

Slide 1




- Welcome!
- Introductions
- Name an object that is important to you (small groups).

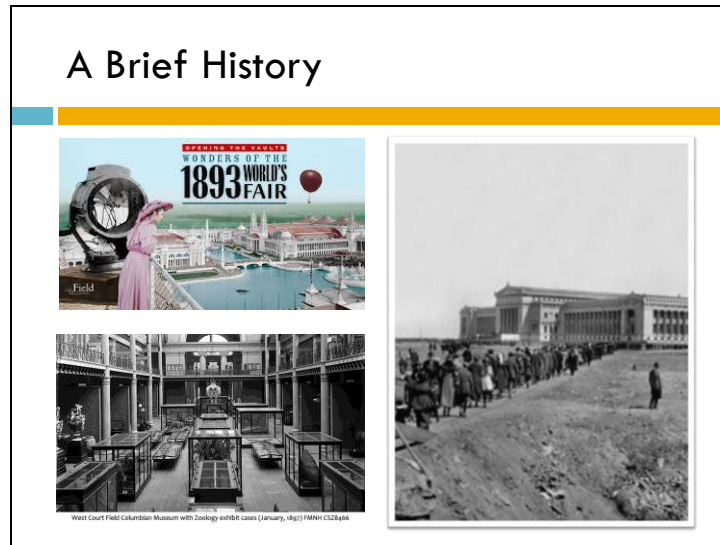
Agenda

The Field
Museum

- Introduction to The Field Museum
- Object-based Learning
- Working with Museum Collections

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- *Click the image for Brain Scoop's "Welcome to The Field Museum" online video (2 min 59 sec)
- Founded: 1893 - from the collections of the World's Columbian Exposition
- Named after: Marshall Field – the Museum's first major benefactor
- Current building: Opened in 1921 – designed by Daniel Burnham



- *Click on picture for link to “Imaging The Field” online video (3 min)
- More than a museum, The Field is a world-renowned research institution
- The Museum’s collection is comprised of over 25 million items, all housed in this building
- Less than 1% of the collections are on display
- Carl Akeley- Father of Modern Taxidermy (TFM 1896-1909)
- African Elephants (1905)
- Four Seasons (

N. W. Harris Learning Collection




- A lending library of artifacts and specimens
- Established in 1911
- 400+ Exhibit Cases
- 60 Experience Boxes



What is Object-based Learning?

The consequent learning and meaning-making that develops from interacting with an object -
Based on the Contextual Model of Learning (Falk & Dierking, 2000)



- What is an object? (Anything, found or man made.)
- Definition- Constructivist theory of learning in action. Meaning is made from the intersection of our experiences and our ideas.
- When we interact with an object we are using our prior knowledge and the new knowledge we're gathering from observing that object to make sense of what we're seeing.
- We then use our new knowledge to make a claim about what the object is, or if we already know, to learn as much as we can about it. This can include its purpose, place in time and origin.
- Studying objects is so successful because it's participatory, hands-on, and it's always engaging. Even the simplest objects have the power to fascinate us. (Paperweight example.)

“Our earliest learning experiences involve objects. We see, hear, touch, taste, and smell things, and we use this sensory information to formulate our understanding of the world. But within a short time, development of language abilities—speech, reading, and writing—begins to take precedence. Probably for most people, development of their perceptual abilities to learn directly from objects rarely achieved the sophistication of their verbal skills.

Some people however, are naturally more adept at learning from objects, as teachers who bring students to the museum are well aware. Often children who are “slow learners” in the classroom display hidden talents in museum learning situations. They gain a new confidence in themselves as result, and often take this self-confidence back into the classroom. Teachers in turn, become re-inspired as they see new talents emerge in their students.

Almost all of us enjoy learning directly from objects. We like to experience things for ourselves. We like to look at them, handle or explore them with our senses, and come up with our own ideas about them. The process of learning from objects is exciting and fun because it is participatory, and because it can take us in so many directions. Even the simplest of objects has the power to engage us.”

Objects: Identifying vs. Reading	
Identifying Objects	Reading Objects
<ul style="list-style-type: none">➤ Early language development emphasizes the importance of naming and identifying objects.➤ Once an object has been identified, it is time to teach the child to name something else.	<ul style="list-style-type: none">➤ Just like reading text, reading an object is a skill set that needs careful scaffolding.➤ Reading an object requires careful examination and access to prior knowledge.


1. What is the difference between reading an object and identifying it?
2. Identifying an object is naming it. Reading an object is looking critically at it to determine its origins, purpose or place in a particular time period.
3. Reading an object requires using your senses to note what the physical characteristics are and then making connections between that item and the larger world around us.
4. For example: When working with young learners, you begin by discussing the traits of an object (look, feel, smell, sound) and then move on to making inferences about it. Where did it come from or how was it used?
5. Learning to read an object is a process, just like learning to read text. It builds on lower level thinking skills (such as color, shape and texture) to higher level thinking skills (making connections and predictions), until the reader is able to make meaning.
6. When that meaning making becomes automatic, then the learner has accomplished this skills (goal). (Just like reading a book, we automatically make meaning from it, don't need to sound out each letter).

Benefits of “Reading” Objects

“At the centre of all our programs... is a belief in the tremendous power of objects to educate. In fact, we think it is as important for people to learn to use objects as a means of discovering things about themselves and their world as it is for them to learn to use words and numbers.” – Nova Scotia Museum

What objects offer that other mediums do not:

- > Language differentiation
- > Knowledge level differentiation
- > Learning style differentiation



Why should we incorporate reading objects and working with objects into our classrooms?

- Take advantage of natural curiosity that every student possesses.
- Makes all learning hands on.
- Promotes the cycle of inquiry.
- Gets students problem solving and thinking critically.
- Participatory.
- Engaging- learning develops from a genuine “need to know”.
- Students take responsibility for their own learning.

Take away from quote:

- Using objects to learn and teach makes the connection between what we do in school and what we do in real life obvious and meaningful.
- It fills in the gap between the abstract nature of traditional learning and real world activities (like visiting a museum or other informal learning institution.)

Differentiation:

- Students work within their own parameters and at their own pace.
- Lessons & activities can be as challenging or provide as much scaffolding as necessary for individual learners.
- Relies heavily on student knowledge and experiences. When students examine an item they don’t recognize, their thoughts automatically try to connect that item to something in their prior experience to make sense of it.

Top 5 Reasons OBL Works

- Takes advantage of students' natural curiosity.
- Makes all learning hands-on.
- Participatory in nature.
- Promotes the cycle of inquiry.
- Develops critical thinking and problem-solving.




Learning from Objects

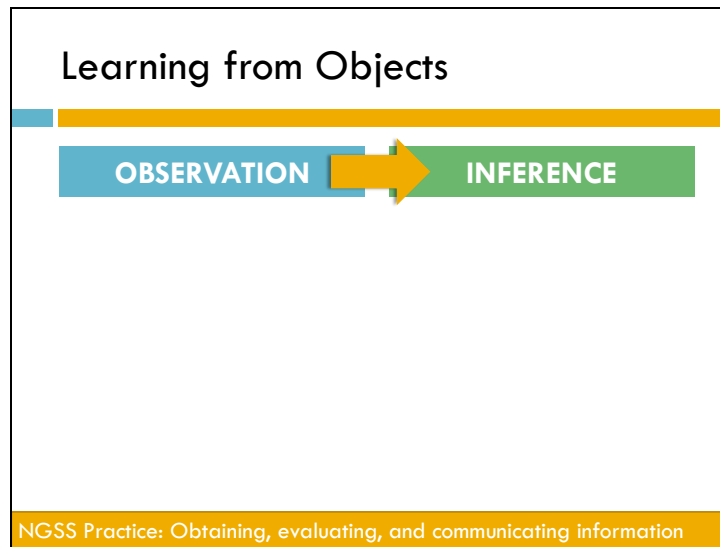
Practice Reading a common object

What do you notice about the object?
What does the object...

- Look like?*
- Feel like?*
- Sound like?*
- Smell like?*




- Work in groups to “read” the cup.
- These are some sample questions to think about when working with objects for the first time or when trying to familiarize students with this process. Bloom’s taxonomy is a great place to start when working with objects.
- As adults our brains are automatically going to jump to that higher level questioning and reasoning, but if you can, just try to make as many observations as possible about the cup.
- Small group discussion. (3-5 min.)
- Share out observations.
- Keep inferences separate if you can. See where discussion leads.



- Charts are excellent ways to keep track of data while working with objects.
- They make the exercise clear and they document evidence so you can return to and enhance your work.
- There is a copy of this chart in your folder.*

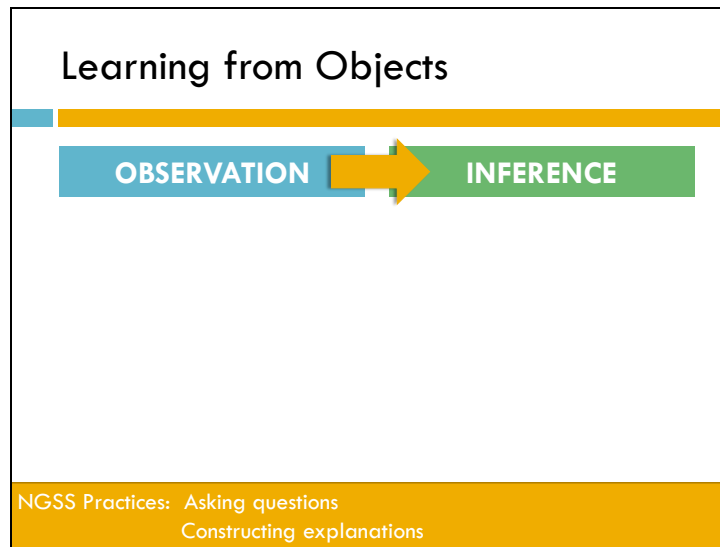
And Now for a Little Practice...



"Reading" an Object Investigation

- What information can you find out simply by "reading" the object?
- What questions might require further research?
- What "big ideas" can the object address?

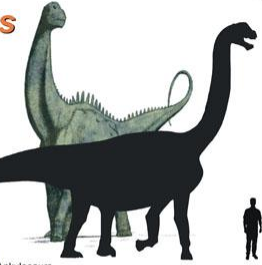
1. Use the handout, "Reading an Object: Investigation Sheet" in your folder to take notes.*
Contains space for answering all of these questions.



- What are your observations about your unknown object?
- What connections can you make to your own experience and knowledge that will help you to read this object?
- What inferences can you make based on the data and evidence of your investigation?
- Charts are excellent ways to keep track of data while working with objects.
- They make the exercise clear and they document evidence so you can return to and enhance your work.
- A copy of this chart is in your folder.*

Camarasaurus lentus
Kam-are-ah-saw-rus len-tus
"Chambered Lizard, Slow"

Weight: 18 tonnes
Height: 3.2 m at hips
Length: 18.3 m



Dinosauria
Ornithischia
Ceratopsians, Hadrosaurs, Ankylosaurs
Saurischia
Theropoda
Allosaurs, Tyrannosaurs, Raptors
Sauropodomorpha
Prosauropoda
Platysaurus, Rejsaurus
Sauropoda
Diplodocimorpha
Amargasaurus & Diplodocus
Macronaria
Brachiosaurus, Camarasaurus & Argentinosaurus

Time Period: **Late Jurassic**
160 - 141 million years ago

Location: North America

Described: Othniel C. Marsh, 1889

Your object is a *Camarasaurus* tooth!

Enhance Learning with Collections

From a Single Object, Students will...	From a Collection, Students will...
<ul style="list-style-type: none">> Practice observation skills.> Make inferences about an object's structure and function.> Collect and record data.> Make connections to an object's place in the "big picture".> Communicate their ideas.> Collaborate with peers.	<ul style="list-style-type: none">> Compare and contrast features and find patterns among different objects.> Sort and categorize objects in ways that are personally meaningful.> Develop investigable questions.

- Show the starfish and shell to the group.
- Ask them to come up with ways that these items are related.
- Add the butterfly to the group.
- Ask if they're perceptions have changed.
- Ask them to name the collection.
- These are just some of the things that students can learn through a single item or through a collection. The list is not exhaustive.
- Learning from one artifact lends itself to focused thinking. It's a good idea to start with this when working with objects for the first time.
- Learning from a collection really expands thinking and allows students to see how things that don't seem related actually are. That's what science is all about- discovering, analyzing and understanding all the ways in which elements of our world are interconnected.

Practice Making A Collection

First	Then
<ul style="list-style-type: none">➤ Organize the objects at your table into groups that tell a story.➤ Try reorganizing the objects into different groups at least once.➤ Choose one collection that contains at least three objects to share with the larger group.	<ul style="list-style-type: none">➤ Make observations about the other groups' collections.➤ Write a title for each of the other groups' collections on a post-it note and place it on their table.➤ Think out of the box!

NGSS Practice: Analyzing and interpreting data

- Work with your group to make a collection of items.
- Use items from your table and from other tables as well. Each table has different objects.
- Your collection needs at least 3 items.
- Gallery Walk
- Share titles on post-it notes.
- Come back to your table.

Collections Debrief

- Discuss the following questions with your original table group:
 - Can you form any groups of similar titles from those that others shared with you?
 - Are you surprised by any of the collection titles others' shared with you?
 - What might certain titles tell you about others' observations of your collection?



Creating a Mini Exhibition

First	Next
<ul style="list-style-type: none">□ In groups of two or three, select three objects to make a collection.□ Think about the story your collection might tell.	<ul style="list-style-type: none">□ Title your collection.□ Write a brief introduction that summarizes the story or theme for your collection.□ Write a label for each of the objects in your collection that describes the object and how it relates to the theme.

1. Objects and collections tell a story.
2. Create collection.
3. Mini Museum Visit
4. What skills did you have to use to complete this short activity?

Getting Started With Objects

➤ **Prepare for Learning**

- Gathering Collections
- Creating a Space for Collaboration

➤ **Connect to Standards**

- ELA Anchor Standards for Speaking and Listening
& ELA Anchor Standards for Language
- NGSS Science and Engineering Practices

➤ **Plan the Lesson**

- Essential and Guiding Questions
- Assessment



Three, Two, One

- Write down three things you learned, two questions you have, and one new idea you're excited to try.
- Be prepared to share with your table!



Resources

- Alvarado, A. & Herr, D. (2003). *Inquiry-Based Learning Using Everyday Objects: Hands-on Instructional Strategies that Promote Active Learning*. Newbury Park, CA: Corwin.
- Falk, J. H. & Dierking, L. D. (2000). *Visitor Experiences and the Making of Meaning*. Lanham, MD: Altamira.
- Shuh, J. (1982). Teaching Yourself to Teach with Objects. *Journal of Education*, 7, 1-9.
- Common Core State Standards, corestandards.org
- Next Generation Science Standards, nextgen.org



Thank you for visiting The Field Museum!

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