**Egg Study: An Integrated, Inquiry-Based Unit**

Kindergarten: Fairforest Elementary School

**Story Focus:** Chickens Aren’t the Only Onesby Ruth Heller

**Source(s):** Guiding Readers by Deanna Jump and Deedee Wills; STEM Engineering Challenge Humpty Dumpty Egg Drop by Gretchen Hilley

**Standards:**

*Word work and vocabulary:* K.RL.3.2; K.RIP.3.2; *K.RFS-1a-d; K.RFS-2a-e; K.RFS-3a-d;*

*K.RFS-4*

*Read Aloud:* K.I.2.1; K.I.3.1; K.I.3.2; K.I.4.1; K.I.5.1; K.I.5.2; K.RL.1.1; K.RL.1.2; K.RL.1.3;

K.RLMC.5.1; K.RLMC.5.2; K.RLMC.6.1; K.RLMC.7.1; K.RLMC.7.2; K.RLMC.8.1a-e; K.RLLCS.9.1; K.RLLCS.9.2; K.RLLCS.10.1-6; K.RLLCS.11.1; K.RLLCS.11.2; K.RLLCS.12.1; K.RLLCS.12.2; K.RLRC.13.1; K.RIMC.5.1-5.2; K.RIMC.6.1; K.RIMC.7.1; K.RILCS.8.1-8.2; K.RILCS.9.1-9.5; K.RILCS.10.1; K.RILCS.12.1

*Phonemic Awareness:* K.RL.2.1; K.RL.2.2; K.RL.2.3; K.RL.2.4; K.RL.2.5; K.RI.2.1

*Interactive Writing:* K.W.1.1;K.W.1.2;K.W.4.1;K.W.4.2;K.W.4.3;K.W.4.4;K.W.4.5;K.W.4.6;

K.W.4.7;K.W.4.8;K.W.5.1;K.W.5.2;K.W.5.3;K.W.5.4;K.W.5.5;K.W.6.1;

K.W.6.2; K.W.6.3

*Inquiry-Based Literary Standards:* K.I.1.1; K.I.2.1; K.I.3.1; K.I.3.2; K.I.4.1; K.I.4.2; K.I.4.3;

K.I.5.1; K.I.5.2

**Overview of Unit**

**Key Ideas and Details:**

What is this main topic of this story?

Who is the connection between chickens and the other animals in this story?

Can you list some of the oviparous animals in this book?

Can you think of some other animals that lay eggs?

What are animals that don’t lay eggs called? (Mammals) What characteristics do they have? (fur or hair)

*SCHEMA*: Students use what they know about eggs and add to that knowledge as they study a variety of eggs. **Experiments to build schema** – Egg Observation; Parts of an egg study; See through Egg Experiment; Egg Spinning Study; Squeeze that Egg; Egg STEM Challenge Humpty Dumpty Egg Drop.

*INQUIRY*: Eggs can be hard to squeeze when handled a certain way but can crack easily when different pressure is applied. Can you design a container that will keep an egg from cracking when dropped?

 **Egg STEM Challenge**  – students design, build and test a container that will keep an egg from cracking when dropped.

**Integration of Knowledge and Ideas:**

What does the author say about the spiny anteater and the duckbill platypus? (they are exceptions)

How can we find out what she means when she says they are exceptions? (Research: add this link for information and a video to “It’s Learning” and students can research on own or can view as a whole class [SPINY ANTEATER DUCKBILL PLATYPUS](http://animals.sandiegozoo.org/animals/echidna)

**Craft and Structure:**

What type of book is this?

Why do you think the author wrote this book? (persuade, entertain, inform)

What did you learn from reading this book?

***Vocabulary:*** oviparous, naturally, mammal, wild, tame, extinct, reptiles, amphibians, guard

**Other:**

Choose an oviparous animal to draw and write about

**Daily Lesson Plans**

Full Daily Lesson Plans are in April Guiding Readers - [April Guiding Readers merged.pdf](April%20Guiding%20Readers%20Merged.pdf). STEM activities have been integrated from STEM Engineering Challenge Humpty Dumpty Egg Drop –[stemengineeringchallengehumptydumptyeggdrop.pdf](../STEM/STEMEngineeringChallengeHumptyDumptyEggDrop.pdf); 10 Egg Activities – [eggactivities.pdf](../STEM/EggActivities.pdf)

**Daily focus** of the linked lesson plans are noted below.

***Day 1:***

*Word Work* – review two vowels go walking the 1st does the talking; /oa/ makes long /o/ sound as in goat; makes /oo/ sound when teamed up with another “o” as in moose.

*Phonemic Awareness* – CVC Blending or segmenting

*Read Aloud* – SCHEMA, review what schema is: what we already know in our head. Whenever we read, we need to open up that file of information in our head and add new information to it.

*Interactive Writing –* Share the pen as you construct a response. Point out mechanics of a sentence. Co- write 1st sentence then challenge students to “add more” by writing a 2nd on own.

*Egg Observation:* students observe a variety of eggs and the animal that hatches from it. (flipchart or blog and put on It’s Learning) Students respond on Padlet with their favorite egg and what animal hatches from it. *This can be done during computer time and students rotate to complete throughout day/week*

*Parts of An Egg Study*: students explore an egg and learn about the different parts of an egg. Students will need: 1 egg, 1 bowl, paper towels, journals or paper then will glue in journal, pencil.

***Day 2:***

*Word Work* –/oa/ and /oo/ sounds; sorting /oa/ and /oo/ words then select one word to draw and create a sentence using.

*Phonemic Awareness* – manipulating beginning sounds by playing “Swap it Out”

*Vocabulary Work –* “oviparous” *(animals lay eggs)* and “viviparous” *(animals that are mammals, babies grow inside their mother and are born alive)*

*Read Aloud* – SCHEMA - After reading the text, students will classify animals as oviparous or viviparous. *Interactive Writing –* share the pen as you construct a sentence using the vocabulary word “packed.”

*See Through Egg Experiment* – How important is the shell of an egg? This experiment will take 4 days to complete, using only a few minutes of class time per day. Materials needed: glass container, egg, vinegar, large spoon.

***Day 3:***

*Word Work* – make words activity with /oo/ and make a list of /oo/ words

*Phonemic Awareness* – syllabication (blending and segmenting syllables)

*Read Aloud* – PURPOSE, authors write for a reason. Some write to persuade, entertain, or inform us. Use previous books, Hey, Little Ant; Ice Bear; Abe Lincoln’s Hat; The Easter Bunny’s Assistant, to help explain how those authors persuaded, entertained, or informed us.

*Vocabulary Work –* “mammal”review from yesterday that mammals are viviparous and what characteristics define a mammal.

*Interactive Writing –* share the pen as you construct a response(s) to why the author wrote this book and what she wanted us to know.

*Egg Spinning Study* – How do you know if an egg is raw or hard boiled? You can find out by spinning the eggs.

*Squeeze that Egg! –* How strong is an egg? This experiment will help students see how amazingly strong an egg is. (Put egg in plastic bag before beginning)

***Day 4:***

*Word Work* - /oo/ sounds and words; students read and highlight words with /oo/

*Phonemic Awareness* – rhyming skills; students identify the rhyming words in a group when presented with multiple words orally.

*Read Aloud* – PURPOSE, review how authors write for a reason. Some write to persuade, entertain, or inform us. After reading story, explain how today the students will be authors and write to inform. *Creating Books –* Students will make a book on oviparous animals based on the information learned this week. Students can also use the chart where they categorized animals into oviparous and viviparous animals to help.

*STEM Challenge Day 1 –* Building: students work in pairs and use a recording sheet to plan their creation. Students work with a plastic egg and experiment as they create a design. Encourage students to use the engineering process: ask, imagine, plan, create, improve. To add technology, a student/teacher can take pictures during each step.

***Day 5:***

*Word Work* – check for understanding. Students color words based on their vowel sound.

*Phonemic Awareness* – students will count words, use those words in a sentence and expand on a sentence. Words are: octopus, viviparous, hatch, mammal, ostrich, crocodile, seahorse

*Read Aloud* – OPINION, students will draw and write about what oviparous animal they would like to have as a pet and why.

*Interactive Writing –* the opinion writing can be done as interactive writing or as an independent writing experience.

*STEM Challenge Day 2 –* Testing: students will go to the drop spot and take turns dropping their creation. Students collect data on how many drops their egg device withstands. To continue with technology, a student/teacher can take a video of the test(s) then students can create a mini-movie with their photos from day 1 and video from day 2.