raft RESOURCE AREA FOR TEACHING

STEAM SCIENCE TECHNOLOGY ENGINEERING ARTS MATHEMATICS

LEARNING ACTIVITY

Beautiful Butterflies

Designing the Next Generation of Beautiful Butterflies

Butterflies have beautiful and intricate designs and colors on their wings. They use the shapes, patterns and colors to send messages to other butterflies and to hide from predators. Can you design a new generation of butterflies?

Activity Challenge
Design a butterfly offspring that incorporates its parents' visible traits.

Preparation

1. Gather materials and select a workspace.

To Do

1. Color Butterfly A with two different colors. One butterfly must have blue.
2. Color Butterfly B with two different colors as well.
3. Now, butterfly A and B have distinct shapes and colors, choose any 2 shapes/patterns and 2 colors from butterfly A or B.
4. Draw and color Butterfly C with the chosen shapes/patterns and colors.

Observations

- Label the different parts of the butterfly including the antenna, eyes, head, thorax, abdomen, wings, and legs.
- In your STEAM Journal, explain why you chose some pattern or color over another color for butterfly sees design. Think about a flowering bush, a street corner, or the side of a tree. What design and color of butterfly do you think would blend in best in any of those settings?

Extensions

- Attempt to identify and label the forewing, hindwing, proboscis, and wing veins. If the butterfly does not have those anatomical parts, then draw them in and label.
- Cut out your butterfly offspring and make a tiny kite out of it.
- Attempt to reproduce the blue color on your offspring with markers on plastic wrap by combining to colors that make blue.

The Content behind the Activity
Butterfly wing patterns and colors are passed down from generation to generation in genetic code called DNA. DNA is a biological messenger that tells cells how to specialize. The DNA in specialized cells contains the code for an organism's traits, such as wing colors, that can be observed and measured. Observable traits are called phenotypic traits. Phenotypic traits like color, pattern, and wing size are the expression of genetic messages in the DNA. Offspring in a generation will commonly display (express) one or more of the phenotypic traits of the parent organism.

Materials Needed

- o STEAM Journal
- o Learning Activity Butterfly Outlines
- o 6 different colored pencils, markers, crayons, etc.
- o Pencil or pen

Grade Range
K-2
3-5
6-8

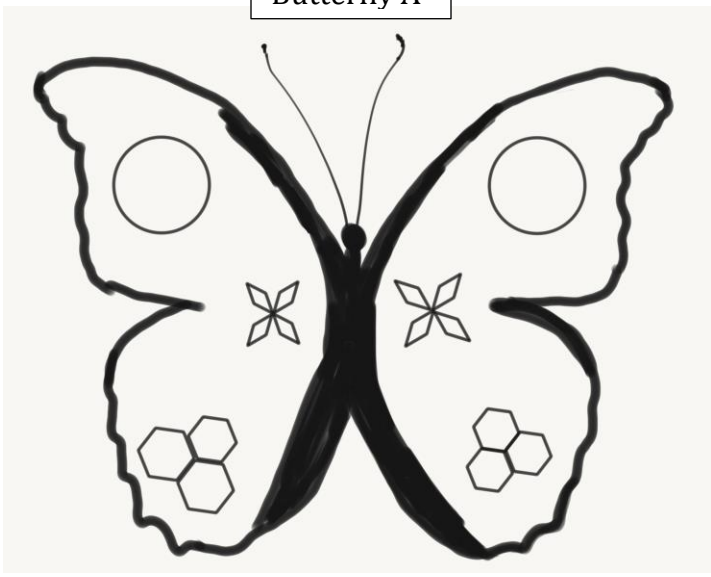
Topics/Skills
Traits, Biology, Phenotypes, Shapes, Patterns

Learning Standards
Biological Evolution

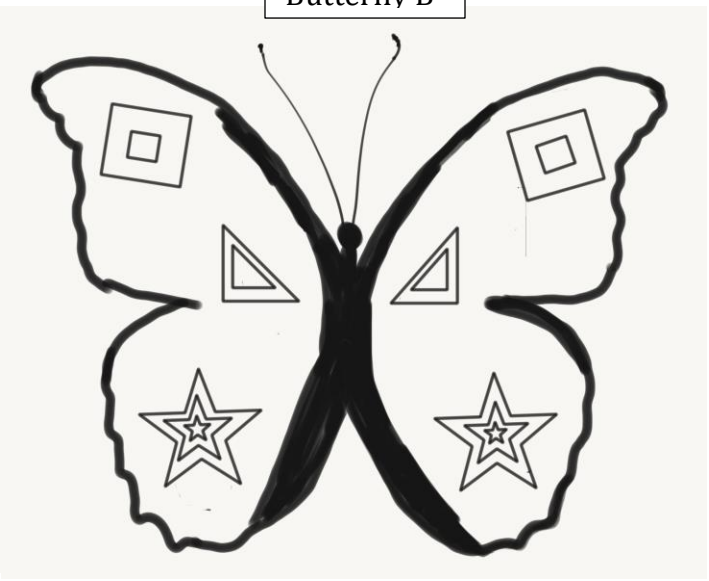
Duration
15-20 minutes

Prep Time
2 minutes

Butterfly A



Butterfly B



Butterfly C