



## ANALOGIES

Thinking  
strategies  
to enhance skills  
of analysis,  
creativity,  
and problem  
solving.

## BUTTERFLY ANALOGIES

**Lesson Description:** Students review the characteristics of butterflies, caterpillars and the stages in butterfly metamorphosis by creating two types of analogies- *direct* and *personal*. In making these comparisons students use critical and creative thinking.

**Pre-assessment/Prior Knowledge:**

- Students have indicated a basic understanding of the Questioning strategy through the introductory lesson (p. 21).
- Students have shown knowledge of butterflies through assessments in Science.

**SOL/POS Objective:**

**Science 3.4** The student will investigate and understand that behavioral and physical adaptations allow animals to respond to life needs.

**Science 3.8** The student will investigate and understand basic sequences and cycles occurring in nature.

**POS Benchmark 1.3.5, Indicator 1.3.5-3** Identify the characteristics of butterflies.

**Instructional Strategy:**

*Identifying Similarities and Differences*- Through personal and direct analogies, students explore the scientific topic of butterflies.

**Materials:**

- *Be a Butterfly* (p. 116)
- *Butterfly Analogies* (p. 117)
- pictures of butterflies and caterpillars
- butterfly science trade books and library books (optional)

**Enduring Understanding:**

- Analogies are comparisons.
- Analogies help us understand new concepts and remember important information.
- Analogies make our writing interesting.
- Analogies enable us to think creatively about topics.

**Introduction/Essential Questions:**

- How does creating analogies help you understand and remember what you learn?
- Why do authors and poets use analogies in their writing?
- What are some real life situations in which you might use analogies?

**Teach and Explore Strategy:**

- Ask the students to define **analogy**. An analogy is a comparison of two items in order to discover a similar characteristic which connects the two items.
- Tell students there are different kinds of analogies. In this lesson they will be working with **direct** and **personal analogies** as they relate to the butterfly unit.



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- Explain **direct analogy** (simple comparison) Say: A direct analogy compares two things. For example you can compare a butterfly to a kite. Now let's make some comparisons. In what ways are a butterfly and a kite alike or the same? Think, both...are or both have....or both can... As students contribute ideas, make a list of similarities on the board or chart paper.
- Comparing a butterfly and a kite can also be shown on a Venn Diagram.
- Tell students that the more different the items being compared are, the more it challenges their thinking. This is because the connections or similarities are not so obvious. The most original and unique ideas come from these more challenging comparisons.
- Have students practice with a more difficult comparison: How is a butterfly like a stone?
- Explain **personal analogy** (be the thing) Say: A personal analogy is created when you identify with the feelings and functions of an object. Imagine you are an insect such as an ant ... How do you feel? How do others treat you? What do you look like? What do you do as this thing? If you could talk what would you say? What is good in your life? What is not so good? Give students time to respond as an ant to these questions.
- Explain that personal analogies help you apply facts that you know about an object such as an ant. They also used their imaginations as they pretended to be the ant. This is creative thinking.
- Be sure students remember that in personal analogy writing they use the word "I" and will be writing in the first person. For example, "When I flew into the butterfly net I was trapped. I was so nervous that my wings started to shake. I knew I had to think of a plan to escape or I'd wind up in a jar."
- Tell students that they will do two analogy activities in this lesson- one using direct analogy and the other personal analogy.
- Distribute and preview *Be a Butterfly* (p. 116) and *Butterfly Analogies* (p. 117). Give students 20-30 minutes to complete the activities.
- When students have finished have them share their responses with each other or the group.

**Assessment Evidence:**

- Student responses in analogy discussion
- Completed products and sharing

**Metacognition:**

- Which kind of analogy, direct or personal did you enjoy the most? Why?
- What kind of thinking did you use in this lesson?
- How does using analogies help you communicate information more effectively?



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**Extensions:**

- Students illustrate their analogies.
- Students create a personal analogy for a caterpillar or moth following the same prompts as in *Be a Butterfly* or develop original thinking prompts.
- Students extend *Be a Butterfly* by writing a story about adventures they have as a butterfly or select their own story idea.



ANALOGIES

Name \_\_\_\_\_ Date \_\_\_\_\_

**Be a Butterfly**

Use your knowledge of butterflies and your imagination to respond to the questions below. Be a butterfly. Thinking, acting, and feeling like a butterfly is a personal analogy.

What kind of butterfly are you? What do you look like?

Where do you live?

What do you do all day long?

Who are your friends? Who are your enemies?

Should humans study you? Why or why not?

If you could have one wish, what would it be?

What's the BEST part about being a butterfly?

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Student  
Handout



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Name \_\_\_\_\_

Date \_\_\_\_\_

**Butterfly Analogies**

Think of what you know about butterflies to make the following direct analogies. After finding one connection, stretch your thinking by making adding other similarities for each pair. Try to think of original ideas (ideas no one else might think of).

A butterfly : airplane

A butterfly wing : paper

A butterfly's proboscis : garden hose

A caterpillar's body : pine cone

A chrysalis : backpack

Make your own analogies:

A caterpillar moves like a \_\_\_\_\_ because both \_\_\_\_\_

Butterfly eggs look like \_\_\_\_\_ because both \_\_\_\_\_.

Caterpillar's bristles (setae) are like \_\_\_\_\_ because both \_\_\_\_\_

Butterfly's antennae are like \_\_\_\_\_ because both \_\_\_\_\_.

**Bonus Thinking:** Make up your own butterfly direct analogy.

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*Thinking strategies to enhance skills of analysis, creativity, and problem solving.*