UNIT: LEARNING ABOUT BUTTERFLIES THROUGH RESEARCH

Grade 2/Library Media/Science/Educational Technology

LESSON 1: BUTTERFLIES GALORE

Library Media Essential Curriculum Objectives
2.0 Locate and Evaluate Resources and Sources: Students will be able to follow an inquiry process to identify, locate, evaluate, and select resources and sources in a wide variety of formats to meet the information need in an ethical manner. (AASL 21st 1)
   B. Locate and Evaluate Answers
      1. Locate and select sources to meet the information need.
         c. With guidance, apply knowledge of search strategies to locate relevant sources.

4.0 Interpret Recorded Data/Information: Students will be able to follow an inquiry process to interpret recorded data/information to create new understandings and knowledge related to the information need in an ethical manner. (AASL 21st 2)
   A. Interpret Recorded Data/Information
      1. Evaluate and analyze the quality of recorded data/information to meet the information need.
         a. With guidance, identify the main idea of the recorded information.
         b. With guidance, compare recorded information to prior knowledge and make personal connections.
      2. Apply critical thinking skills and problem-solving strategies to the recorded data/information to meet the information need.
         d. With guidance, identify and analyze patterns within the recorded data/information to create categories.
         e. With guidance, make connections and inferences using prior knowledge and the recorded data/information.
   B. Create New Understandings and Knowledge
      1. From the recorded data/information, ethically create new understandings and knowledge related to the information need.
         a. With guidance, synthesize the recorded data/information from multiple sources.
         b. With guidance, draw conclusions from the recorded data/information to create new understandings.

Science Essential Curriculum Objectives
Unit IV: Life and Environmental Science
Goal 1: Characteristics of Organisms – The student will use scientific skills and processes to describe and compare characteristics, basic needs, and life cycle of an organism.
Objective – The student will be able to:
   e. Observe, describe, and record butterfly larvae structures and behaviors.
   f. Identify the structural changes in the various stages of a butterfly larva’s growth and how they allow the organism to perform different functions. (MLO)
   g. Predict and identify food preferences of butterfly larvae.
UNIT: LEARNING ABOUT BUTTERFLIES THROUGH RESEARCH

h. Describe, record, and compare characteristics of different stages of a butterfly’s life cycle.

i. Observe, describe, and identify structural parts of a butterfly and the functions of those parts.

Educational Technology Essential Curriculum Objectives

Goal 3: Technology for Learning and Collaboration – The students at grade two will use a variety of technologies for learning and collaboration

   Learning
   Objective - The student will be able to:
   a. Use and understand how technology enhances learning
      1. Use technology tools, including software and hardware, from a range of teacher-selected options to learn new content or reinforce skills

Goal 5: Technology for Information Use and Management: The students at grade two will use technology to locate, evaluate, gather, and organize information and data.

   Locate, Evaluate, and Gather Information/Data
   Objective - The student will be able to:
   a. Explore and use age-appropriate information resources available through technology
      1. Select relevant information from appropriate technology resources (such as databases, library catalogs, and electronic reference materials)

Organize Information/Data
   Objective - The student will be able to:
   a. Use technology tools to organize information
      1. Participate, as part of a class, in organizing information using technology tools (such as graphic organizers and slide presentations)
      1. Use teacher-selected technology tools to organize information/collect data

Performance Objective(s)
- Students will use a graphic organizer to record information about butterflies.

Objectives with Assessment Limits:

General Reading Processes 1.0
- Identify and explain what is directly stated in the text

Comprehension of Informational Text 2.0
- Use graphic aids such as illustrations and pictures, photographs, drawings, sketches, cartoons, maps, graphs, charts/tables, diagrams, and other graphic aids encountered in informational texts

Lesson Timeframe
20 minutes

Materials
- “Monarch Butterfly” PowerPoint presentation
- Fiction and nonfiction butterfly books
UNIT: LEARNING ABOUT BUTTERFLIES THROUGH RESEARCH

- Copy of “KWL Chart” to project with overhead projector, LCD projector, or document camera
- Overhead projector, LCD projector, or document camera
- Computer with Internet connection for demonstration of database
- LCD projector
- SIRS Discoverer – www.discoverer.sirs.com
- World Book Online – www.worldbookonline.com

Procedures/Activities
Motivation/Opening
1. Have the first image from the “Monarch Butterfly” PowerPoint presentation displayed on the screen as the students arrive for class.
2. Share the “Monarch Butterfly” PowerPoint presentation.
3. Use the “KWL Chart” to record students’ prior knowledge about butterflies. Have AL remind the students that the chart will help them organize their information.

Activity
4. Explain that the students are going to become experts about butterflies. Each table team will become an expert in one area (kinds of butterflies, body parts, life cycle, habitat).
5. Point out display of fiction and nonfiction books about butterflies. Explain that information about butterflies could be found in books, but for this activity, students will be using an online database.
6. Introduce how to use SIRS Discoverer and/or World Book Online.
7. Demonstrate how to locate information about butterflies.

Closing
8. Refer back to the KWL chart; ask students to record information they want to know about butterflies.

Evaluation
Each student will participate in developing the class chart.
UNIT: LEARNING ABOUT BUTTERFLIES THROUGH RESEARCH

LESSON 2: BUTTERFLY RESEARCH INTRODUCTION

Media Essential Curriculum Objectives
2.0 Locate and Evaluate Resources and Sources: Students will be able to follow an inquiry process to identify, locate, evaluate, and select resources and sources in a wide variety of formats to meet the information need in an ethical manner. (AASL 21st 1)

B. Locate and Evaluate Answers
1. Locate and select sources to meet the information need.
   c. With guidance, apply knowledge of search strategies to locate relevant sources.
   d. With guidance, select print, online, and multimedia sources.
2. Evaluate sources to meet the information need.
   a. With guidance, evaluate sources based on currency, authority, and relevance to select sources that best meet the information need.

3.0 Find, Generate, Record, and Organize Data/Information: Students will be able to follow an inquiry process to find, generate, record, and organize information relevant to the information need in an ethical manner. (AASL 21st 1)

C. Record and Organize Data/Information
1. Record data/information in a variety of formats.
   b. Express different ways to organize information, (e.g., alphabetically; numerical order; parts to whole; compare and contrast; categorize).
   c. With guidance, identify appropriate formats for organizing data/information.

4.0 Interpret Recorded Data/Information: Students will be able to follow an inquiry process to interpret recorded data/information to create new understandings and knowledge related to the information need in an ethical manner. (AASL 21st 2)


A. Interpret Recorded Data/Information
1. Evaluate and analyze the quality of recorded data/information to meet the information need.
   a. With guidance, identify the main idea of the recorded information.
   b. With guidance, compare recorded information to prior knowledge and make personal connections.
2. Apply critical thinking skills and problem-solving strategies to the recorded data/information to meet the information need.
   d. With guidance, identify and analyze patterns within the recorded data/information to create categories.
   e. With guidance, make connections and inferences using prior knowledge and the recorded data/information.

B. Create New Understandings and Knowledge
1. From the recorded data/information, ethically create new understandings and knowledge related to the information need.
   a. With guidance, synthesize the recorded data/information from multiple sources.
UNIT: LEARNING ABOUT BUTTERFLIES THROUGH RESEARCH

b. With guidance, draw conclusions from the recorded data/information to create new understandings.

Science Essential Curriculum Objectives
Unit IV: Life and Environmental Science
Goal 1: Characteristics of Organisms – The student will use scientific skills and processes to describe and compare characteristics, basic needs, and life cycle of an organism.

Objective – The student will be able to:

   e. Observe, describe, and record butterfly larvae structures and behaviors.
   f. Identify the structural changes in the various stages of a butterfly larva’s growth and how they allow the organism to perform different functions. (MLO)
   g. Predict and identify food preferences of butterfly larvae.
   h. Describe, record, and compare characteristics of different stages of a butterfly’s life cycle.
   i. Observe, describe, and identify structural parts of a butterfly and the functions of those parts.

Educational Technology Essential Curriculum Objectives
Goal 3: Technology for Learning and Collaboration – The students at grade two will use a variety of technologies for learning and collaboration

Learning
Objective - The student will be able to:

   b. Use and understand how technology enhances learning
      2. Use technology tools, including software and hardware, from a range of teacher-selected options to learn new content or reinforce skills

Goal 5: Technology for Information Use and Management: The students at grade two will use technology to locate, evaluate, gather, and organize information and data.

Locate, Evaluate, and Gather Information/Data
Objective - The student will be able to:

   a. Explore and use age-appropriate information resources available through technology
      1. Select relevant information from appropriate technology resources (such as databases, library catalogs, and electronic reference materials)

Organize Information/Data
Objective - The student will be able to:

   a. Use technology tools to organize information
      1. Participate, as part of a class, in organizing information using technology tools (such as graphic organizers and slide presentations)
      2. Use teacher-selected technology tools to organize information/collect data

Performance Objective(s)

- Students will identify facts about butterflies using an electronic resource.
UNIT: LEARNING ABOUT BUTTERFLIES THROUGH RESEARCH

Objectives with Assessment Limits:
General Reading Processes 1.0
  • Identify and explain what is directly stated in the text
Comprehension of Informational Text 2.0
  • Use graphic aids such as illustrations and pictures, photographs, drawings, sketches, cartoons, maps, graphs, charts/tables, diagrams, and other graphic aids encountered in informational texts
  • Use online features such as URLs, hypertext links, sidebars, drop-down menus, home page, site maps, and other features characteristic of online texts
  • Distinguish between a fact and an opinion

Materials
  • “Monarch Butterfly” PowerPoint presentation
  • KWL chart from previous class
  • LCD projector
  • “Butterfly Cooperation”
  • “List of Butterflies for Pairs”
  • “Butterfly Facts”
  • Access to computers
  • SIRS Discoverer – www.discoverer.sirs.com
  • World Book Online – www.worldbookonline.com

Procedures/Activities
Motivation/Opening
  1. Have the first image from the “Monarch Butterfly” PowerPoint presentation displayed on the screen as the students arrive for class.
  2. Use the “KWL Chart” from the previous class to help students identify four areas of information that could be researched about butterflies (kinds of butterflies, body parts, life cycle, and habitat). Remind students that charts can help organize information.

Activity
  3. Pair students by handing each student a butterfly shape with a name of a butterfly. Students holding the same butterfly become partners.
  4. Assign each pair a topic to research (kinds of butterflies, body parts, life cycle, and habitat). Explain to students that they will use SIRS Discoverer or World Book Online (AL should demonstrate how to use the drop down menus, side bars, and hyperlinks) to locate and read information about their area. Students will also write four facts learned on the graphic organizer, “Butterfly Facts”.
  5. Have students work at computers and access SIRS Discoverer or World Book Online to begin to locate facts. Remind them to look for and identify facts in the text.
  6. Collect student papers.

Closing
UNIT: LEARNING ABOUT BUTTERFLIES THROUGH RESEARCH

7. Have students show by a raise of hands if they have successfully located the information needed. Check to see if at least one fact has been noted on the graphic organizer, “Butterfly Facts”.

Lesson Modifications/Adaptations
- To assist students who have visual impairments or IEP modifications, print out sections of articles in larger font for students to use.
- Limit the number of facts students need to locate.

Evaluation
Each student will locate and record at least one fact about butterflies.
UNIT: LEARNING ABOUT BUTTERFLIES THROUGH RESEARCH

LESSON 3: BUTTERFLY RESEARCH CONTINUED

Media Essential Curriculum Objectives

2.0 Locate and Evaluate Resources and Sources: Students will be able to follow an inquiry process to identify, locate, evaluate, and select resources and sources in a wide variety of formats to meet the information need in an ethical manner. (AASL 21st 1)

   B. Locate and Evaluate Answers
   1. Locate and select sources to meet the information need.
      c. With guidance, apply knowledge of search strategies to locate relevant sources.
      d. With guidance, select print, online, and multimedia sources.
   2. Evaluate sources to meet the information need.
      a. With guidance, evaluate sources based on currency, authority, and relevance to select sources that best meet the information need.

3.0 Find, Generate, Record, and Organize Data/Information: Students will be able to follow an inquiry process to find, generate, record, and organize information relevant to the information need in an ethical manner. (AASL 21st 1)

   C. Record and Organize Data/Information
   1. Record data/information in a variety of formats.
      b. Express different ways to organize information, (e.g., alphabetically; numerical order; parts to whole; compare and contrast; categorize).
      c. With guidance, identify appropriate formats for organizing data/information.

4.0 Interpret Recorded Data/Information: Students will be able to follow an inquiry process to interpret recorded data/information to create new understandings and knowledge related to the information need in an ethical manner. (AASL 21st 2)

   A. Interpret Recorded Data/Information
   1. Evaluate and analyze the quality of recorded data/information to meet the information need.
      a. With guidance, identify the main idea of the recorded information.
      b. With guidance, compare recorded information to prior knowledge and make personal connections.
   2. Apply critical thinking skills and problem-solving strategies to the recorded data/information to meet the information need.
      d. With guidance, identify and analyze patterns within the recorded data/information to create categories.
      e. With guidance, make connections and inferences using prior knowledge and the recorded data/information.

   B. Create New Understandings and Knowledge
   1. From the recorded data/information, ethically create new understandings and knowledge related to the information need.
      a. With guidance, synthesize the recorded data/information from multiple sources.
      b. With guidance, draw conclusions from the recorded data/information to create new understandings.
UNIT: LEARNING ABOUT BUTTERFLIES THROUGH RESEARCH

Science Essential Curriculum Objectives
Unit IV: Life and Environmental Science
Goal 1: Characteristics of Organisms – The student will use scientific skills and processes to describe and compare characteristics, basic needs, and life cycle of an organism.
Objective – The student will be able to:
   e. Observe, describe, and record butterfly larvae structures and behaviors.
   f. Identify the structural changes in the various stages of a butterfly larva’s growth and how they allow the organism to perform different functions. (MLO)
   g. Predict and identify food preferences of butterfly larvae.
   h. Describe, record, and compare characteristics of different stages of a butterfly’s life cycle.
   i. Observe, describe, and identify structural parts of a butterfly and the functions of those parts.

Educational Technology Essential Curriculum Objectives
Goal 3: Technology for Learning and Collaboration – The students at grade two will use a variety of technologies for learning and collaboration
   Learning
   Objective - The student will be able to:
   c. Use and understand how technology enhances learning
      3. Use technology tools, including software and hardware, from a range of teacher-selected options to learn new content or reinforce skills

Goal 5: Technology for Information Use and Management: The students at grade two will use technology to locate, evaluate, gather, and organize information and data.
   Locate, Evaluate, and Gather Information/Data
   Objective - The student will be able to:
   a. Explore and use age-appropriate information resources available through technology
      1. Select relevant information from appropriate technology resources (such as databases, library catalogs, and electronic reference materials)
   Organize Information/Data
   Objective - The student will be able to:
   b. Use technology tools to organize information
      1. Participate, as part of a class, in organizing information using technology tools (such as graphic organizers and slide presentations)
      2. Use teacher-selected technology tools to organize information/collect data

Lesson Timeframe
20 minutes

Performance Objective(s)
- Students will list butterfly facts for a class book.
UNIT: LEARNING ABOUT BUTTERFLIES THROUGH RESEARCH

Objectives with Assessment Limits:
General Reading Processes 1.0
- Identify and explain what is directly stated in the text

Comprehension of Informational Text 2.0
- Use graphic aids such as illustrations and pictures, photographs, drawings, sketches, cartoons, maps, graphs, charts/tables, diagrams, and other graphic aids encountered in informational texts
- Distinguish between a fact and an opinion

Materials
- “Monarch Butterfly” PowerPoint presentation
- Fiction and nonfiction butterfly books
- “Butterfly Facts”
- “Butterflies”
- LCD projector, overhead projector, or document camera
- Access to computers
- SIRS Discoverer – www.discoverer.sirs.com
- World Book Online – www.worldbookonline.com

Procedures/Activities
Motivation/Opening
1. Have the first image from the “Monarch Butterfly” PowerPoint presentation displayed on the screen as the students arrive for class.
2. Share with students some of the facts noted from the previous lesson.
3. Review how to access SIRS Discoverer or World Book Online.

Activity
4. Continue having students work at computers and access SIRS Discoverer or World Book Online to locate facts.

Tell students that facts are important pieces of true information.

Closing
5. Have students share one interesting fact learned from their research.
6. Tell students that the information they collect will be used for a special project.

Lesson Modifications/Adaptations
- To assist students who have visual impairments or IEP modifications, print out sections of articles in larger font for students to use.
- Limit the number of facts students need to locate.

Evaluation
Each student will complete a “Butterfly Facts” organizer
UNIT: LEARNING ABOUT BUTTERFLIES THROUGH RESEARCH

LESSON 4: BUTTERFLY BOOK

Media Essential Curriculum Objectives
2.0 Locate and Evaluate Resources and Sources: Students will be able to follow an inquiry process to identify, locate, evaluate, and select resources and sources in a wide variety of formats to meet the information need in an ethical manner. (AASL 21st 1)

B. Locate and Evaluate Answers
1. Locate and select sources to meet the information need.
   c. With guidance, apply knowledge of search strategies to locate relevant sources.
   d. With guidance, select print, online, and multimedia sources.
2. Evaluate sources to meet the information need.
   a. With guidance, evaluate sources based on currency, authority, and relevance to select sources that best meet the information need.

3.0 Find, Generate, Record, and Organize Data/Information: Students will be able to follow an inquiry process to find, generate, record, and organize information relevant to the information need in an ethical manner. (AASL 21st 1)

C. Record and Organize Data/Information
1. Record data/information in a variety of formats.
   b. Express different ways to organize information, (e.g., alphabetically; numerical order; parts to whole; compare and contrast; categorize).
   c. With guidance, identify appropriate formats for organizing data/information.

4.0 Interpret Recorded Data/Information: Students will be able to follow an inquiry process to interpret recorded data/information to create new understandings and knowledge related to the information need in an ethical manner. (AASL 21st 2)

A. Interpret Recorded Data/Information
1. Evaluate and analyze the quality of recorded data/information to meet the information need.
   a. With guidance, identify the main idea of the recorded information.
   b. With guidance, compare recorded information to prior knowledge and make personal connections.
2. Apply critical thinking skills and problem-solving strategies to the recorded data/information to meet the information need.
   d. With guidance, identify and analyze patterns within the recorded data/information to create categories.
   e. With guidance, make connections and inferences using prior knowledge and the recorded data/information.

B. Create New Understandings and Knowledge
1. From the recorded data/information, ethically create new understandings and knowledge related to the information need.
   a. With guidance, synthesize the recorded data/information from multiple sources.
UNIT: LEARNING ABOUT BUTTERFLIES THROUGH RESEARCH

b. With guidance, draw conclusions from the recorded data/information to create new understandings.

Science Essential Curriculum Objectives
Unit IV: Life and Environmental Science
Goal 1: Characteristics of Organisms – The student will use scientific skills and processes to describe and compare characteristics, basic needs, and life cycle of an organism.
Objective – The student will be able to:
e. Observe, describe, and record butterfly larvae structures and behaviors.
f. Identify the structural changes in the various stages of a butterfly larva’s growth and how they allow the organism to perform different functions. (MLO)
g. Predict and identify food preferences of butterfly larvae.
h. Describe, record, and compare characteristics of different stages of a butterfly’s life cycle.
i. Observe, describe, and identify structural parts of a butterfly and the functions of those parts.

Educational Technology Essential Curriculum Objectives
Goal 3: Technology for Learning and Collaboration – The students at grade two will use a variety of technologies for learning and collaboration
Learning
Objective - The student will be able to:
d. Use and understand how technology enhances learning
  4. Use technology tools, including software and hardware, from a range of teacher-selected options to learn new content or reinforce skills

Goal 5: Technology for Information Use and Management: The students at grade two will use technology to locate, evaluate, gather, and organize information and data.
Locate, Evaluate, and Gather Information/Data
Objective - The student will be able to:
a. Explore and use age-appropriate information resources available through technology
  1. Select relevant information from appropriate technology resources (such as databases, library catalogs, and electronic reference materials)

Organize Information/Data
Objective - The student will be able to:
c. Use technology tools to organize information
  1. Participate, as part of a class, in organizing information using technology tools (such as graphic organizers and slide presentations)
  2. Use teacher-selected technology tools to organize information/collect data

Lesson Timeframe
20 minutes
UNIT: LEARNING ABOUT BUTTERFLIES THROUGH RESEARCH

Performance Objective(s)
- Students will create a class book using their butterfly facts.

Objectives with Assessment Limits:
Comprehension of Informational Text 2.0
- Use graphic aids such as illustrations and pictures, photographs, drawings, sketches, cartoons, maps, graphs, charts/tables, diagrams, and other graphic aids encountered in informational texts
- Distinguish between a fact and an opinion

Materials
- “Monarch Butterfly” PowerPoint presentation
- Fiction and nonfiction butterfly books
- “Butterfly Facts” from previous lesson
- Copies of “Butterflies”
- Overhead projector
- Access to computers
- SIRS Discoverer – www.discoverer.sirs.com
- World Book Online – www.worldbookonline.com

Procedures/Activities
Motivation/Opening
1. Tell students that they will be using their butterfly facts to create a class book.
   Discuss what will be needed to be included in the book – cover, title page, table of contents.

Activity
2. Display a transparency of a “Butterfly Facts” organizer exemplar. Explain to students that each person at the table will need to review the organizers and each person selects one fact to be included in a class book titled, “All About Butterflies”. AL says using charts to organize the information helps keep your ideas clear.
3. Using their best handwriting, have students copy a fact onto “Butterflies” (Student Resource Sheet 2.writeup).
4. Students will review their work to make sure they completed the task as directed and did their best work.

Closing
5. Combine the facts into a class book and share it with the class.

Lesson Modifications/Adaptations
To assist students who have visual impairments or IEP modifications:
- Print out sections of articles in larger font for students to use.
- Limit the number of facts students need to locate.

Evaluation
Each student will write one fact about butterflies for a class book.
UNIT: LEARNING ABOUT BUTTERFLIES THROUGH RESEARCH

Follow-up/Extension

- The class butterfly book will be available in the library media center or in the classroom for students to read.
- Students may add pictures to the class book.
- The Earth’s Birthday Activity Kit - http://www.earthsbirthdaystore.org/