

# Research

## **Lesson 1: Introduction to Research Process**

### **Objective:**

The student will understand that that research is a process for gathering information and answering questions. Students will know the difference between an Investigable Question and a Research Question. Students will brainstorm a list of insects as a class that they can research. Students will be partnered up and will choose an insect/butterfly to research. (Note: Any Science or Social Studies topic can be chosen depending on what your students need or which science module you are working with.)

### **TEKS:**

1.19 Writing/Expository and Procedural Texts. Students write expository and procedural or work-related texts to communicate ideas and information to specific audiences for specific purposes. Students are expected to:

- (A) write brief compositions about topics of interest to the student;
- (C) write brief comments on literary or informational texts.

1.23 Research/Research Plan. Students ask open-ended research questions and develop a plan for answering them. Students (with adult assistance) are expected to:

- (A) generate a list of topics of class-wide interest and formulate open-ended questions about one or two of the topics; and
- (B) decide what sources of information might be relevant to answer these questions.

1.24 Research/Gathering Sources. Students determine, locate, and explore the full range of relevant sources addressing a research question and systematically record the information they gather. Students (with adult assistance) are expected to:

- (A) gather evidence from available sources (natural and personal) as well as from interviews with local experts;
- (B) use text features (e.g., table of contents, alphabetized index) in age-appropriate reference works (e.g., picture dictionaries) to locate information; and
- (C) record basic information in simple visual formats (e.g., notes, charts, picture graphs, diagrams).

1.25 Research/Synthesizing Information. Students clarify research questions and evaluate and synthesize collected information. Students (with adult assistance) are expected to revise the topic as a result of answers to initial research questions.

### **Essential Questions:**

Why do people ask questions?

How will asking questions and finding answers help in better understanding the world?

What is research?

How are topics chosen to research?

What is the difference between a research question and an investigable question?

### **Assessment:**

Student will define research orally as a class. Student will orally distinguish between investigable questions and research questions. Students will choose a topic of study (insect/butterfly) with a partner.

**Procedure:***Anticipatory Set/Activate Prior Learning*

1. "We have been learning all about QUESTIONS! We have learned about different kinds of questions and different ways to find the answers to questions."
2. *Ask Essential Questions and Discuss:*
  - a. Why do people ask questions?
  - b. How will asking questions and finding answers help in better understanding the world?
  - c. What is the difference between a research question and an investigable question?
  - d. What is research?
3. We have been learning how to conduct a classroom investigation about butterflies, and now we are going to learn how to research questions we have. First, we need to choose a topic to research. While we have been studying painted lady butterflies, you all have made great connections to other kinds of butterflies, as well as other kinds of insects. Let's brainstorm a list of other kinds of insects or butterflies you would like to learn more about!
4. Call on students and write a list on chart paper of different insects or butterflies they want to research.
5. After making the list, put students into partners, and direct the partners to discuss what they would like to learn more about. Then tell them they will get to choose one insect/butterfly to research together.
6. Direct the students to write a sentence in their learning log telling what insect they are going to research together.

**Lesson 2: Research: Introducing Product, Presentation Guidelines & Rubric**

**Objective:** The students will understand that there are many ways to convey information. The students will choose a product to use to display the information they learned about their research topic. The students will understand the expectations for their product and their oral presentation. The students will make a plan for their product.

**Essential Questions:**

How can you share the information that you learned about your research topic with others?

What are characteristics of a quality product?

What are characteristics of a quality presentation?

What is a rubric?

**Evidence of Learning:**

The students will contribute to a class list of product choices. Students will choose a product to use to share their information with the class. Students will use a rubric to evaluate sample products.

**Procedure:**

1. Review research procedure (Steps in the Big 6)
2. Ask: How can you share information you learned to others?
3. List choices.
4. Explain guidelines for their product & presentation.  
Ask: What are characteristics of a quality product/presentation?  
List on chart paper.
5. Show them the rubric, going through each qualifier one at a time.
6. Use the rubric to evaluate sample products.
7. Check for understanding: Fist to Five  
How well do you understand the expectations for your product?  
How well do you understand the expectations for your presentation?
8. Direct partners to confer and choose a product.
9. Show students the product planning sheet. Model filling it out. Ask students to consider what materials they will need so they can be ready to start working on it the next time.

**Materials:**

*Teacher*

Chart paper

Markers

Rubric (poster size and letter size)

Sample Products

ELMO

*Students*

Product planning sheet, Pencil

# Research Product Planning Sheet

Names \_\_\_\_\_ and \_\_\_\_\_

Topic \_\_\_\_\_

Product Choice \_\_\_\_\_

What materials will you need to complete your product?

_____	_____
_____	_____
_____	_____
_____	_____

Where will you get the materials?

Name \_\_\_\_\_ Research Topic \_\_\_\_\_

### Insect Research Oral Presentation Guidelines and Rubric

**Guidelines:**

You will have 5 minutes to present your project to the class. In the presentation you will need to answer the following questions:

- How many sources did you use?
- How many facts did you gather?
- What product did you choose? How did you organize the information?
- What did you learn?

Guidelines	1	2	3	Comments
<b>Sources</b>	1 or 0 sources used	2 sources	3 or more sources	
<b>Information</b>	Some facts gathered with little or no details	At least one fact for each question with some detail	More than one fact for each question with detail and your own connections	
<b>Product</b>	Unfinished product	Product is organized in a clear way	Product is organized in a clear, creative way with extra details	
<b>Communication in Oral Presentation</b>	Spoke clearly at times and explained some of what you learned	Spoke clearly, explained most of what you learned	Spoke clearly and with expression. explained all of what you learned	