build knowledge for their project.

Daily Schedule: Quests

Math Minds



Play & Learn

Message-Making

Exploration/ Investigation

Makerspace

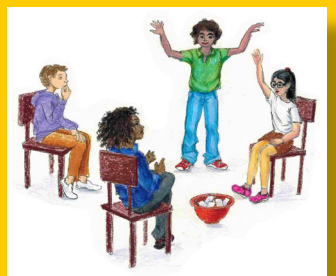
Quest with the Teacher

Exploration/Investigation

Known as the Exploration Quest in social-studies-led units and the Investigation Quest in science-led units, this Quest involves children engaging in project-related work that supports the conceptual development of ideas and practices.

Daily Schedule: Quests

Math Minds



Play & Learn

Message-Making

Exploration/ Investigation

Makerspace

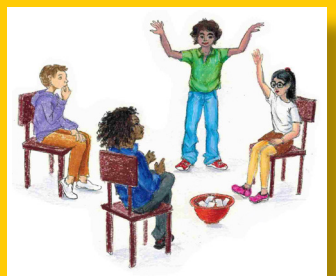
Quest with the Teacher

Makerspace

The Makerspace Quest focuses on a science activity related to creating an artifact or part of a product that supports the project's driving question.

Daily Schedule: Quests

Math Minds



Play & Learn

Message-Making

Exploration/ Investigation

Makerspace

Quest with the Teacher

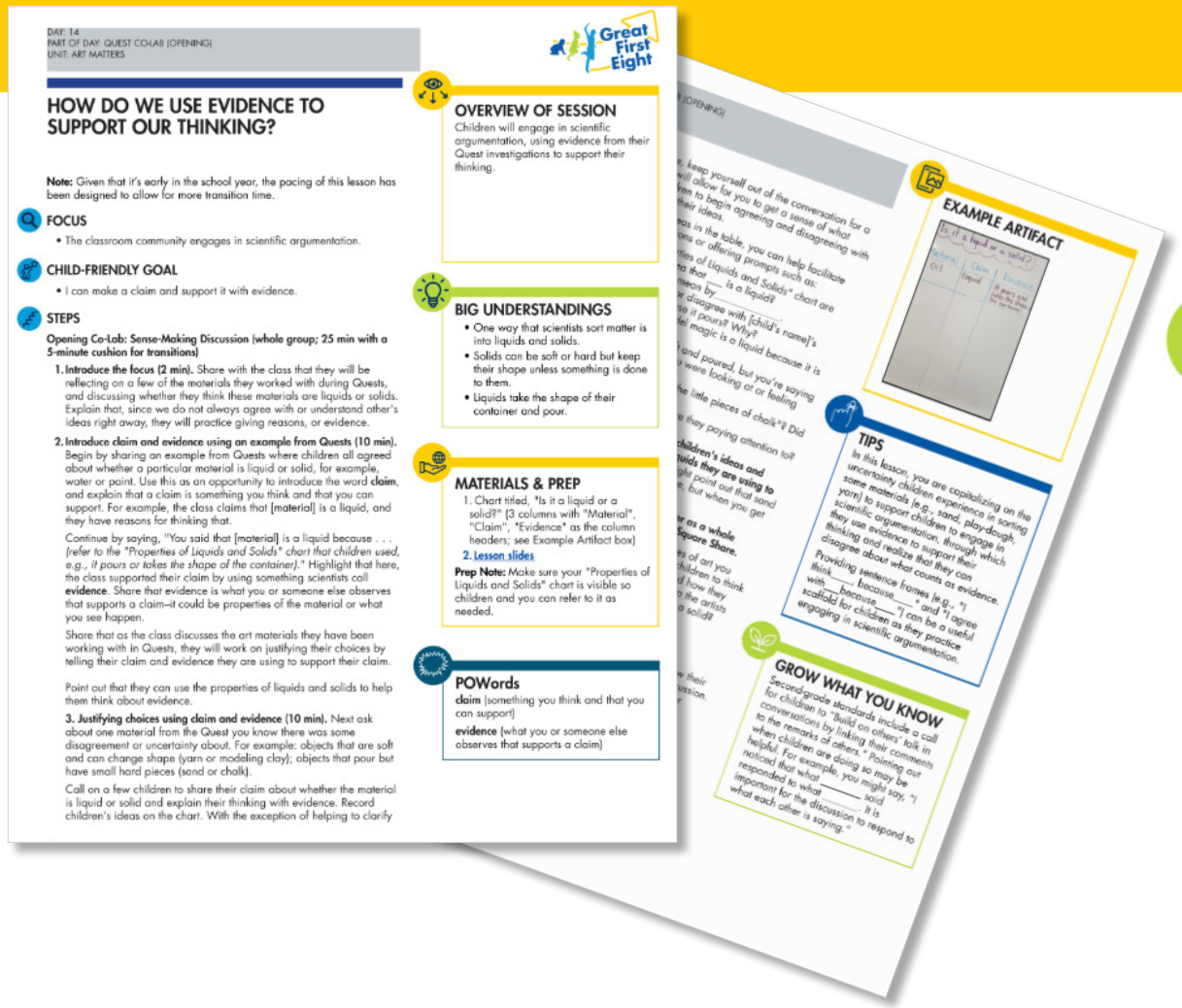
Quest with the Teacher

In Quest with the Teacher, the teacher works with a small group. The content of this Quest is typically similar to what children engage with in Exploration/Investigation or Message-Making.

Lesson Plans

Great First Eight Lesson Plans were carefully designed, with input and feedback from many classroom teachers, to provide a great deal of support for planning and carrying out the lesson while also providing room for teachers to be responsive to the children in front of them.

Many lesson plans include "Grow What You Know" and other boxes designed to support continued professional learning related to implementation of the curriculum.



DAY: 14
PART OF DAY: QUEST CO-LAB (OPENING)
UNIT: ART MATTERS

Great First Eight

HOW DO WE USE EVIDENCE TO SUPPORT OUR THINKING?

Note: Given that it's early in the school year, the pacing of this lesson has been designed to allow for more transition time.

FOCUS
- The classroom community engages in scientific argumentation.

CHILD-FRIENDLY GOAL
- I can make a claim and support it with evidence.

STEPS

Opening Co-Lab: Sense-Making Discussion (whole group; 25 min with a 5-minute cushion for transitions)

1. **Introduce the focus (2 min).** Share with the class that they will be reflecting on a few of the materials they worked with during Quests, and discussing whether they think these materials are liquids or solids. Explain that, since we do not always agree with or understand other's ideas right away, they will practice giving reasons, or evidence.
2. **Introduce claim and evidence using an example from Quests (10 min).** Begin by sharing an example from Quests where children all agreed about whether a particular material is liquid or solid, for example, water or paint. Use this as an opportunity to introduce the word **claim**, and explain that a claim is something you think and that you can support. For example, the class claims that [material] is a liquid, and they have reasons for thinking that.

   Continue by saying, "You said that [material] is a liquid because . . . *(refer to the "Properties of Liquids and Solids" chart that children used, e.g., it pours or takes the shape of the container)*." Highlight that here, the class supported their claim by using something scientists call **evidence**. Share that evidence is what you or someone else observes that supports a claim–it could be properties of the material or what you see happen.

   Share that as the class discusses the art materials they have been working with in Quests, they will work on justifying their choices by telling their claim and evidence they are using to support their claim.

   Point out that they can use the properties of liquids and solids to help them think about evidence.
3. **Justifying choices using claim and evidence (10 min).** Next ask about one material from the Quest you know there was some disagreement or uncertainty about. For example: objects that are soft and can change shape (yarn or modeling clay); objects that pour but have small hard pieces (sand or chalk).

   Call on a few children to share their claim about whether the material is liquid or solid and explain their thinking with evidence. Record children's ideas on the chart. With the exception of helping to clarify

OVERVIEW OF SESSION
Children will engage in scientific argumentation, using evidence from their Quest investigations to support their thinking.

BIG UNDERSTANDINGS
- One way that scientists sort matter is into liquids and solids.
- Solids can be soft or hard but keep their shape unless something is done to them.
- Liquids take the shape of their container and pour.

MATERIALS & PREP
1. Chart titled, "Is it a liquid or a solid?" (3 columns with "Material", "Claim", "Evidence" as the column headers; see Example Artifact box)
2. Lesson slides

Prep Note: Make sure your "Properties of Liquids and Solids" chart is visible so children and you can refer to it as needed.

POWords
claim (something you think and that you can support)
evidence (what you or someone else observes that supports a claim)

EXAMPLE ARTIFACT

TIPS
In this lesson, you are capitalizing on the uncertainty children experience in sorting some materials (e.g., sand, play-dough, yarn) to support children to engage in scientific argumentation, through which they use evidence to support their thinking and realize that they can disagree about what counts as evidence. Providing sentence frames (e.g., "I think ___ because ___." and "I agree with ___ because ___.") can be a useful scaffold for children as they practice engaging in scientific argumentation.

GROW WHAT YOU KNOW
Second-grade standards include a call for children to "Build on others' talk in conversations by linking their comments to the remarks of others." Pointing out when children are doing so may be helpful. For example, you might say, "I noticed that what ___ said ___. It is important for the discussion to respond to what each other is saying."

GROW WHAT YOU KNOW

You may have heard the saying, "'i' before 'e,' except after 'c.'" Like most broad generalizations about English, there are many exceptions to this—in fact, a *Washington Post* article called it "a giant lie." However, the tag you sometimes hear with the saying, "the exception says /ā/, as in *neighbor* and *weigh*," helps make the saying somewhat more accurate (we still do not recommend teaching it). In /ā/ spellings that are the focus of this lesson, the "e" comes before "i."

Please note that "eigh" and "ei" do not always spell the /ā/ sound, as in *height*, *heir*, and *deceive*, for example.

Materials & Tools

Great First Eight includes many materials and tools that support learning, such as collections of poems, songs, Readers' Theater scripts, and informational articles; Vowel Sounds and Spellings Cards; slides that go with specific lessons; and much, much more!

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Assessment

Too often assessment practices in U.S. schools do not actually improve the quality or appropriateness of individual children's education but rather serve to perpetuate a narrow, deficit-laden view of children's capabilities and unequal opportunities for children to engage in the most intellectually engaging work. In the Great First Eight Second Grade Curriculum, we take a different approach . . .

Principles Guiding Our Observation and Assessment Plan

The following principles shape our approach to assessment:

1. Observation and assessment practices should **align with our 15 Great First Eight Design Principles**.
2. Observation and assessment practices should **help teachers maintain high expectations for all children**.
3. Observation and assessment practices should **emphasize what children can do**.
4. Observation and assessment practices should **be equitable**.
5. Observation and assessment practices should **enable children to be active participants** in the assessment process.
6. Assessment tasks should **offer learning opportunities** for children.
7. Observation and assessment practice should **be aligned to the curriculum**, including the curriculum's aims with respect to:
   - procedural knowledge, practices, and skills
   - conceptual knowledge
   - discourses
   - dispositions

   We should not test what we have not taught.
8. Observation and assessment should **offer children multiple opportunities to show what they know and can do** over the course of a unit or over multiple units.
9. Observation and assessment should **offer children multiple ways to express their thinking**.
10. Assessment practices should **be educative when needed** (e.g., about central components of science practices).
11. Observation and assessment **must inform instruction**.

We enact these principles through a three-pronged approach to assessment:

(1) guided observation,
(2) rapid, systematic assessments, and
(3) a structured portfolio

Assessment

Guided Observation: The Seeing Strengths Spreadsheet

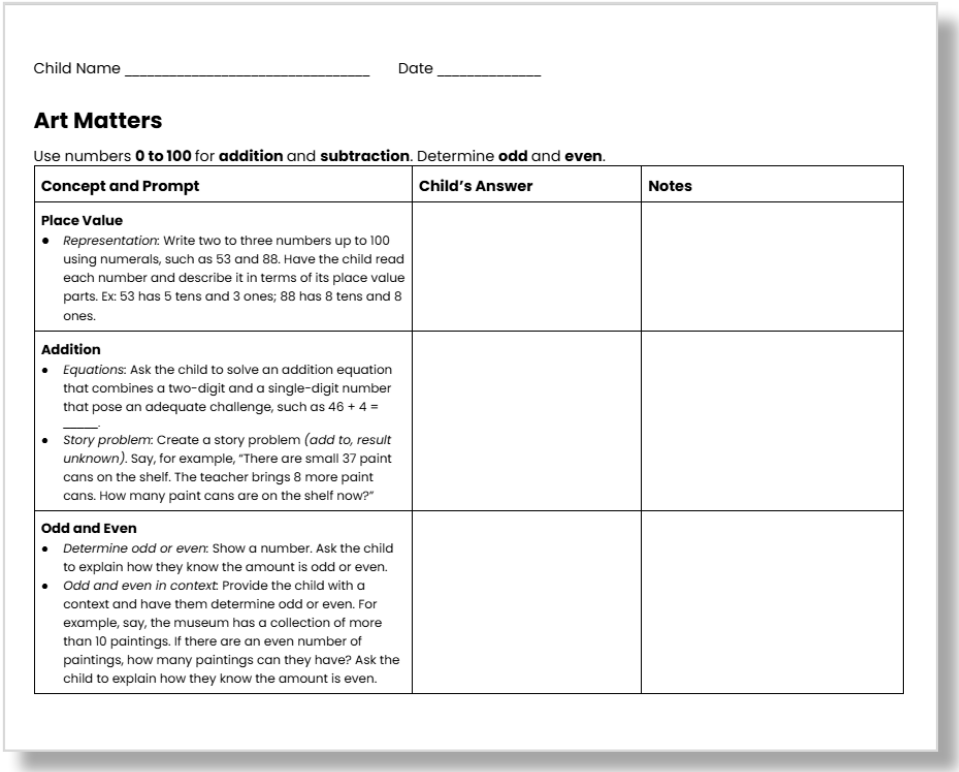
Strengths	Obser-vation Period	First Last #1 — Amount of support to: Substantial	Moderate	Minimal	None	Comments
MATH						**MATH**
M1: Sees themselves as mathematical thinkers and doers, & recognizes & values the contributions of mathematics ideas from various cultural backgrounds and individuals.	Ob-1	☐	☐	☐	☐	
	Ob-2	☐	☐	☐	☐	
	Ob-3	☐	☐	☐	☐	
	Ob-4	☐	☐	☐	☐	
M2: Makes sense of problems and perseveres when solving problems.	Ob-1	☐	☐	☐	☑	**[example]** Attempted a subtraction problem and used representations, numbers, and symbols to solve. When asked probing questions, he was able to share how his representations and mathematical symbols connect to the story problem context. He said, "Since there are 25 trains at the station and 10 leave, I can make 25 using ten frames and then mark out 10 to show 10 are gone."
	Ob-2	☐	☐	☐	☐	
	Ob-3	☐	☐	☐	☐	
	Ob-4	☐	☐	☐	☐	
M3: Uses numbers, math tools, and/or words to help explore and make sense of problems.	Ob-1	☐	☐	☐	☐	
	Ob-2	☐	☐	☐	☐	
	Ob-3	☐	☐	☐	☐	
	Ob-4	☐	☐	☐	☐	
M4: Communicates their own reasoning effectively, and considers the reasoning of others by listening, asking questions, and making connections.	Ob-1	☐	☑	☐	☐	**[example]** When comparing 3-digit numbers he determined that 237 is less than 327, but when asked to explain he said, "I just know it's less because it's smaller."
	Ob-2	☐	☐	☐	☑	**[example]** He measured a book in inches and his partner measured it in cm. He pointed out that they got different answers and asked his partner who was wrong. His partner said it is because they measured with different units so they are both right.
	Ob-3	☐	☐	☐	☑	**[example]** Determined that a number is even because "everyone has a pair".
	Ob-4	☐	☐	☐	☑	**[example]** He saw a classmate draw one line down the center of a circle to partition it into halves and made the connection, "It's like when I had to share a cookie with my sister so I broke it one time down the middle!"
M5: Develops and recognizes multiple paths to solve problems.	Ob-1	☐	☐	☐	☐	
	Ob-2	☐	☐	☐	☐	
	Ob-3	☐	☐	☐	☐	
	Ob-4	☐	☐	☐	☐	
M6: Attends to math vocabulary, symbols, and labels when solving mathematical problems.	Ob-1	☐	☐	☐	☐	
	Ob-2	☐	☐	☐	☐	
	Ob-3	☐	☐	☐	☐	
	Ob-4	☐	☐	☐	☐	
M7: Recognizes, creates, and uses patterns or relationships when reasoning.	Ob-1	☐	☐	☐	☐	
	Ob-2	☐	☐	☐	☐	
	Ob-3	☐	☐	☐	☐	
	Ob-4	☐	☐	☐	☐	

We provide a structured online observation spreadsheet, "Seeing Strengths," to guide and record observations of children's developing strengths. The spreadsheet is created with individual children's names and photos in the column headings and Strengths organized by domain within the row headings. These Strengths typically reflect clusters of standards rather than just a single standard, making them powerful and relatively efficient foci for observation.

The spreadsheet offers space to record brief comments about observed strategies or skills, evidence of content knowledge, or other dispositions for each child. There is also a set of four checkboxes for each Strength: substantial, moderate, minimal, and none. These checkboxes don't put the onus on the child but rather refer to the amount of support the teacher needs to provide for the child to show this Strength. Teachers may work in the Seeing Strengths spreadsheet during the day or during a reflective period of the teacher's choosing. We also provide prompts in some lessons that offer especially good opportunities to observe for specific strengths.

Assessment

Rapid, Systematic Assessments



Child Name _____ Date _____

Art Matters

Use numbers **0 to 100** for **addition** and **subtraction**. Determine **odd** and **even**.

Concept and Prompt	Child's Answer	Notes
Place Value • *Representation*: Write two to three numbers up to 100 using numerals, such as 53 and 88. Have the child read each number and describe it in terms of its place value parts. Ex: 53 has 5 tens and 3 ones; 88 has 8 tens and 8 ones.		
Addition • *Equations*: Ask the child to solve an addition equation that combines a two-digit and a single-digit number that pose an adequate challenge, such as 46 + 4 = ____. • *Story problem*: Create a story problem *(add to, result unknown)*. Say, for example, "There are small 37 paint cans on the shelf. The teacher brings 8 more paint cans. How many paint cans are on the shelf now?"		
Odd and Even • *Determine odd or even*: Show a number. Ask the child to explain how they know the amount is odd or even. • *Odd and even in context*: Provide the child with a context and have them determine odd or even. For example, say, the museum has a collection of more than 10 paintings. If there are an even number of paintings, how many paintings can they have? Ask the child to explain how they know the amount is even.		

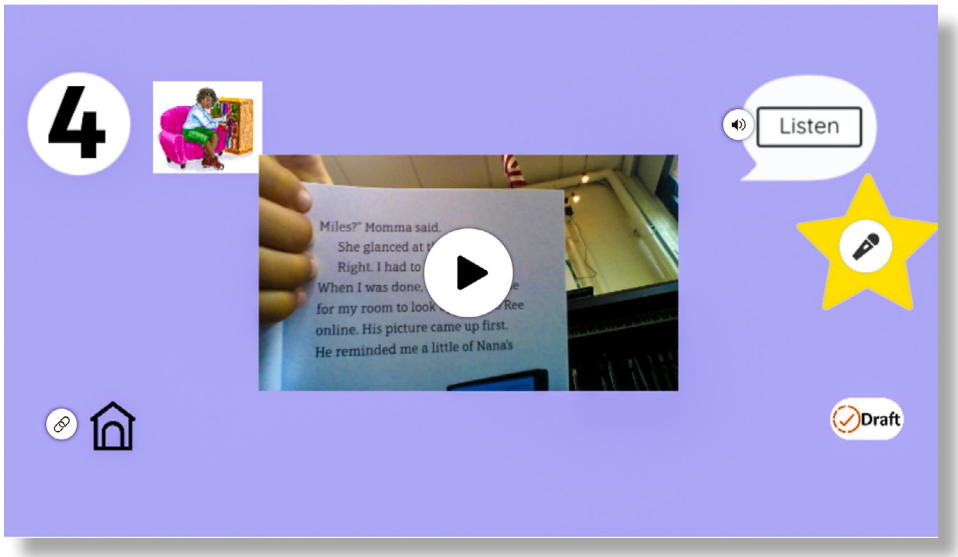
The Art Matters (Unit 1) portion of the Great First Eight Second Grade Math Assessment

Rapid, systematic assessments in Great First Eight Second Grade include any assessments the school must administer due to state mandates as well as systematic formative assessments developed by Great First Eight. The Great First Eight assessments are administered at various points throughout the year for the purpose of informing instruction.

The Great First Eight rapid, systematic assessments are very carefully aligned to our curriculum. For example, in our Word Reading and Spelling Assessment, we only test children's ability to read and spell words with phoneme-grapheme relationships that we have explicitly taught. This alignment is uncommon in U.S. assessment and crucial for achieving equity and effectiveness in assessment.

Assessment

Structured Portfolio



One page of a second grader's unit portfolio.

The third and final component of the Great First Eight Second Grade approach to assessment is a structured portfolio that captures key accomplishments of children in each unit/project. The portfolio is created using the digital platform Seesaw™ to encourage two-way communication with families about children's learning and to allow for children to use multiple channels or methods to demonstrate what they know or can do, such as photos of drawings, writing, or artifacts, as well as video and audio recordings.

The unit/project portfolio includes at least one entry per domain and is designed to incorporate student choice. For example, in Roots of Rice, for literacy foundational skills, children choose an excerpt from the book *Miles Lewis: King of the Ice* to record themselves reading out loud, and for math, they choose a problem to share from their work that demonstrates adding and subtracting 3-digit numbers. For each portfolio entry except in social and emotional learning, we provide a rubric the teacher can use to evaluate the entry; in some cases, child-facing versions of the rubrics are also provided.

Professional Learning

Great First Eight teacher professional learning in year one involves:

- Daily planning time
- Weekly or biweekly teacher study group/ professional learning community/lesson study/inquiry meetings
- Thirty hours of professional learning modules to engage in with colleagues before implementing Great First Eight
- Fourteen hours of professional learning modules to engage in with colleagues during the first year of implementing Great First Eight
- Additional professional learning materials for use in subsequent years

All modules come with facilitator guides so that a coach, lead teacher, or other member of the school or center community can lead the professional learning internally. It's the best of both worlds: high-quality, research-aligned professional learning materials used in a job-embedded, ongoing manner.

The Year One Professional Learning Modules include the following:

Fundamental Understandings about Great First Eight:

- Introduction to GF8 Second Grade
- Professional Learning in the GF8 Second Grade Curriculum
- Designing a GF8 Second Grade Classroom
- Lesson Plan Walk-Through in GF8 Second Grade
- Assessment in GF8 Second Grade
- Language Diversity in GF8
- Project-Based Learning in GF8 Second Grade
- Positionality (four sessions)
- Frameworks for Family and Community Engagement in GF8 Second Grade

Professional Learning About Parts of the Day:

- The Daily Schedule in GF8 Second Grade
- Word Wonders and Meet with the Teacher in GF8 Second Grade
- Wonder Co-Lab in GF8 Second Grade
- Math Marvels in GF8 Second Grade
- Community Time in GF8 Second Grade
- Quest Co-Lab in GF8 Second Grade
- Classroom Culture & Climate in GF8 (across the day)

Professional Learning About Specific Units:

- Launch Week
- Art Matters Launch Deck
- Water World Launch Deck
- Roots of Rice Launch Deck
- All Aboard Deck
- Pollinator Pathways Launch Deck
- Future Figures Launch Deck

Professional Learning

Specific Domains of Learning:

- Social and Emotional Learning and Identity in GF8 Second Grade
- Social Studies Teaching and Learning in GF8 Second Grade
- Science and Engineering Teaching and Learning in GF8 Second Grade
- What Are the Social Justice Standards? in GF8 Second Grade
- Vocabulary: POWords in GF8 Second Grade
- Modeling in GF8 Science & Engineering
- (Other aspects of math and literacy are addressed in modules about parts of the day)

Tools and Techniques in Great First Eight:

- Wonder Books & Other Texts in GF8 Second Grade
- Classroom Discourse in GF8
- Differentiation in GF8
- Family Engagement Curriculum in GF8–Parts 1 & 2
- Intro to Seesaw™ (for those not already familiar with this platform)
- Seesaw™ in GF8
- Research Skills in GF8 Second Grade
- Listening to Reading–Watching While Writing Protocol in GF8 Second Grade

Revisiting Modules of Choice:

Throughout the year, coaches and teachers can revisit modules of their choice as needed to continually support children's growth.

Family Engagement

Families First: The Great First Eight Curriculum Family Engagement Approach K–2

In Great First Eight, we recognize that families are children's first and most enduring teachers. We help teachers learn from families. We provide opportunities for families to learn from one another. And we share with families ways they can support children's curriculum-related learning at home.

In Great First Eight K–2 classrooms, teachers have daily opportunities to learn from and with families, including through:

- ✔ Talking at pick-up and drop-off (if applicable)
- ✔ Text messages
- ✔ Phone calls
- ✔ Video messages
- ✔ Seesaw™ (a digital platform for sharing children's work)
- ✔ Our family folder
- ✔ School/community events, including project celebrations
- ✔ Conferences
- ✔ Feedback on children's work
- ✔ Opportunities to volunteer

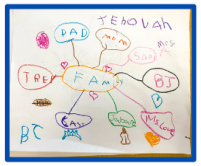
Our family engagement approach also includes:

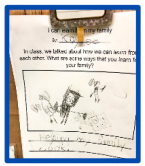
Family curriculum and unit introductions: We share with families about Great First Eight and each curriculum unit

Family Journal: Weekly opportunities for families to write, draw, or video- or audio-record responses to prompts related to the in-class project-based unit

Family Studios: Get-togethers in which families learn from one another and the teacher about ways to support children's learning through everyday activities at home

Great First Eight's approach goes beyond traditional "parent involvement":





- We include many family members, not just parents
- Educators learn from and with families to support children at home and at school

School & Community Events

Teacher Reflection

- How can teachers invite families to attend and participate in school and community events?
- How can school and community events be designed to be inclusive of families' needs and interests?

School and community events provide opportunities for children and families to engage with and build relationships with teachers, other families, and community partners.

The Great First Eight Curriculum is designed to intersect with the community. Units culminate with the children's work on a purposeful product and often include special events where children will be able to share their ideas and learning with families and community members.

START Getting Started

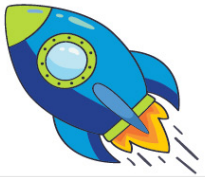
Review the Community Engagement Calendar for your grade level (see the "Overview of Units" category in the Cross-Unit Resources section of Great Gate).

Once you have mapped out your pacing, use this resource to create a family-facing calendar of school and community events that includes dates.

If possible, include events that will be located within the school building as well as events that will take place within the broader community.

Share the calendar on a regular basis, with events filled in through at least the next two months.

As events approach, send reminders to families using child-created invitations and/or via a digital family communication platform (e.g., Seesaw™) or an "evite" website.



Tips

1. Integrate a wide range of opportunities to volunteer, including ways families can be involved even if they cannot attend an event.
2. Recognize family contributions publicly at events and express appreciation for participation.

Links to Principles

Principle 1:

The Great First Eight Curriculum values children's engagement by providing them with real-world purpose and an authentic audience. So, the events you plan are critical for evoking jubilation. Learning in GF8 is fun! Children should feel joy and agency when they share their hard work with an audience.

Image credit: iStock.com/FatCamera

Inquiry can lead us into a future of possibility.

Why is the earth blue and green?

planting gardens

advocating for the planet

Next Steps

Eager to learn more about Great First Eight?

Explore the GreatFirstEight.org website. To sign up for an informational webinar about the curriculum, write to GreatFirstEight@stand.org.

Ready to Apply to Adopt the Curriculum?

Connect with the Great First Eight Team for an application!

Thank you for your interest in Great First Eight!