FIRST GRADE INTERDISCIPLINARY UNIT (F1)

Unit 1: Asking Questions
Concept: inquiry

Essential Question:
How does asking good questions help us to get the best answer?

Deepening Questions:
What makes a good question?
What is the reason for a question?
Why do we ask questions?
What is the importance of asking questions?

Unit Overview
This unit is designed to engage students in the inquiry process in the various disciplines of language arts, math, social studies, science and art. Students will understand that asking good questions is essential for getting to the best answer. While interacting with several texts students understand that ideas are processed through inquiry, thought, and conversation. Additionally, students learn that investigating is foundational to learning. The unit starts by having students learn how asking questions can help them better understand stories and text. Students will investigate plants and their growth and learn how scientists ask and answer questions. When learning about a person, it is the best practice to ask questions related to key details in a person’s life to help get the best overall picture.

Academic Vocabulary

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Section 1: Asking Questions
Hook: *Children’s Games* by Pieter Bruegel
Look at Children’s Games by Pieter Bruegel. Ask the students to study it closely for a few minutes and write down any questions they have about what they see. When the time is up, have them ask their questions. As the students begin to ask questions aloud, write all of the questions on a chart (e.g., “What are they doing? Is that like a hula hoop? Was this painted a long time ago? . . .”). Concentrate on
developing students’ questions into these categories: Who, What, Why, How, Where. Sort each of the questions into the categories shown above and invite students to ask even more questions.

Talk about the value of asking questions and how we begin to open our minds to think deeply about something. (The painting was done in the sixteenth century, and the artist was perhaps trying to show all of the games he knew. You may want to note the few toys children had—sticks, hoops, etc.) (SL.1.2)

*Book or painting to contrast (playground games)
Additional ELA books:
- What Makes a Bruegel a Bruegel? By Richard Muhlberger
- Pieter Bruegel (Getting to Know the World's Greatest Artists) by Mike Venezia
Additional artwork
- Snap the Whip by Winslow Homer

Activity 1: How do I ask questions about a story?

Engaging in Literature (teaching the strategy of QAR)
Wondering about Stories
Students will have a chance to begin asking questions about a story. As you read the book Tomas and the Library Lady, pause periodically and encourage students to ask questions. By using “I wonder” as the beginning of the question, have students predict what is coming next in the story and clarify understanding. Use sticky notes or whiteboards to keep each child engaged in the questioning.

Please refer to the following website which details the purpose of students asking questions to help them better understand a story.
http://thepicturebookteachersedition.blogspot.com/2012/09/the-importance-of-asking-questions.html

Here is a nice summary of how asking questions helps readers:
- Asking questions allow readers to understand why they are reading the text.
- Asking questions give readers a chance to make predictions and then later change their thinking.
- Asking questions allow readers to make connections based on things they already know (their schema).
- Asking questions give the reader a chance to use context clues to identify unfamiliar words.
- Asking questions allow the reader to decide if the content/story was good or not.
- Asking questions give the reader a chance to review important information from the text.
- Asking questions give the reader a chance to clarify any information they may not understand.

Invite students to follow the Before/During/After questioning strategy when reading aloud any other text.

Exploring the "Library"

Invite students to engage in a conversation about visiting a library. This is a place full of books and resources where people can go to get answers to their questions. Start connecting to other places people can go for answers (google, classroom library, museums, “experts”). Draw a quick web (graphic organizer) which shows the word “answers” in the middle with places students can visit to investigate answers to their questions.

Using Pic Collage to make a digital collage where students demonstrate their knowledge. The title of the collage would be “Places I can go to find answers….”

Activity 2: ABC Books (Informational Text)

Tell the students that just because books are called “ABC books” does not mean they are always easy to understand. Therefore, to understand them, we have to be willing to ask questions and to think deeply and look for key details. Tell the students that they are going to look at The Graphic Alphabet. Using a document camera for viewing this book would be helpful. On each page, there is a letter, but there is something more going on than just that letter. Look at A. Have the students ask questions about the page and try to answer them (e.g., “Why is the letter A
crambling? Could the letter be a mountain? Is that an avalanche? "). As you go through the book and throughout the unit, introduce the new vocabulary.

Read aloud the book The Upside Down Turn Around Alphabet Book by Lisa Campbell Ernst. Ask students to think critically about each letter and brainstorm other things each letter could be. As an option, give each child a die cut black letter where he/she can create their own book page. (e.g. M can become a roller coaster ride)

Is that a question? (declarative vs. interrogative sentences)

Introduce the writing of declarative and interrogative sentences by focusing on an informational ABC book, such as Eating the Alphabet: Fruits and Vegetables from A to Z (Lois Ehlert). On a chart, write a question such as “What is your favorite fruit?” Teach the students to answer the question with a complete declarative response, such as “My favorite fruit is a strawberry.” Discuss the end punctuation. Continue this activity to teach the expansion of sentences to include details, such as “Strawberries are my favorite fruit because they are juicy, sweet, and delicious.”

As a class or small group, students will sort sentences by Asking/Telling (Interrogative/Declarative). At the end of each, they will place the correct punctuation mark. The following website shows how this can be done with sentence strips and a pocket chart.


Following is a blackline master that covers not only asking and telling but introduces the concept of exclamatory sentences. http://files.havefunteaching.com/fun-activities:center-activities/cool-cat-sentences-activity.pdf

Create an anchor chart detailing the differences between an asking and telling sentence.

http://www.first-grade-fever.blogspot.com/2012/01/asking-or-telling.html

Variations on an Alphabet Book

Students will explore VERBS by reading the ABC book Q is for Duck by Mary Elting, Michael Folsom, and Jack Kent. Students can understand the pattern of the text which hints that the letter is connected to the verb of the picture and not the noun. They will create picture or a classbook shown on the website below.


Researching and Writing an ABC Book

Using the ABC books as a model, generate some ideas for writing a class ABC book. Work together as a class to come up with potential research questions. Begin by asking questions such as, “Is it possible to create an ABC book with Games to Play as our title?” Allow the class to give some ideas (e.g., names, authors, books, plants, insects). After ideas have been shaped into a research question, allow the children to vote on a theme for the class ABC book.

Once the theme is chosen, gather information from a variety of texts and digital resources for each letter of the alphabet. For instance, if the class decides on “Insect”, each students will get a letter and “research” an insect that starts with that letter.

NOTE: This process may be done with a small group of kids as it may take some time for each student to find the name of an item and interesting fact about that item. Students should then find out information (possibly through a search engine) about their page so they can write and draw accordingly.

Assessment:

Decide on a topic/theme and design for the book. Assign each student a letter in the book. Each page should include an upper and lower case letter, the key word, an illustration, and a sentence using the key word. Students will also write or dictate one sentence about the page (Insect ABC book: D is for Dragonfly. Baby
dragonflies live underwater where they breathe through gills.) Be sure to have them follow rules for spelling and punctuating correctly.

More Questions?
Students will practice generating good questions about any piece of literature (similar to Thomas and the Library Lady). As a whole class, create a t-chart of good vs. bad questions. Then distribute a BDA (Before-During-After Sheet) to each student to complete based upon reading/listening to one of the stories below.

Read aloud any selection from the anchor texts listed below:
- Fly Away Home by Eve Bunting
- An Angel for Solomon Singer by Cynthia Rylant
- The Stranger by Chris Van Allsburg
- Baseball Saved Us by Ken Mochizuki and Dom Lee
- The Wednesday Surprise by Eve Bunting
- Storm Boy by Owen Paul Lewis
- Charlie Anderson by Barbara Abercrombie and Mark Graham
- Amos and Boris by William Steig
- Beatrice Doesn't Want To by Laura Numeroff and Lynn Munsinger
- The Sick Day Patricia Maclachlan and Jane Dyer
- Elmer by David McKee
- Elbert's Bad Word by Audrey Wood and Don Wood
- The Van Gogh Cafe by Cynthia Rylant
- The Librarian Who Measured the Earth by Kathryn Lasky
- Why Is The Sky Blue? Sally Grindley and Susan Varley
- Weslandiaby Paul Fleischman and Kevin Hawkes
Section 2: What Makes a Garden Grow?

This section is tied to the Houghton Mifflin Harcourt Journeys reading series. It is adapted from Unit 5, Lesson 21. Additionally, this section ties in science based on the Science: A Closer Look (MacMillan/McGraw-Hill) texts used by Concept Schools. Particularly, Life Science (Chapter 1.)

HOOK: Dead Pinon Tree by Georgia O’Keefe

Students will complete an asking/telling protocol sheet about O’Keefe’s paintings noting a connection to what plants need in order to survive to place in their inquiry journals. They can revisit this sheet at the end of this section to revise or add to each of the columns.

Activity 1: Asking Questions about Plants

Complete a KWL chart about GARDENS that allows students to express what the KNOW, WONDER and LEARNED (leaving off the learned part which can be filled out at the end of this section. Students can be prompted to take any of their “Wonders” to record in their inquiry journals to investigate at a later time.

Small Group: (From A Closer Look) Exploring a Magazine Article

As a class, students will do a close reading of Ranger Rick’s Insect-Eating Plants. Students should note any observations about what plants need to grow and live. Ask students how this information affect what you believe plants need in order to grow? They can then generate their own hypothesis about what plants need.

Students will then investigate the features of informational text (see link the Harvey’s Comprehension Toolkit) as a way to help better understand a whole piece of text. Specifically, students will learn the function of a caption (and how it is different from a label.) If further practice is needed, invite students to find other texts with captions then create their own captions given a picture.

The following website offers a free download of posters for each of the features: attach (posters). These are perfect for not only highlighting the feature(s) the class is studying but can be posted for reference.

http://www.teacherspayteachers.com/Product/Non-Fiction-Text-Features-Posters-219255

Additional Resources/Sources Informational Text:
Hungry Plants (Step into Reading)

*Study of Plants (nonliving vs. living things) can be scheduled in conjunction with the unit following A Closer Look

Activity 2: Investigating How Plants Grow

Whole Group:

Frog and Toad Together: The Garden (HMH Journeys)

Before reading the selection, ask students to apply the skill of BDA they learned earlier when confronted with new and/or difficult text. Students will listen to the section The Garden in the book Frog and Toad Together by Arnold Lobel.

During the reading of the text, focus on asking questions throughout to help guide students through comprehension. Remind students to use TEXT EVIDENCE to support their answers. (Questions are located in the “Use Text Evidence” section throughout the teacher’s edition.)
After the reading, lead students through a Guided Retelling. Use the prompts on the retelling cards (or photocopy pages from the text) to order events from the story. Students can take turns orally retelling the story.

Make a t-chart. Based on information in the story, students will list things that helped a garden grow and things that did not. If students wish to add additional information, they can turn over the sheet. Remind students we are basing our t-chart on information only from the story.

Writing Activity: Toad’s Diary
Invite students to make a diary for Toad. In the diary, they will detail the steps in growing a garden as well as further develop the character of Toad.

Additional HMH Activities:
Narrative Writing: HMH Journeys activity (TE p. T35)

Dig Deeper (Comprehension)
Students will use the story as well as their retell to identify the story structure (characters, setting and plot.)
Guide students through using a story map to help them better understand the main elements of the anchor text. Refer to TE page T40 and T41 for additional details

Whole Group:
Read aloud the text Garden Good Guys by Timothy Thomas (HMH Journeys informational text) or select one of the following trade books
- Garden Friends by DK Publishing (easy reader)
- National Geographic Reader: From Seed to Plant (shows labels as well as captions, on grade-level reader)
Students will review the concept of captions as well be introduced to the concept of labels as a feature of non-fiction. Point out examples from the text and help students to understand how the picture and label contribute to understanding the text.

Pair students up and have them go on a “Feature Find.” They will capture (digitally) examples of both captions and labels. Each student will select two images to print side by side that show the best example of caption/label and how it is used in their example.

Additional activities to help students explore the text are located in the Teacher’s Edition pages T24-T3
Inquiring about Plants: MMH: A Closer Look
During this next section, students will continue to study what plants need, the parts of a plants, the different types of plants and how plants grow/change. A Closer Look specifically takes students through text and activities that cover these topics. Refer to Unit A: Life Sciences-Plants in MMH: A Closer Look.

Assessment: Create a Plant Portfolio that addresses knowledge in the following areas:
Have students collect artifacts from this past section of the unit and capture them as images. Using the app Videolicious, students will use a voice over to record their learning about plants. Artifacts can be as simple as a picture of a diagram of plant parts with students explaining the different parts of a plant and their functions.
- What plants need in order to grow and change
- The parts of a plants
- Different kinds of plants
- Life cycle of a plant
- Places plants live

Additional Resources/Activities about Plants
Seed to Plant: The following website contains a link to a great unit planned around The Tiny Seed by Eric Carle, concentrating mostly on the life cycle of a plant. It includes a host of activities and corresponding worksheets
where students learn how plants develop and also brings in some math, language arts and additional science activities/experiments.


Poetry!: The book Seeds, Bees, Butterflies and More (Poems for Two Voices) by Carole Gerber and Eugene Yelchin is a terrific companion to this section of the inquiry unit. It is a precursor to the older student version of Poems for Two Voices series Joyful Noise by Paul Fleischman

Assessment:
Students will choose one kind of plant (fruit, vegetable, flower, etc.). They will create a seed packet as a means not only to sell the seed but also tell how the buyer should care for it. The packets should include a picture of the plant, where it grows best, how it should be planted and cared for, etc. Seed packets can be created from large manila shipping envelopes.
Section 3: Inquiring about a Problem (asking questions to help solve a problem)

This section of the unit is designed to build upon students’ mathematical knowledge gained in Kindergarten of concepts such as:

- solving addition/subtraction problems with sums up to 10
- Composing and decomposing numbers
- Representing addition/subtraction as a model (drawing, etc)

A quick review of these standards may be helpful before engaging students in word problem study.

Activity 1: Asking Questions about Math Problems

Read aloud *The Grapes of Math* by Greg Tang. Introduce students to the concept that problems in math can be easier if they ask the right questions or break the questions down. Create a smartboard lesson or diecut version of bunches of grapes. Ask students to start to rearrange the bunch of grapes to try to make the problem easier. Record any “question” sentences the students ask. Invite students up to share their mathematical thinking (focusing on the questions they asked while doing exploring the problem) with the class.

Post the following question:
Given a problem, what questions are appropriate to ask to in order to begin addressing a problem?
Use the attached resource poster (Good Mathematicians Ask Questions!) to review the types of questions students should ask when given a math problem.

Activity 2: Question Words in Story Problems

“Math Curse” Create a math curse diary (possible a binder where students can add problems/strategies/solutions as they encounter them) where students can record any problem they have in math (there are 19 pencils and 22 students in class. How many pencils do I need to get from the closet?) *This is an ongoing activity and should be continued for many weeks. Possibly review the binder and its contents frequently with the students to show how others address problem solving.

Greg Tang talking about his career (biography of his career)
http://www.readingrockets.org/books/interviews/tang

Activity 3: Methods for Solving Word Problems

Given a class word problem, students will learn how to approach a word problem in order to begin to solve it. See the following link for an explanation of the C.U.B.E.S method of word problem solving.
http://firstgradewow.blogspot.com/2014/02/math-thinking-patterns-and-cubes.html

Identifying Key words:
Create an anchor chart as a class based on the words they tend to see in a word problem and their meaning.
See the website for an example of this anchor chart.

Links to Story Problems and Problem Solving Strategies:
Worksheets to practice each problem solving strategy:
http://www.eduplace.com/math/hmm/problem/prb_1.html

Problem Solving Strategies
http://www.teacherspayteachers.com/Product/Problem-Solving-Math-Strategies-335997

Section 4: Who Are We? (asking questions about a person and their past)

Deepening Questions:
What is a biography?
How does a biography help me learn about someone?
What makes a good biography?
What questions should I ask when writing a biography?

Whole Group: Read aloud the story *Tomás Rivera* by Jane Medina
Create a web (that will be converted into an anchor chart) detailing information students learned about Tomas Rivera from *Tomas and the Library Lady* read aloud earlier in the unit.

Activity 1: Introduction to Biographies

Elements of a biography: Molly Bannacky
Start with the following question to guide this section:
*What do you really need to and want to know about a person’s life?*

Read aloud the story of Molly Bannaky by Chris K. Soentpiet.
As you read the book aloud, ask students to use a Fishbone Diagram to chart all the different elements that you learn about in a biography (birth, schooling, family members, career, etc.) Have students start to include any additional elements they may have found helpful knowing about Molly.

Additional Practice with Biographies:
*Frida by Jonah Winter
Who Was Walt Disney? (Who Was...?) by Whitney Stewart and Nancy Harrison
Who Was Jackie Robinson? By Gail Herman
Who Was Rosa Parks? (Who Was...?) by Yona Zeldi McDonough
Meet President Barack Obama (Scholastic News Nonfiction Readers) by Laine Falk
Barack Obama: Out of Many, One by Shana Corey
George Washington Carver: The Peanut Wizard by Laura Driscoll
*My Name Is Georgia (Georgia O’Keefe) by Jeanette Winter
*I am Abraham Lincoln (Ordinary People Change World) by Brad Meltzer
Through Georgia’s Eyes by Rachel Victoria Rodriguez
The Watcher: Jane Goodall’s Life with the Chimps by Jeanette Winter
Salt in His Shoes: Michael Jordan by Deloris Jordan, Roslyn M. Jordan
*Wilma Unlimited: How Wilma Rudolph Became the World’s Fastest Woman by Kathleen Krull
Teammates by Peter Golenbock
Dear Benjamin Banneker by Andrea Davis Pinkney
George Washington’s Mother by Jean Fritz
Young Orville and Wilbur Wright: First to Fly by Andrew Woods
George Washington Carver by Andy Carter and Carol Seller
Diego Rivera: An Artist’s Life by Sarah Vazquez
Happy Birthday, Martin Luther King by Jean Marzollo
Jacob Lawrence by Mike Venezia
A Picture Book of Frederick Douglass by David A. Adler
Frida Kahlo by Mike Venezia
Harvesting Hope: The Story of Cesar Chavez by Peter Golenbock
Whole Group: Pick from one of the biographies on Dr. Seuss (Theodore Geisel)

**Dr. Seuss by Helen Lester (HMH Journeys-Unit 2, Lesson 9)**
Who Was Dr. Seuss by Janet Pascal (available for free on wegivebooks.org) longer text
Dr. Seuss by Charlotte Guillain

Ask students to help develop an anchor chart of the elements of a biography in which they can refer to when writing their own biography later in the unit.
(http://media-cache-ec0.pinimg.com/originals/23/00/25/23002549580736c8756c8f7f6088c88f.jpg)

Assessment: Memoirs of a Goldfish by Devin Scillian
Students will listen to this book read aloud. Ask students to note that this is a fiction book but could behave like a biography. They will complete a biography evaluation to see if the text meets the necessary elements for being a good biography. Invite students to Pair/Share and present their findings to another students and make an argument for their evaluation.

**Activity 2: Understanding Biographies**

Explore the concept of Then and Now by reviewing several biographies. Students will note that information can come from facts noted in the story (birthdate), from pictures in the books or even the events discussed in the text. They can use a Venn Diagram to gather their observations noting how the character’s life (Then) and their life (Now) are different yet the same.

*Good biographies to use for the Then/Now are noted above with an asterisk.*

Assessments: Students will be able to create a picture timeline of one of the characters from the biographies they have heard/read. They will write a brief reflection on how the character’s life and their life compare citing examples from the text.

**Activity 3: Writing a Biography**

Students are to come up with “good” questions to ask the family member they are interviewing for a biography. These questions should be based on the elements of a biography and include some type of sequence. Possibly share some examples of student questions helping students to generate questions that will help them fill out the biography graphic organizer. Review the questions with each student so there is some type of guidance.

Students will then interview a person (preferably someone in their family.)
Students will complete a graphic organizer. It may also be helpful for students to draw out a timeline to understand how things happen sequentially. Ask students to bring in a photograph of the person they interviewed.

Assessment: Blabberize Biography
Using the graphic organizer they filled out, students will be writing a speech (told from the voice of the person they interviewed using words like I and me.) Using blabberize.com students will read their speech (which really is them writing a biography of the person.)

**Historical Narratives**
Boy on Fairfield Street by Kathleen Krull
http://firstgradeblueskies.blogspot.com/2014/01/writing-biographies-freebie.html
Shows good anchor charts:
http://amber-polk.blogspot.com/2013/03/biography-unit.html
Activities were adapted from the following teacher-created unit:
http://www.teacherspayteachers.com/Product/Biography-Mini-Unit-634547

Additional Biographies:

Salt in His Shoes: Michael Jordan by Deloris Jordan, Roslyn M. Jordan
Wilma Unlimited: How Wilma Rudolph Became the World’s Fastest Woman by Kathleen Krull
Teammates by Peter Golenbock
Dear Benjamin Banneker by Andrea Davis Pinkney
George Washington’s Mother by Jean Fritz
Young Orville and Wilbur Wright: First to Fly by Andrew Woods
George Washington Carver by Andy Carter and Carol Seller
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