

“Discovering Dinosaurs” Jackie Thomas



For further information contact

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2005-2006 IDEA CATALOG OF EXCELLENCE

PROGRAM OVERVIEW

Discovering Dinosaurs is an in-depth four-week unit created for regular education first grade children of average ability, but can easily be adapted to any grade-level by increasing the difficulty level and the quantity of the writing and technology requirement. This unit covers the way of life of the three periods of the dinosaurs: Triassic, Jurassic, and Crustaceous. The purpose of this unit is to expose the children to what life was like in prehistoric times. This unit also incorporates the use of the Super 3 Process to help the students properly incorporate the use of technology in the research of one of the aforementioned time periods.

In this unit, children will investigate the commonalities and diversity of the three Dinosaur Time Periods. Each time period will be discussed in regard to their location, climate, and specific dinosaurs and plants along with their distinctives. There will also be a discussion on paleontology, fossils, and extinction and how that information affects us today. A field trip to Dinosaur World in Plant City will be included as well to provide a hands-on approach and to give students a real-time experience of dinosaur life. Through the reading of a variety of Dinosaur trade books and other online resources, the students will work in four small groups to complete research and a brochure (using Publisher) discussing

the above stated topics. Students will also create a Dinosaur Diorama on their favorite time period using the research found on the internet and through the reading of the different trade books.

The impact this unit will create on increasing technology and academic literacy for the students is that it will allow the students to become immersed in the topic. They will not just be listening to me give them information about a topic, but they will be thoroughly involved in locating and using the information to create the required culminating projects for the unit. The use of technology increases student interest and involvement and thereby creates a greater internalization of the material.

OVERALL VALUE – ISTE/NETS OBJECTIVES

TEACHER: If applicable to plan.

- I. Technology Operations and Concepts
 - A. Teachers demonstrate introductory knowledge, skills, and understanding of concepts related to technology.
 - B. Teachers demonstrate continual growth in technology knowledge and skills to stay abreast of current and emerging technologies.

- II. Planning and Designing Learning Environments and Experiences
 - A. Teachers design developmentally appropriate learning opportunities that apply technology-enhanced instructional strategies to support the diverse needs of learners.
 - C. Teachers identify and locate technology resources and evaluate them for accuracy and suitability.
 - D. Teachers plan for the management of technology resources within the context of learning activities.
 - E. Teachers plan strategies to manage student learning in a technology-enhanced environment.
- III. Teaching, Learning, And The Curriculum
 - A. Teachers facilitate technology-enhanced experiences that address content standards and student technology standards.
 - B. Teachers use technology to support learner-centered strategies that address the diverse needs of students.
 - C. Teachers apply technology to develop students' higher order skills and creativity.

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D. Teachers manage student learning activities in a technology-enhanced environment.

IV. Assessment And Evaluation

A. Teachers apply technology in assessing student learning of subject matter using a variety of assessment techniques.

B. Teachers use technology resources to collect and analyze data, interpret results, and communicate findings to improve instructional practice and maximize student learning.

C. Teachers apply multiple methods of evaluation to determine students' appropriate use of technology resources for learning, communication, and productivity.

V. Productivity And Professional Practice

C. Teachers apply technology to increase productivity.

D. Teachers use technology to communicate and collaborate with peers, parents, and the larger community in order to nurture student learning.

VI. Social, Ethical, Legal, And Human Issues

A. Teachers model and teach legal and ethical practice related to technology use.

B. Teachers apply technology resources to enable and empower learners with diverse backgrounds, characteristics, and abilities.

C. Teachers identify and use technology resources that affirm diversity

D. Teachers promote safe and healthy use of technology resources.

E. Teachers facilitate equitable access to technology resources for all students.

STUDENT:

1. Basic Operations and Concepts
 - * Students demonstrate a sound understanding of the nature and operation of technology systems.
2. Social, Ethical, and Human Issues
 - * Students practice responsible use of technology systems, information, and software.
 - * Students develop positive attitudes toward technology uses that support lifelong learning.
3. Technology Productivity Tools
 - * Students use technology tools to enhance learning.
 - * Students use productivity tools to collaborate in constructing technology-enhanced models and produce other creative works.
4. Technology Communication Tools
 - * Students use a variety of media and formats to communicate information and ideas effectively to multiple audiences.
5. Technology Research Tools
 - * Students use technology to locate, evaluate, and collect information from a variety of sources.
 - * Students use technology tools to process data and report results.

SUBJECTS COVERED

Cross Curricular

GRADES

First

MATERIALS

- * Computers, projector
- * Printer
- * Sufficient supply of ink and paper
- * Microsoft Office Software that includes Word, Excel, Publisher, and PowerPoint
- * Internet access
- * Science Journals
- * Diorama Rubric
- * Brochure Planning Sheet
- * Brochure Rubric
- * Student Research Check Sheet
- * United States Map
- * Shoe Boxes
- * Modeling Clay (variety of colors) for creating dioramas and fossils
- * Plastic dinosaurs and plants for diorama
- * Twigs, leaves, boiled clean chicken bones for creating fossils
- * Pencils & Crayons
- * Markers
- * Drawing Paper
- * Diskettes
- * Chart paper
- * Scavenger hunt questions for field trip to Dinosaur World in Plant City found at www.dinoworld.net

RESOURCES

- * In the Time of Dinosaurs by W. Wise
- * Dinosaur Babies by L. Penner
- * Dinosaur Bones by Alike
- * The Day of the Dinosaur by Stan and Jan Berenstain
- * Magic School Bus: In the Time of the Dinosaurs by J. Cole
- * Variety of dinosaur trade-books
- * Encarta Online
- * Grolier Online; Sunlink
- * www.enchantedlearning.com

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- * www.dinoworld.net
- * www.ciconline.com
- * www.mnh.si.edu/highlight/triceratops/
- * www.nmnh.si.edu/paleo/dino/alpha.htm
- * www.ucmp.berkeley.edu/
- * www.fieldmuseum.org/sue/index.html
- * www.nationalgeographic.com/dinorama/
- * www.marcopolo-education.org/
- * <http://teacher.scholastic.com/activities/dinosaurs/>
- * www.studyworksonline.com/cda/content/explorations/0,,NAV2-75_SEP1548,00.shtml
- * <http://olc.spsd.sk.ca/DE/webquests/dino/dinowq.htm#Introduction>

SUNSHINE STATE STANDARDS

SOCIAL STUDIES

- SSA 111 - The student compares everyday life of different places and times and that places and things change over time.
- SSB 111 - The student determines relative location of places.
- SSB 112 - The student uses simple maps and globes.
- SSB 114 - The student knows areas can be classified as regions.
- SSB 211 - The student knows physical and human characteristics of places.
- SSB 212 - The student knows how different places and communities have changed physically and demographically.

SCIENCE

- SCF 111 - The student describes the basic needs of all living things.
- SCF 114 - The student understands structures of living things are

adapted to their function in specific environments.

SCF 115 - The student compares and describes the structural characteristics of plants and animals.

SCF 211 - The student knows that plants and animals are similar but not identical to their parents.

SCF 212 - The student knows that there are many different kinds of living things that live in a variety of environments.

SCG 112 - The student know that plants and animals are dependent upon each other for survival.

SCG 113 - The student knows some characteristics of different environments and some plants and animals found there.

SCG 211 - The student knows that if living things do not get food, water, shelter, and space, they will die.

READING

LAA 111 - Student predicts what a passage will be about based on its title and illustration.

LAA 213 - Student reads for information.

LAA 215 - Student uses materials for reference

LAC 111 - Listening

WRITING

LAB 111 - Uses a graphic organizer and makes a plan

LAB 112 - Creates sentences with details

LAB 213 - Uses basic computer skills to express thought

ACCOMMODATIONS

ESE STUDENTS

* ESE students will be working with peer buddies and teacher direction to complete the project.

* Follow any IEP modifications

ESOL STRATEGIES

Overall

1. Provides warm nurturing environment.
2. Seat student close to the front.
3. Establish a daily routine.
7. Arrange small discussion and talking activities.
10. Keep directions short and simple.
11. Assign buddies and peer tutors.

Language Arts

1. Utilize oral techniques.
2. Utilize TPR teaching strategy.
4. Speak clearly and simplify vocabulary.
6. Limit correction of pronunciation, structure, or vocabulary errors.
7. Share big books.
11. Use props to introduce vocabulary.
15. Provide individual and group activities.

Social Studies

4. Utilize graphic organizers.
5. Modify lesson objective according to the language level of the LEP student.
7. Utilize audiovisual materials which support a multi-sensory approach.

Computer Literacy

1. Teach through modeling.
2. Assign work in groups with native speakers in English.
4. Select appropriate software.

DIRECTIONS/PROCEDURE

Unit Questions and Objectives

Essential Question: How does long ago discoveries affect us today?

Unit Questions:

What was life like during the time of the dinosaurs?

How did when and where the dinosaurs live, affect the way they lived?

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Objectives:

Students will learn what the world was like when dinosaurs were alive.

Students will understand that other types animals were also alive during the time of the dinosaurs.

Students will be able to identify and match a minimum of three different dinosaurs and/or other prehistoric animals along with their physical characteristics to the correct time period.

Students will be able to identify and match a minimum of one type plant life to the correct time period.

Students will be able to describe the climate and habitat during each time period.

Students will be able to classify the dinosaurs based on the types of food eaten: carnivore, herbivore, or omnivore.

Students will be able to define paleontology, fossils, Pangaea, climate, and extinction.

Students will understand how fossils are made and preserved.

Students will be able to explain how scientists know as much as they do about dinosaurs.

Students will be able to tell about a minimum of one theory of extinction.

Students will complete drawings of each time period and keep in a science journal.

Students will complete a Dinosaur Diorama showing a scene from one of the three time periods.

Small groups will create and present a brochure telling about the three time periods of the dinosaurs.

Timeline: Four-week unit at 45 minutes of writing time and 30 minutes of Science time.

Anticipatory Set (Plan):

The children will be introduced to Discovering Dinosaurs through the reading of The Day of the Dinosaur by Stan and Jan Berenstain as well as the

use of other pictures, books, the internet, and realia showing the students the variety of animal and plant life that lived during the time of the dinosaurs.

Contents/Concepts:

First, discuss the three time periods (Triassic, Jurassic, and Cretaceous) of the Mesozoic Era and locate on a map where dinosaur fossils have been discovered. Next, discuss appearance of the continents (Pangaea), climate, and habitats (to include plant life) during each time period. Compare and contrast to appearance, climate, and plant life of today. Then, discuss the different types of animals that lived during each time period both dinosaur and non-dinosaur. Ask the students to describe the characteristics of at least three animals in each time period. Conduct a discussion on paleontology, fossils and how scientists studying fossils from the past can affect what we do today. Conclude the unit with a discussion on the different theories of extinction and have the students be able to describe a least one of these theories.

Independent Practice (Do):

Small groups will create a brochure, using MS Publisher, telling about the three time periods in the Mesozoic Era, paleontology, fossils, and extinction. Brochures must include a picture of an animal or dinosaur and a plant from that time period. Students should also include information on continent formation, climate, different animals, and plants during each time period. Individual students will also complete a science journal complete with pictures and notes from study, and create a diorama depicting a scene from one of the three time periods.

Assessment and Closure (Review):

- * The students will complete a rubric for their Dinosaur Diorama to assess the quality of their work.
- * The teacher will complete a rubric for their Group Brochure to assess the quality of their work.
- * The teacher will complete a rubric for completion of students' science journal.

- * Students will present to and share their Brochures and Dioramas with their classmates.

Week 1

Monday - Pique students interest by having them go on a dinosaur "egg" hunt. Tell the students that we can't begin the unit until the dinosaurs eggs have been found. Once all the eggs have been found, complete the KW of a KWL chart. Read and discuss The Day of the Dinosaur by Stan and Jan Berenstain pointing out particular animals and plant life. Provide overview to Discovering Dinosaur Unit though first two slides of Power Point Presentation, viewing the Enchanted Learning site to aid in the overview. Create groups for brochure project.

Tuesday - Continue PowerPoint presentation on the Triassic Period and discuss Pangaea. View first site from above list and take notes on organizer for brochure. Create a drawing of Pangaea and place in science journal. Teacher works with group one to begin brochure project.

Wednesday - Continue PowerPoint presentation on the Triassic Period and discuss the climate, habitats, and plant life. View first three sites from above list and take notes on organizer for brochure. Create a drawing of climate and habitats of the Triassic Period and place in science journal. Teacher works with group two to begin brochure project.

Thursday - Continue PowerPoint presentation on the Triassic Period and discuss different animals that lived during this time. View first sites from above list and take notes on organizer for brochure. Create a drawing of favorite animal and/or dinosaur and label its characteristics. Place in science journal. Teacher works with group three to begin brochure project.

Friday - Review Triassic Period and hold teacher/student conferences on completion of science journals and

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works with group four to begin brochure project.

Week 2

Monday - Review Triassic Period and continue PowerPoint presentation on the Jurassic Period and discuss how continents began to shift. View first site from above list and take notes on organizer for brochure. Create a drawing of continental shift and place in science journal. Teacher works with group one on brochure project.

Tuesday - Continue PowerPoint presentation on the Jurassic Period and discuss the climate, habitats, and plant life. View first three sites from above list and take notes on organizer for brochure. Create a drawing of climate and habitats of the Jurassic Period and place in science journal. Teacher works with group two on brochure project.

Wednesday - Continue PowerPoint presentation on the Jurassic Period and discuss different animals that lived during this time. View first sites from above list and take notes on organizer for brochure. Create a drawing of favorite animal and label its characteristics. Place in science journal. Teacher works with group three on brochure project.

Thursday - Review Jurassic Period and hold teacher/student conferences on completion of notes and science journals and works with group four on brochure project.

Friday - Review Triassic and Jurassic Time Periods and continue PowerPoint presentation on the Crustaceous Period and discuss how continental shift during this period. View first site from above list and take notes on organizer for brochure. Create a drawing of continental shift and place in science journal. Teacher works with group one on brochure project.

Week 3

Monday - Continue PowerPoint presentation on the Crustaceous Period and discuss the climate, habitats, and plant life. View first three sites from above list and take notes on organizer for brochure. Create a drawing of climate and habitats of the Crustaceous Period and place in science journal. Teacher works with group two on brochure project.

Tuesday - Continue PowerPoint presentation on the Crustaceous Period and discuss different animals that lived during this time. View first sites from above list and take notes on organizer for brochure. Create a drawing of favorite animal and label its characteristics. Place in science journal. Teacher works with group three on brochure project.

Wednesday - Review Crustaceous Period and hold teacher/student conferences on completion of notes and science journals and works with group four on brochure project.

Thursday - Continue PowerPoint presentation on Paleontology and fossils. View <http://olc.spsd.sk.ca/DE/webquests/dion/dinowq.htm#Introduction> to demonstrate for kids how fossils are created and preserved. View www.fieldmuseum.org/sue/index.html to learn about "Sue". Discuss how scientists study fossils to learn what life was like in the past and how that affects us today. Make an imprint fossil. Directions for imprint fossil found at: www.scholastic.com/magicschoolbus/games/teacher/dinosaurs/index.htm. Have students take notes on organizer for brochure project. Teacher works with group one on brochure project.

Friday - Complete PowerPoint presentation on Extinction Theories. View www.enchantedlearning.com to discuss these theories. Take notes on organizer for brochure project. Create a drawing of

extinction theory they like the best and place in science journal. Teacher works with group two on brochure project.

Week 4

Monday - Tuesday - Give directions and rubric on how to complete the Dinosaur Diorama. Teacher works with groups three and four to complete brochure while remainder of class works on dinosaur dioramas.

Wednesday - Project completion day for brochure and dioramas. Teacher conferences.

Thursday - Prepare students for field trip to Dinosaur World in Plant City. Show students web site at www.dinoworld.net to let them know what to expect. Allow them to preview scavenger hunt that chaperones will help each group complete.

Friday - Field Trip to Dinosaur World. Complete scavenger hunt while there. Upon return to school, discuss field trip and complete unit wrap-up by filling out "L" of KWL chart, rubrics and "showing off" brochures and dioramas.

ASSESSMENT/SUMMARY

I expect to see an increase in interest and motivation in the students' behavior. The children really enjoy working on computers and with the added hands-on experiences, I believe they will put a great deal of effort in searching for information and completing their research for their brochure and diorama. This, in turn, will lead to a greater internalization of the material, because they are investing more of their time and hard work to complete the project. It's something fun and when it's fun, it more often will be remembered; it makes a greater impact.

See Rubric pages

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OUTCOMES OR PRODUCTS PRODUCED

Products Produced:

- * Each group creates a brochure telling about life in the Mesozoic Era.
- * Each individual student creates a science journal for the three time periods discussed, paleontology, fossils, and extinction.
- * Each individual student creates a Dinosaur Diorama depicting a scene from their favorite time period.

TECHNOLOGY TRAINING MODULES USED

TH0054 PowerPoint XP-Basic Used to create Power Point lesson presentation.	TH0093 Word XP Intermediate Prepared student rubric for diorama	TH0137 Outlook XP Intermediate Communication with peers on topic; use calendar for reminders.
TH0055 PowerPoint XP-Intermediate Used to add animation to lesson presentation.	TH0058 - Publisher XP Preparation of Dinosaur Brochure	TH0078 Excel 2000 - Basic Prepared teacher rubric for brochure project.
TH0061 Teacher Web Resources II Student/teacher research	TH0129 Kidspiration Used software to map out ideas for brochure.	TH0112 Integrating Tech into Science Using Primary Resources Student/teacher research
TH0097 Using Scanners in Education Used to scan some pictures for the brochure	TH0153 Assessing Technology - Used to help select project.	TH0036 Using a Digital Camera in Teaching Used camera to take pictures of student dioramas













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VI. Assessment/ evaluation of the lesson: (prepare a rubric for assessment)

Dinosaur Diorama Rubric

Student Name _____

	3 points	2 points	1 point
I have included a variety of animals.	 I have 3 + animals.	 I have 2 animals.	 I have 1 animal.
I have included a variety of plants.	 I have 3 + plants.	 I have two plants.	 I have one plant.
I included details in by background scene.	 I have 3 + details.	 I have 2 details.	 I have 1 detail.
My diorama was completed on time.	 Project on time.	 Project 1 day late	 Project 2 + days late.

A = 10 - 12 points

D = 3 - 4 points

B = 7 - 9 points

U = 0 - 2 points

C = 5 - 6 points

Total Points Earned _____

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Discovering Dinosaurs Scoring Rubric for Science Journal

Student Name: _____

Date: _____

	Total Value	Points Earned	Teacher Evaluation
Content	60 points total		
Notes included for each topic	20		
Notes for each topic is clearly summarized	20		
Detailed pictures for each topic	20		
Layout	20 points total		
Page titles	10		
Complete notes and drawings	10		
Organization	20 points total		
Spelling	5		
Grammar	5		
Journal is visually neat and attractive	10		
Total Points Overall	100	0	
Grade			

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Materials Budget

SUPPLIER	ITEM DESCRIPTION	COST	QTY	TOTAL COST
Teacher's Exchange	Dinsaur & other Prehistoric Animals (EMC 253)	\$9.95	1	\$9.95
Teacher's Exchange	Dinosaur Thematic Unit (TCM 238)	\$9.99	1	\$9.99
Teacher's Exchange	Magic School Bus in the Time of the Dinosaurs Theme Unit (TCM 2087)	\$7.95	1	\$7.95
Teacher's Exchange	Triassic Period Chart	\$1.99	1	\$1.99
Teacher's Exchange	Jurassic Period Chart	\$1.99	1	\$1.99
Teacher's Exchange	Cretaceous Perios Chart	\$1.99	1	\$1.99
Books-a-Million	Dinosaur Babies by Lucille Penner	\$3.99	1	\$3.99
Books-a-Million	The Day of the Dinosaur by Stan and Jan Berenstain	\$6.58	1	\$6.58
Books-a-Million	Dinosaur Named Sue by Fay Robinson	\$3.99	1	\$3.99
Books-a-Million	Dinosaur Babies by Alike	\$4.99	1	\$4.99
Books-a-Million	The Magic Shool Bus in the Time of the Dinosaurs by Joanna Cole	\$5.99	1	\$5.99
Books-a-Million	Mighty Dinosaurs — Reader's Digest Childrens Books	\$19.99	1	\$19.99
Books-a-Million	Dinosaurs (InterFact: A Book and CD-ROM that work together)	\$14.95	1	\$14.95
Books-a-Million	Scary Creatures Dinosaurs by John Cooper	\$6.95	1	\$6.95
Books-a-Million	Dinosuars (Eyewitness Books)	\$15.99	1	\$15.99
Books-a-Million	Totally Dinosaurs by Dennis Schatz	\$16.95	1	\$16.95
Wal-Mart	Dinosaur Days by Joyce Milton	\$2.50	1	\$2.50
Wal-Mart	Modeling Clay	\$2.97	8	\$23.76
Wal-Mart	Dinosaur Playsets	\$1.97	8	\$15.76
Wal-Mart	Dinosaurs plactic figures	\$0.88	8	\$7.04
Oriental Traders	Dinosaur Novelty Assortment	\$7.95	1	\$7.95
Teacher's Name <u><i>Jackie Thomas</i></u> School: <u><i>Lena Vista Elementary</i></u>		Subtotal		\$191.24
		Tax if applicable		\$11.47
		Shipping if applicable		
		TOTAL BUDGET AMOUNT		\$202.71