



### Do you See a Pattern?

You can use monarchs to teach about many things! Stone Mountain Memorial Association (SMMA) uses the monarch butterfly to help students apply their knowledge in other contexts and to different disciplines. The activities relate a grade-level specific GPS to monarch life, habitat or migration. Use this lesson as a post-trip activity following your Kindergarten Plants field trip.

GPS correlation: MKG3. Students will identify, create, extend and transfer patterns from one representation to another using actions, objects and geometric shapes.

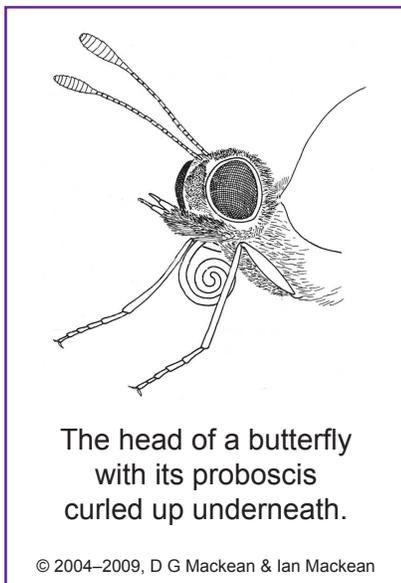
#### Preparation:

Read the background information. Print the worksheet, or make an overhead or display on your Interactive white board. Make copies for each student or pair of students. You may choose to cut out the shapes on the bottom row prior to handing out the sheets to students or to let the students cut out the shapes first.

#### Background information:

You may have seen monarch butterflies during the spring or autumn months at Stone Mountain Park. They have beautiful orange and black wings. monarchs come to the Park to lay eggs on milkweed plants and to drink the nectar from the wildflowers that grow here.

Butterflies prefer to feed on flowers that are shaped like a funnel or narrow tube with nectar at the base. Examples of these flowering plants include: zinnia, calendula, butterfly weed, yarrow, goldenrod, milkweeds, honeysuckle and daisy. Use the USDA Plants Database for photos: <http://plants.usda.gov/>



This flower shape is perfectly suited to fit a butterfly's mouthpart called a proboscis. The proboscis works like a drinking straw. The butterfly keeps it curled up underneath its head until it is ready to drink. Then it uncurls it, sticks it into a flower, and sucks in the sweet nectar.

In this lesson, we will identify the shapes of the monarch butterfly and some of their nectar flowers. These shapes are arranged into patterns across a row. Can you see the pattern? What comes next?

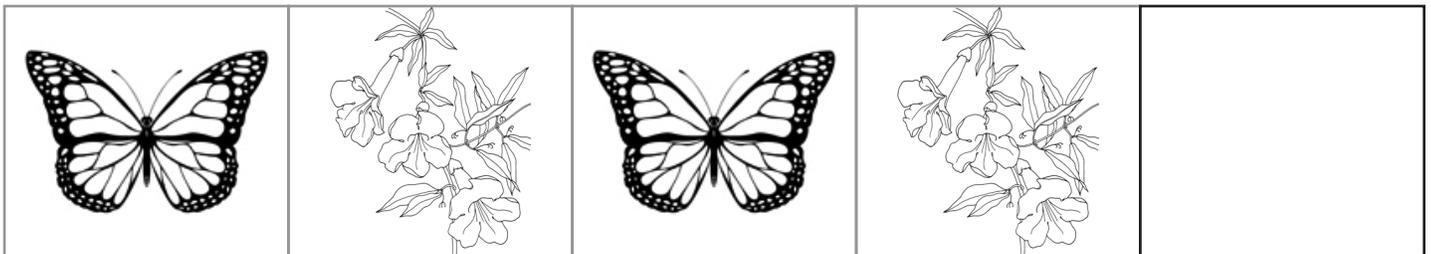
#### Activity:

Read the background information to students. Read them the essential question so they understand the focus of the lesson. Hand out worksheets.



**Essential Question:**

To extend the pattern in each row, what shape should be in the blank square?  
Cut out and use the shapes at the bottom of the page to fill in the blanks.



Cut out the shapes in the row below and use them to extend the patterns in the rows above. Some may be extra!



