## Integrated Curriculum and Instruction Design: Inquiry-Based Learning

**Author:** Julie Beasley  
**Title:** Mammal Reptile Unit  
**Grade Level:** Kindergarten

### Goals/Standards: (#‘S)

**Science Goal 12:** Understand the fundamental concepts, principles and interconnections of the life, physical and earth/space sciences.

**Standard A.** Know and apply concepts that explain how living things function, adapt and change.

- **Benchmark 1.** Differentiate and describe the differences between mammals and reptiles based on characteristics.

- **Benchmark 2.** Categorize and describe characteristics of mammals and reptiles.

**Standard B.** Know and apply concepts that describe how living things interact with each other and with their environment.

- **Benchmark 3.** Demonstrate and describe how characteristics of mammals and reptiles help them survive in and adapt to their environment.

**STATE GOAL 10:** Collect, organize and analyze data using statistical methods; predict results; and interpret

\[ \sqrt() = \text{outcome is assessed} \]

(Number refers to assessment)

<table>
<thead>
<tr>
<th>Teaching and Learning Events*</th>
<th>Engaging the Learner</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Essential Question:</strong> Why do animals live where they do?</td>
<td></td>
</tr>
<tr>
<td>- Following the opening or Hook Activity, students will read letter and complete task analysis ask questions based on openings activities and letter (LP)</td>
<td></td>
</tr>
<tr>
<td>- Inquiry begins with students seeking information from a variety of sources. Teacher will have an Oral Presentation of Literature (Read books and allow for wonder/wander” questions) Opportunity for questioning will be allowed throughout this activity. After students questions, teacher will use coaching or telling questions if not brought up during student questions. (What differences in animals have you observed? How can we group animals according to their characteristics? What individual differences in animals determine where they live?) (LP)</td>
<td></td>
</tr>
<tr>
<td>- Vocabulary List and Track List and Track Vocabulary Words) Put selected words on index cards or use provided sheet to have pairs of students find the words in the nonfiction books. When they have found the words, they put a sticky post-in on the page to be read by teacher. (LP)</td>
<td></td>
</tr>
<tr>
<td>- Jigsaw information in teams, organize and share with class Use animal semantic features chart to work in groups to create checklist of animal characteristics and distinguishing between warm and cold blooded groups (ex. mammal,</td>
<td></td>
</tr>
</tbody>
</table>

### Final Team Performance

**Working in groups of 3-4, students will design and create a habitat that 4 animals of their choice would live in (Synthesizing). Place animals in that habitat, state several facts about each animal, orally**

**Individual Student Assessments**

**Assessment 1.**

Differentiate and describe the differences between mammals and reptiles based on characteristics by using a Touchy, Feely box. The student will infer if a warm or cold blooded animal is represented by the feature in the box. They will explain to the teacher the evidence they used to base their decision. This will be graded by Teacher generated checklist

*Numbers after Teaching and Learning Events refer to assessments
**Context**

Goals/Standards: (#’s)

uncertainty using concepts of probability.
Standard:
A. Organize, describe and make predictions from existing data.

**CONTENT**

Engaging the Learner

reptile) to determine what type the animal is. Opportunity for questioning will be allowed throughout this activity (LP)
- Vocabulary List and Track (List and Track Vocabulary Words) Write selected words on index cards or use provided sheet to have pairs of students find the words in the nonfiction books. When they have found the words, they put a sticky post-in on the page to be read by teacher (LP)
- **Cyberhunt**- Students will use the computer to facilitate learning. They will go on a Cyberhunt created by the teacher. (LP)
- Students evaluate the features of animals to decide if animals should be categorized Warm-Blooded Mammal or Cold-Blooded Reptile. Mammal Reptile Table Clipart
- Do the Animal Concept Circle worksheet (LP)
- Do the Animal Mystery Bubbles worksheet (LP)
- Do the Animal Connect Two worksheet (LP)
Note: Computer will be left on Ask Jeeves or Google for

**Final Team Performance**

evaluate why these animals would live in this habitat. Students will record each other with the digital camera or video tape to help the first graders to make connections to what they will see at the zoo. Use a student made **rubric** to evaluate why these animals would live in this habitat. (FTP Assessment)

**Individual Student Assessments**

Assessment # 2. Categorize mammals and reptile by sorting animal groups of mammals and reptiles and explain to teacher why the student chose those groups for those animals. Use Teacher Generated checklist to grade.

√() = outcome is assessed
(Number refers to assessment)
<table>
<thead>
<tr>
<th>Goals/Standards: (#’S)</th>
<th>CONTEXT</th>
<th>CONTENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engaging the Learner</td>
<td></td>
<td>students to seek answers to their questions. <strong>Assessment 1</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Following assessment teams meet to share knowledge, return to question; answer and ask more questions. The <strong>FTP organizer</strong> is used to guide their work on FTP. (LP)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Make a chart of Mammals and Reptiles Characteristics (have characteristics written on sentence strips and have students put the strips under the right heading) (<strong>Cutting up with Facts</strong>) (LP)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Teacher reads the books <strong>Mammals</strong> (ISBN 1 57572 883 4) and <strong>Reptiles</strong>, (1 57 572 884 2) aloud to students. (<strong>Making Connections with text to self chart</strong>). Students make text-to-self, text-to-world, and text-to-text connections and teacher writes them on post-its. Students analyze and classify the post-its onto a chart paper under the three headings listed above. (LP)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Animal Fact lesson-Get information about mammals and reptiles from computer <strong>hotlist</strong> sites, <strong>books</strong>, and fact file folders (free from <a href="http://www.learningpage.com">www.learningpage.com</a>). Categorize mammals and reptiles pictures with teacher describing characteristics (Have students work on grouping different features paws, blubber, stripes, scales, etc) Categorize plastic mammals and reptiles in groups describing characteristics (LP)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- <strong>Egg/Baby Mammal Hunt</strong> (Hide eggs with plastic reptiles or</td>
</tr>
</tbody>
</table>

\[\sqrt{} = \text{outcome is assessed} \]

(Number refers to assessment)

© Emily Alford, 1998

*Numbers after Teaching and Learning Events refer to assessments*
ENGAGING THE LEARNER

- Pictures of reptiles and mammals (not in eggs) or pictures of mammals around the room. **Mammal Reptile Hunt Graph**. The reptiles and mammals from the Egg/Mammal Hunt (Math Goal 10) **Assessment 2** (LP)
- Following assessment teams meet to share knowledge, return to question; answer and ask more questions. The **FTP organizer** is used to guide their work on FTP. (LP)
- Have students trace each other’s bodies and label parts that help us survive (LP)
- Play the Chameleon Game (Students find environments that they can blend into with the clothes they are wearing) (LP)
- **Blubber glove activity directions sheet** ([http://octopus.gma.org/surfing/antarctica/blubber.html](http://octopus.gma.org/surfing/antarctica/blubber.html)) (LP)
- Play go fish with animal features cards (free from [http://bogglesworld.com/cards.htm](http://bogglesworld.com/cards.htm)) (LP)
- Get information about different habitats from computer **Hot list** and nonfiction books. As a group, make a chart of different habitats and the animals that live in them. Have students create a mural of different habitats with animals that live in them. ([Sample Habitat Chart](#)) (LP)
- **Hotlist** sites, nonfiction books, or fact file folders. Get information about mammals and reptiles that help them survive from hot lists, non-fiction books and fact file folders. In groups, identify characteristics and features of individual animals that help them survive. Complete a **Survival Semantics Feature Chart** together as a class. Opportunity for questioning will be allowed throughout this activity. Have teacher list the animals and the features (with appropriate pictures that help them survive)

FINAL TEAM PERFORMANCE

- Outcome is assessed

©Emily Alford, 1998

*Numbers after Teaching and Learning Events refer to assessments*
Assessment 3 (LP)
- Following assessment teams meet to share knowledge, return to question; answer and ask more questions. The FTP organizer is used to guide their work on FTP. (LP)

Final Team Performance

Individual Student Assessments

√() = outcome is assessed
(Number refers to assessment)

*Numbers after Teaching and Learning Events refer to assessments