

2014-2015

# ideas with INPACT



# idea packet

# Digging Reading!





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### **Goals and Objectives**

#### Common Core

CCSS.ELA-Literacy.RI.5.3 Explain the relationships or interactions between two or more individuals, events, ideas, or concepts in a historical, scientific, or technical text based on specific information in the text.

CCSS.ELA-Literacy.RI.5.6 Analyze multiple accounts of the same event or topic, noting important similarities and differences in the point of view they represent.

CCSS.ELA-Literacy.RI.5.7 Draw on information from multiple print or digital sources, demonstrating the ability to locate an answer to a question quickly or to solve a problem efficiently.

CCSS.ELA-Literacy.RI.5.9 Integrate information from several texts on the same topic in order to write or speak about the subject knowledgeably.

CCSS.ELA-Literacy.RI.5.10 By the end of the year, read and comprehend informational texts, including history/social studies, science, and technical texts, at the high end of the grades 4–5 text complexity band independently and proficiently.

### **New Generation State Standards**

Grade Level:	5
Body of Knowledge:	Nature of Science
Big Idea:	<ul> <li>The Practice of Science -</li> <li>A: Scientific inquiry is a multifaceted activity; The processes of science include the formulation of scientifically investigable questions, construction of investigations into those questions, the collection of appropriate data, the evaluation of the meaning of those data, and the communication of this evaluation.</li> <li>B: The processes of science frequently do not correspond to the traditional portrayal of "the scientific method."</li> <li>C: Scientific argumentation is a necessary part of scientific inquiry and plays an important role in the generation and validation of scientific knowledge.</li> <li>D: Scientific knowledge is based on observation and inference; it is important to recognize that these are very different things. Not only does science require creativity in its methods and processes, but also in its questions and explanations.</li> </ul>

### OVERVIEW

5<sup>th</sup> Grade Gifted Students will dig into reading by exploring dinosaurs, dinosaur fossils and even explore the career of Paleontology! Through this interdisciplinary reading the students will to connect with Science by exploring poetry, fiction and non-fiction books on the subject with a culminating activity of a dinosaur dig! Through the theme of dinosaurs students will use critical reading strategies to help with understanding the material and to use higher order thinking skills of knowledge learned and apply to their very own dinosaur dig. They will enjoy "digging" in to this great reading exploration.

Through the materials requested students will be able to apply the idea of how scientists "dig" for information and how readers "dig" for information. We will have a "tool bag" of fluency tubes, sticky notes, magnifying glasses as we look for reading clues such as character perspectives, descriptions, problems, solutions. In the same manner we will also learn through science how Paleontologists use these same type of strategies to figure out fossils from long ago. They will explore the history of various fossils, identification criteria of fossils, rocks and minerals, and the career of Paleontology.

#### **Timeline of Project**

1<sup>st</sup> Month: Students will be given hard hats, make science coats, sticky notes, and book. Give pre-test

For next 3-6 weeks:

**Reading**: Explain how to "dig" for clues in reading. They will be identifying story elements, figurative language with their sticky notes. Explore various dinosaur books and use reading strategies throughout.

**Science**: Read about Paleontologists and discuss how they "dig" for clues like students dig for reading clues. Create a diorama of what they learned about Paleontologists/write persuasive letter

**Culminating Science activity**: set up a dinosaur dig (with the help of parents), put together fossils, identify rocks

Post-test

Dear Parents,

We would like to create Science Lab Coats this year for all our Scientific Labs. We need each student to bring in an X or XX Large(depending on the size of your child<sup>©</sup>) White Round or V-Neck T-Shirt , that we will cut down the middle(this way it will hang like a coat). Mr. Hall, the art teacher, will be helping them create their own unique "lab coats" . We need these white t-shirts no later than next Friday, \_\_\_\_\_\_\_. Please label your child's t-shirt on the collar tag with a permanent marker so we know who it belongs to.

Thank you for your help in this great project!!

Science Teacher's Name\_\_\_\_\_

Child's Name\_\_\_\_\_

Parent Sign and return that you have received this letter:



### **Dinosaur Pre/Post Test**

#### 1. What is the largest animal to have lived on earth?

- a. Supersaurus
- b. Blue whale
- c. Wooly mammoth

#### 2. When did dinosaurs go extinct?

- a. 15,000 years ago
- b. 65 million years ago
- c. 1 billion years ago

#### 3. Which of these is not a dinosaur?

- a. Apatosaurus
- b. Pterodactyl
- c. Megalosaurus

#### 4. Which dinosaur family was the smartest?

- a. Dromaeosaurids
- b. Oviraptors
- c. Tyrannosaurids

#### 5. Who first coined the term dinosauria?

- a. Joseph Leidy
- b. Charles Darwin
- c. Sir Richard Owen

#### 6. What caused the extinction of the dinosaurs?

- a. an asteroid hitting the earth
- b. a virus
- c. man

#### 7. During what period did Tyrannosaurus rex live?

- a. Cretaceous
- b. Triassic
- c. Jurassic

#### 8. Which one of these dinosaurs was most like a rhinoceros?

- a. Saltopus
- b. Stegosaurus
- c. Triceratops

#### 9. What was the largest dinosaur?

- a. Supersaurus
- b. Tyrannosaurus Rex
- c. Utahraptor

#### **10. What color were dinosaurs?**

- a. Grey
- b. Brown
- c. Unknown

## **Answer Key**

#### 1:Correct answer: Blue whale

The blue whale is the largest animal that ever lived on Earth. They are 80 feet long on average and weigh about 120 tons.

**2:**Correct answer: 65 million years ago Dinosaurs went extinct about 65 million years ago, at the end of the Cretaceous period.

#### **3:**Correct answer: Pterodactyl

Pterodactyls are not dinosaurs. They were a group of flying reptiles that lived at the same time as dinosaurs. There were no flying dinosaurs.

#### 4:Correct answer: Dromaeosaurids

The smartest (also some of the fiercest) dinosaurs were Dromaeosaurids. They had the largest ratio of brain weight:body weight (encephalization quotient or EQ). They included the Utahraptor, Velociraptor, and Deinonychus.

#### **5:**Correct answer: Sir Richard Owen

Sir Richard Owen (1804-1892) was a British comparative anatomist who first coined the term dinosauria, from the Greek "deinos" meaning fearfully great, and "sauros" meaning lizard.

#### **6:**Correct answer: an asteroid hitting the earth

The most widely accepted theory is that a large asteroid, several miles in diameter hit the Earth about 65 million years ago. This caused changes in the earth's atmosphere killing much life on earth.

#### 7:Correct answer: Cretaceous

The Cretaceous period (144-65 mya) is the last period of the Mesozoic Era when dinosaurs were at their height. It ended with the extinction of dinosaurs and many other prehistoric creatures.

#### 8:Correct answer: Triceratops

Triceratops was a rhinoceros-like dinosaur that had three horns on its face. It also had one of the largest skulls of any land animal ever discovered.

#### 9:Correct answer: Supersaurus

The largest dinosaurs were sauropods, large quadrupedal, herbivorous dinosaurs with long necks, small heads, and long tails, which included Ultrasauros, Brachiosaurus and Supersaurus. Ultrasauros was probably about 82-100 feet long, 52 feet high, and weighed 55 to 130 tons.

#### 10:Correct answer: Unknown

It is impossible to say since an animal's skin colors are produced by organic pigments which are not preserved in fossils.

#### **Vocabulary**

<u>Adaptation</u> a structure or ability of an organism that allows it to survive in a particular environment.

**<u>Carnivore</u>** an animal that eats the flesh (meat) of other animals.

<u>**Cast**</u> a fossil formed in the mold of a once living animal or footprint. Usually formed when mud fills the area occupied by the animal when it died.

**Dinosaur** one of a group of extinct animals. All dinosaurs lived on land. The first kinds of dinosaurs developed over two hundred million years ago. The last kinds became extinct about sixty-five million years ago.

**Environment** everything that surrounds a particular type of living thing and affects its growth and health.

**<u>Era</u>** a long period of geologic time such as Paleozoic, Mesozoic, or Cenozoic. An era often begins or ends with an important event.

**Excavate** to uncover by digging.

**Extinct** no longer living or existing.

**Family** a group of closely related plants or animals.

**Fossil** the remains or trace of a living animal or plant from a long time ago. Fossils are usually found embedded in earth or rock.

<u>Geologic time</u> the relative age of various geological periods and the absolute time intervals.

Herbivore an animal that feeds only on plants.

Mold an impression left from a plant or animal. Footprints are an example of a fossil mold.

**Omnivore** animal that eats both plants and animals

**<u>Paleontology</u>** the study of prehistoric life.

Period a division of a geological time, such as Triassic, Jurassic, and Cretaceous

<u>**Plate tectonics**</u> the geologic theory that the earth's crust consists of several independent plates floating on semiliquid magma, whose constant motion is the cause of continental drift, volcanic eruption, and the like.

#### What Good Readers Do!

Free activities/ideas; <u>http://www.fortheloveofteaching.net/2011/04/printable-bookmarks-with-thinking.html</u>

http://www.teacherspayteachers.com/Product/Colorful-Reading-Strategy-Posters-262409

Good Reading Checklist!

#### **Before Reading:**

Think about what the book may be about.

Predict what might happen.

Think about what you already know about the topic or subject.

#### **During Reading:**

Focus on what the book is telling you. Does it make sense?

Try to figure out tricky words. Ask for help if you need it.

Picture in your mind what is happening.

#### After Reading:

Compare your predictions to what the text told you.

Think about the new things you've learned.

Retell the story in your own words.

\*

Hung up on a word? Try these strategies: SKIP over the word and go on

LOOK at the picture and think of words that make sense

SAY the beginning sound

THINK of words that begin with the same sound

ASK which words make sense

READ the word in the sentence and see if it makes sense

#### **Dinosaur Activities Across the Curriculum**

Students participate in a group "fossil" dig

Materials Needed

• For each group: one paper plate, one chocolate chip cookie, toothpick

Suggestion: Divide the activity into two lessons to be taught over two days.

#### \*\*\*Fossil Dig Model

- Begin the lesson by asking the class these questions and writing students' responses on a chart: What do you know about dinosaurs? How do we know that dinosaurs lived long ago?
- Explain what fossils are and then say, "I'm going to let each of you help find dinosaur fossils."
- Assign students to groups of two to four. Distribute one paper plate, one chocolate chip cookie, and one toothpick to each group. Hang up a chart that says the following:

Each fossil:	EARN \$25
Broken fossil:	PAY \$15
Tool rental (the toothpick):	PAY \$5
Damage to the ground:	PAY \$10

- Tell students that they are going to try to remove the dinosaur fossils (chocolate chips) from the ground (the cookie) without breaking the fossil or the ground. Give students about 20 minutes to complete this activity.
- At the end of the lesson, tally each group's achievements; add up the profits and subtract the payments. Teacher's suggestion: Tally the finished "fossil digs" on the board or on an overhead projector so that everyone can see the results.
- •

#### \*\*Naming Dinosaurs

- Begin with: "How are dinosaurs named?" Write students' answers on a chart.
- Explain that a dinosaur is named in one of four ways:

1. where the dinosaur fossil was found: for example, *Edmontosaurus, Albertosaurus,* a city and a province of Canada;

- 2. after a famous scientist: for example Lambeosaurus, Lawrence Lambe;
- 3. by the way the animal acted: for example *Tyrannosaurus rex*, "terrible lizard king";

4. how the animal looked: for example *Stegosaurus*, "plated lizard," *Triceratops*, "three horns on face."

- Display the word part cards with the meanings. Move the cards around to create different dinosaur names (for example, change *Triceratops* to *Microceratops*, "small-horned face").
- Distribute writing paper, and tell students to copy word parts to create new dinosaur names. For example, if students copy *tri-* ("three"), *donto-* ("teeth"), *-saurus* ("lizard"), the new word would be *tridontosaurus* ("three-toothed lizard"). Here are a few word parts and their meanings to help you get started:

bi	two
cephalo	head
derm	skin
korythos	helmet
ops	face
saurus	lizard
tetra	four
trachy	rough

• Have students draw pictures of the dinosaurs they create. Tell students to make sure the drawings match the names. Teacher's suggestion: In naming the dinosaurs and "designing" a new dinosaur, I would put the cards in a pocket chart so that everyone could see them. Then I would have a few students come up and manipulate the cards (pick up the cards and move them around) to create a new dinosaur name.

#### Adopt-A-Dinosaur

Name				
		means		
Pronunci	ation:			
Name				
Amazing	, Facts			
1.				
2.				
3.				
Dinosau	Size:			
Foods:				
Circle:	Carnivore	Herbivore	Omnivore	
Location				
Time Per	riod:			
Discover	red or Named by			
		in		
Family :				

#### **DINO-MITE WEB QUEST**

Part 1 - Research it!

Before assigning topics, your group needs to identify specific dinosaurs in your

assigned family to guide your research. Each group member will be responsible for

researching and presenting one of the required topics.

Topic #1: General Description

Assigned to \_\_\_\_\_

Your assignment is to develop an overview of your dinosaur family. Your research should

identify the features used to classify dinosaurs in your family, such as body structure,

locomotion, etc. You should also provide information related to the time periods during

which the dinosaurs in your family ruled the earth.

Topic #2: Foods

Assigned to \_\_\_\_\_

Your assignment is to identify the foods each dinosaur in your family eats and indicate whether the dinosaurs were herbivores, carnivore, or omnivores. Be sure to provide any "proof" scientists use to determine the information you present, such as tooth structure or analysis of fossil remains.

Topic #3: Sizes

Assigned to \_\_\_\_\_

Your assignment is to research the various sizes of the dinosaurs in your family. Take the information you collect and classify it in some type of order. For example, list the dinosaurs that are large, medium, and small. Which dinosaur in your family was the largest? Which was the smallest?

Topic #4: Survival Mechanisms

Assigned to

Your assignment is to identify the how the dinosaurs in your family defended themselves against threats in their environments. Keep a journal and classify this information in some type of order. For example, does it use its tail or its claws? Were there other means for ensuring survival?

Each group member is required to keep a research journal that shows the progress of their research, the information discovered, and important resources. The research journal will be graded!



# PALEONTOLOGIST

\_\_\_\_\_

### Process:

You and a group of friends are digging on the playground when one of you notices a rock that resembles a tooth. You begin to dig a little further and find another mysterious looking rock. Maybe they are fossils! Everyone is excited about the discovery but isn't sure what to do next. So, of course, you run to tell your teacher, Ms. Inquisitive.

http://www.fossilsforkids.com/Page2.html or this site: http://www.enchantedlearning.com/subjects/dinosaurs/dinofossils/index. html

\*What are fossils and what do they look like?

\*How are fossils formed?

#### \*How can the age of a fossil be found?

More information:

http://www.ucmp.berkeley.edu/education/explorations/tours/fossil/5to8/I ntro.html He -

# ARCHAEOLOGIST

http://www.amnh.org/explore/ology/paleontology

#### more information:

http://idahoptv.org/dialogue4kids/archive/agespast.cfm

\*How should we go about digging more without harming any other treasures we may find?

\*What can we learn from a fossil about the past?

## Paleontology Career Letter (Persuasive Writing)

After reading and researching about Paleontology would you or would you not like to be a paleontologist? Why or why not?

Step 1- Decision: Yes or no

Step 2- Write three important facts(from your notes) about why or why not this would be a great career for you and your friend.

1:

2:

Step 4- What do you think is the MOST interesting fact(from your notes) about this field.

Step 5- Which fact about this field bothers you the most and why?

Step 6- Now that you have planned it out write a letter that is five paragraphs long or longer to your best friend/family member. In your letter, tell whether you are interested in this career or not. Include details and facts that support your decision. In the last paragraph, summarize your main points.

# WEBSITES

#### If The Dinosaurs Came Back by Bernard Most(packet)

http://www.enchantedlearning.com/subjects/dinosaurs/index.html

#### If The Dinosaurs Came Back(the book page by page for SMART Board/projector)....free!

http://fms01.sd54.k12.il.us/treasures/pdf/kindergarten/K\_TB\_9\_If\_the\_Dinosaurs\_Came\_Back.p df

#### "Boy Were We Wrong About Dinosaurs" by K. Kudlinski

https://commoncore.org/maps/documents/03.06.RL.Wrong\_About\_Dinosaurs\_FINAL.pdf

http://teacher.scholastic.com/activities/dinosaurs/

http://ethemes.missouri.edu/themes/345

#### context clues:

http://www.flocabulary.com/context-clues/

http://www.pinterest.com/hewittl/context-clues/

#### The Enormous Egg Teacher Packet:

http://www.splashpublications.com/files/enormousegg.pdf

#### **Inferences Activities:**

http://files.havefunteaching.com/fun-activities/reading-activities/inferences-activity.pdf

#### **Brainpop-inferences:**

http://www.brainpop.com/educators/community/bp-jr-topic/make-inferences/

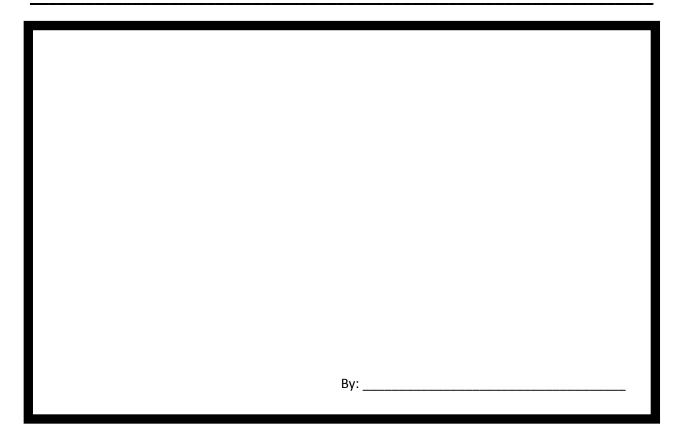
#### Great free dinosaur idea packet!

http://www.carlscorner.us.com/dinosaurs/digging%20up%20dinosaurs%20unit.pdf

|--|

Complete the sentence then illustrate it in the box.

If the dinosaurs came back,



#### **Possible Materials to Purchase:**

#### The Enormous Egg - Oliver Butterworth; Paperback 6.30 (Amazon)

**Enormous Egg: Novel-Ties Study Guide** - Oliver Butterworth (Amazon) \$15.26

# **Dinosaur Hunters (Step into Reading) Paperback 3.99 (Scholastic Books)**

Oriental Trading:

Personalized Yellow Construction Hats. A Dozen for \$5.99

Small Dinosaur Dig Kits 6 kits for 19.00 IN-59/1064

Dinosaur Eggs IN-39/975 22 pieces 12.00

http://www.educationalinsights.com

5136 GeoSafari® Classroom Dinosaur Dig Now: \$69.99

#### Various Dinosaur books:

"Boy, Were We Wrong about Dinosaurs" by K. Kudlinksi "Did Dinosaur Drink This Water?" by R. Wells "If Dinosaurs Came Back" by B. Most "Born to Be Giants" by L. Judge



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Project funds are to be spent within the current school year or an extension may be requested. An expense report with receipts is required by June 15th.

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#### For more information, contact:

Edwina Lau, Program Director 305.558.4544, ext. 113 elau@educationfund.org



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