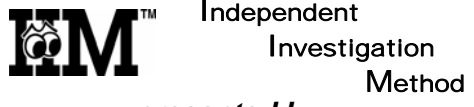



1
**Students Are Never Too Young
To Be Researchers**



presented by
Cindy Nottage



2
AGENDA

- **Why research?**
- **Introduction to IIM**
(The IIM Research Model)
- **Group Basic**
 Step by step through a model unit
- **Questions & Answers**

3
RESEARCH



Do a
“**Think**, **Pair**, **Share**” about
**“THE REASONS YOU WOULD TEACH
YOUNG CHILDREN TO DO RESEARCH”.**

- “**Think**” (1 minute) on your own
- “**Pair**” (2 minutes) with your neighbor
- “**Share**” with the whole group

**WHY TEACH YOUNG CHILDREN⁴
TO DO RESEARCH?**

PLAGIARISM

**CONTENT AREA READING
SCHOOL INITIATIVES**

DIFFERENTIATION

STATE STANDARDS



**Just a Few Skills Used
in Research**

5

Identifying prior knowledge

Finding appropriate resources

Asking good questions

Reading in content areas

Evaluating validity of resources

Time management

Using effective presentation skills Writing skills

Paraphrasing, summarizing Documenting

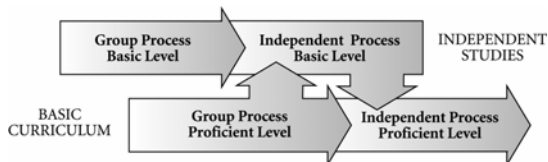


A K-12 RESEARCH MODEL FOR ALL ABILITY STUDENTS

6



**Independent Investigation Method:
The Model**



IEM :Independent Investigation Method ⁷

A PROVEN MODEL

Standards-based

For all ability students

Meets different learning styles

Teaches authentic life-long skills

Works with all basic subject areas

Connects with other teaching initiatives

Gets kids excited about learning



Topic – Laying the Groundwork ⁸

Teaching research goes more smoothly by planning ahead, designing key questions that frame the study, and introducing the research process vocabulary and steps to students.

TEKS Language Arts

The student generates questions and conducts research using information from various sources.

TEACHER PREP WORK AT STEP 1- TOPIC



Independent Investigation Method ⁹



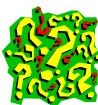
Follow These Footsteps to Success in a Research Project



ESSENTIAL QUESTIONS

UNIT: Paleontology

CLASS TOPIC: Hadrosaurs



ESSENTIAL QUESTION (Upper level):

What gives your dinosaur nightmares?

ESSENTIAL QUESTIONS (Lower level):

1. What was your dinosaur's habitat?
2. Why was your dinosaur able to survive in its habitat?
3. Describe the life cycle of your dinosaur.

YOUR GROUP **EM** UNIT

What you need to know to get started:

- UNIT _____
- CLASS TOPIC _____
- ESSENTIAL QUESTION(S) _____

At the end of the unit, what are the essential understandings each student should have?

1. Check state standards
2. Look at your curriculum guide
3. Other ideas?



Topic

13

Researchers record information they already know (facts) and things they want to learn (questions) about a topic they have chosen or been assigned.

TEKS Social Studies Skills

The student uses problem-solving and decision-making skills, working independently and with others, in a variety of settings.

STUDENT WORK AT STEP 1 – TOPIC



INTEREST CENTER

14

CLASS UNIT: PALEONTOLOGY
CLASS TOPIC: HADROSAURS



The contents of your interest center could include:

- Books – Non-fiction, fiction, picture, reference
- Primary documents
- Visuals – Posters, maps, charts, photographs, diagrams, graphs
- Artifacts
- Video and audio tapes
- Puzzles and games



Manual p.15



Steps 1-3 Topic – Research

15



OUR HADROSAUR GLOSSARY



<u>Paleontology</u>	<u>The study of ancient plants and animals</u>
<u>Hadrosaurs</u>	<u>A group of dinosaurs with beaks like a duck</u>
<u>Fossil</u>	<u>Remains of ancient plants and animals found in rocks</u>
<u>Herbivores</u>	<u>Animals that eat plants</u>



Goal setting

16

Researchers set goals by developing questions to guide their study. Other goals might include a time management plan, types of resources, and amount of information and key vocabulary words to be gathered.

TEKS English Language Arts and Reading

The student forms and revises questions for investigations, including questions from reading, assignments, and units of study.



Goal Setting



17



SETTING RESEARCH GOALS

Our Notefact Goal: 25

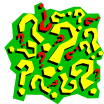
Glossary Entries: 10

Number of Resources: 3

Resource Types: Listening to a Book
Video
Book Passage

Teacher (Essential) Questions:

1. What was your dinosaur's habitat?
2. Why was your dinosaur able to survive in its habitat?
3. Describe the life cycle of your dinosaur.



STUDENT QUESTIONS

18

1. IN YOUR GROUP, WRITE A LIST OF QUESTIONS YOU WANT TO KNOW ABOUT HADROSAURS – AS MANY AS YOU CAN.
2. READ THEM OVER CAREFULLY, AND CHOOSE YOUR 2 FAVORITES
3. WRITE THEM ON SENTENCE STRIPS
4. READ THEM TO THE GROUP, AND TAPE THEM ON THE CHART.

Researchers use a variety of resources and strategies so they can gather and record information, focusing on goals set in Step 2.

TEKS English Language Arts and Reading

The student:

- reads widely for different purposes
- acquires an extensive vocabulary
- represents text information in different ways
- listens actively and purposefully

Just say ~~NO~~ to Plagiarism!



A Plagiarist is

- Uninformed
- Careless
- Lazy
- Dishonest

Don't be a COPY CAT!



Taking Group Notefacts

- Choose resources that you can use with the whole class – *Read to them, watch a video, etc.*
- Prepare charts for each source with a “Notefacts Heading” (*Manual p.25*) at the top of each
- Use one resource at a time and assign each one a source #.
- Write appropriate bibliographic heading on chart for each source (*Manual pp. 90-91*) and put source # in large magnifying glass.
- Record notefacts from each source on charts, putting source number next to each notefact.



HORNED AND CRESTED DINOSAURS 22

Some dinosaurs had strange crests of bone on their heads.

These belonged to a group called the hadrosaurs. The crest probably worked as a very sensitive nose which helped the hadrosaurs smell enemies from far away.

Another group of dinosaurs had horns on their heads and bony shields around their necks. These were the ceratopsians

Hadrosaurs and ceratopsians were plant-eating dinosaurs.

They probably developed their special heads to protect them from the carnivores.

Hadrosaurs had rows of hundreds of small, sharp teeth in their jaws. They ate tough pine needles, and when their teeth wore down, new ones grew to replace them.

McCord, Anne. The Children's Picture Prehistory DINOSAURS. London: Usborne Publishing, Ltd., 2005. (pp. 22-23)



Manual pp. 52 & 55

STEP 3 Research

Notefacts 23



Source #

3

McCord, Anne. The Children's Picture Prehistory DINOSAURS. London: Usborne Publishing, Ltd., 2005. (pp. 22 & 23)



.....



.....



.....



STEP 4

Organizing 24


24

Researchers organize their data to allow them to analyze and interpret findings for use in a paper or project.


TEKS Social Studies Skills

The student applies critical-thinking skills to organize and use information acquired from a variety of sources including technology.


Manual p.34

STEP 4 **Steps to Group Organizing**  25


- Think about categories as you read all notefacts together.
- List possible categories on chart paper
- Make final category choices and identify by color.
- Cut notefacts into strips; model with 1 or 2 notefacts.
- Give a notefact to each pair of students.
- Pairs choose category and explain choice to class.
- They color and glue notefacts to category sheets.




Category 1
(BLUE)




Category 2
(GREEN)




Category 3
(RED)




Category 4
(BROWN)


STEP 4 **Our HADROSAUR Categories**  26




BLUE – PHYSICAL DESCRIPTION




GREEN – SURVIVAL



BROWN – HABITAT



RED – LIFE CYCLE



ORANGE – BEHAVIORS

STEP 5 **Goal Evaluation** 27

Researchers check to see if they've fulfilled the assignment requirements and evaluate the quality of their work during the first four steps.

TEKS English Language Arts and Reading

The student:

- uses writing as a tool for learning and research
- evaluates his/her own research and raises new questions for further investigations.



Checklist

- ✓ Gathered enough notefacts and glossary words?
- ✓ Answered our goal-setting questions?
- ✓ Used the correct number and types of resources?





GLOSSARY CHECK My Words at Work

Name: Karen

Topic: Hadrosaurs

Write 3 words that are important to your study of Hadrosaurs.

1. Fossils 2. Crest 3. Paleontologist

Now write 1 sentence using each word to show you understand its meaning. Don't use just the definition.

1. While digging in their backyard, some lucky children found fossils of dinosaur teeth.
2. At the top of his head, the Hadrosaur had a funny-looking crest that made him look like he was wearing a hat.
3. The paleontologist was excited to share the fossils of a new dinosaur he discovered while on a dig in Wyoming.

Product

Researchers write papers and create projects to show what they have learned.

TEKS Social Studies Skills

The student communicates in written, oral, and visual forms.

TEKS English Language Arts and Reading

The student produces visual images, messages, and meanings that communicate with others.



WRITTEN PRODUCTS

Book (ABC, biography, diary, fact, fantasy, flip book, journal, picture book, recipes, science fiction, shape book)

Advertiser*

Dictionary

Letter

News article

Riddle

Travel log



Brochure

Fact cards

Magazine

Poetry

Song



Presentation

Researchers present their findings to an appropriate audience.

TEKS English Language Arts and Reading

The student speak clearly and appropriately to different audiences for different purposes and occasions.

What are the different ways your students can present the results of their group study?



Teach a lesson



Do a dramatic presentation



Use technology



Active Learning Systems is an educational publishing and consulting company. In 1985, Cindy Nottage and Virginia Morse developed the Independent Investigation Method (IIM), a research process for students in grades K-12, for use in their own classes. In 1992, to meet the demand for training in the model, they founded Active Learning Systems. The company now publishes and sells a variety of IIM materials and provides training for educators internationally. For a complete listing of their materials and training options, visit their website.

www.iimresearch.com

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- Franklin Watts, Inc. – www.scholasticlibrary.com
- Heinemann – www.heinemannlibrary.com
- Jackdaw Publications – www.jackdaws.com
- Maupin House – www.maupinhouse.com
- Newbridge (Discovery Links) – www.newbridgeonline.com
- Pieces of Learning – www.piecesoflearning.com
- Prufrock Press – www.prufrock.com
- Rourke Publishing – www.rourkepublishing.com
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(Be sure to use your 10% off code "TAGT" when ordering from the office)

We love to hear from you – problems, successes, just to chat.
