

Gulp! Butterfly Survivor



Ages: Grades 1-adult

Subjects: science, languages, arts, math, social studies, and physical education

Duration: 20-45 minutes

Group Size: 20 to 40 students or more, 4 –6 participants

Setting: any room setting

Objectives

Students will learn how much effort it takes for a butterfly to eat enough to survive.

Method

Students role-play feeding, or nectaring, butterflies, learning some of the hazards a butterfly has to survive to get enough food.

Background

Butterflies need quite a bit of food to survive long enough to reproduce. In the case of the monarch butterfly, they need a lot of fat stores in order to make their difficult migration south in the fall.

Butterflies eat nectar from flowers. They uncurl their mouth-piece, called a proboscis, and stick it deep into the flower, drinking out the nectar.

Finding flowers, or nectar sources, can be hard work for butterflies. With urban areas growing, many wild flowers are being plowed under for the latest shopping mall or apartment complex. Today's busy society doesn't leave a lot of time for gardening as a hobby, either. Unless special efforts are made to help feed butterflies, they often have a tough time finding the nectar that insures their survival.

Not only do butterflies face the daunting task of finding food, but they also face many other dangers. Predators such as birds prey on the beautiful insects. We can't blame the birds – they are trying to eat, too – but birds are something a butterfly has to contend with on a daily basis. Pesticide use also kills butterflies, often unintentionally.

Finding food is indeed a game of survival for butterflies. Finding *enough* food ensures the survival of the next generations of butterflies.

Materials

- Classroom or meeting room large enough to hold all participants
- Six sturdy chairs, sat facing each other, three across
- Clear plastic cups: 3 with line drawn about 1 inch from bottom
- Straws (curly ones look like a proboscis!)
- Liquid – water works fine

Procedure

1. Set up playing field with three chairs facing three chairs. Put about 10 feet (or less) between the two rows of chairs.
2. Put a cup of liquid on three of the chairs.
3. Put an empty cup with a line drawn about 1 inch above the bottom on the chair across from the chair with the full cup of liquid.
4. Give three participants a straw and tell them that is their proboscis, or mouthpiece. Explain that they must suck liquid up from the full cup, and deposit it into the empty cup (their stomach) on the chair across from them. They must make as many trips as it takes to get the liquid up to the fill line. The first butterfly to fill their stomach is the survivor.
5. Sounds easy? Well, some butterflies have a harder challenge. Pick a challenge from the list below for one of your butterflies to face. Having a damaged wing or living in a concrete-filled city makes it even more difficult for them to eat enough. Announce that one of your participants will have to circle all the “stomach chairs” before depositing the liquid from their straw into the stomach.
6. Start the “race for survival.” Use the results to discuss habitat needs, how the stronger survive, etc.

Suggested Challenges:

- Butterfly with wing damage due to bird trying to eat it.
- Nearby garden torn out for new parking lot
- Rainy day
- Wing damage from too small a space to hatch. Wings couldn't fully expand.

After the game is over, ask the students to summarize what they learned about survival in the wild. Use this as a springboard to discuss what we can do to insure food sources for butterflies.

Extensions

Below are some suggestions for expanding students' knowledge about butterflies

- Explore some ideas for creating butterfly habitat with both nectar sources and host plants
- Plant and maintain a butterfly garden
- Do internet research on butterflies.

References:

This activity created by Thea Miller Ryan for use at the International Butterfly Breeders Conference in Kansas City, 2000. E-mail: twinrein1@home.com