The Benefits of Bats

Audience/Group Setting
Event setting

Goal
To nurture respect and caring attitude/behavior toward bats by helping people understand more about their nature and benefits bats bring to nature and people.

Objectives
After the interpretive program, 85% of guests will have enjoyed the program and be able to do at least one of the following:

1. List at least 1 way people benefit from bats (pest control, pollination, bananas, mangoes, tequila)
2. Describe why it is never a good idea to pick up or disturb bats. (i.e. rabies)

Big Idea/Main Message
Bats benefit people.

Conservation Action/Behavior Addressed
Become more aware of bats and what to do to help save them.

Background Information
Bats may be associated with ghosts, goblins and Halloween, but they don’t have much in common. Bats are not scary or evil. In fact, they are an incredibly important part of so many environments. Active at night, bats are seldom seen but surprisingly important parts of people’s daily lives. Anyone who has ever eaten bananas, mangoes, cashews or even agave, the plant used to make tequila, should thank the fruit bats for helping farmers pollinate and disperse seeds for these plants. Other bats feed on night flying insects and act as important natural pest control. As a result, corn, cotton, cucumber and other farmers save billions of dollars in pesticides. By reducing the need for pesticides, bats not only lower costs for farmers, they also help protect the environment.

Materials Needed
Crops that benefit from bat pollination or seed dispersal (any number of the following):
- Mangoes
- Peaches
- Bananas
- Dates
- Tequila bottle (only use if presenter is over 21)
- Cashews

Crops protected by insect eating bats (any number of the following):

Year of the Bat Activity – Activity Name
Corn
Pickles
Cucumbers
Cotton (boll & t-shirt)

Staff
2-3 volunteers

Length of Activity
5-10 minutes

Set up
On a table, group the materials into items benefited by bat pollination or seed dispersal and items protected by insect eating bats.

Procedure
1. Ask guests if they enjoy consuming any of the products on the table.
2. If they reply “yes” discuss some of the benefits of bats (choose which facts to provide based on which items they find interesting):
   a. FRUIT AND NECTAR EATING bats help pollinate and/or disperse seeds for bananas, mangoes, cashews, tequila, peaches, figs, dates. Tequila is produced from agave plants whose seed production drops to 1/3,000th of normal without bat pollinators.
   b. INSECT EATING bats help protect cucumbers, corn, and cotton. This saves farmers billions on pesticides and helps protect the environment.
3. Discuss other ways bats benefit people:
   a. BAT DROPPINGS in caves support whole ecosystems of unique organisms, including bacteria useful in detoxifying wastes, improving detergents, and producing gasohol (fuel mixture of 10% anhydrous ethanol and 90% gasoline that can be used in internal combustion engines) and antibiotics.
   b. RAINFOREST RENEWAL - Tropical bats are key elements in rain forest ecosystems which rely on them to pollinate flowers and disperse seeds for countless trees and shrubs.
   c. DRACULIN - An anticoagulant used to treat human heart attack and stroke patients was developed from VAMPIRE bat saliva (many people are afraid of vampire bats – it is important to note that there are no vampire bats in the U.S. – of the over 1,100 species of bats, only 3 species are vampire bats – all vampire bats live in tropical climates in the new world (Mexico, Central/S America) - feed mostly on sleeping livestock who often have no idea they’ve been bitten.)
   d. Navy researchers have patterned some SONAR systems after the bats’ ECHOLOCATION. (By making high frequency calls either out of their mouths or noses and then listening for echoes to bounce from the objects in front of them, bats are able to form pictures in their brains. In this way, bats are able to comfortably move around at night, avoiding predators, maneuvering around obstacles, locating their food, and capturing insects in total darkness.)

Year of the Bat Activity – Activity Name
e. Bats can be a TOURIST ATTRACTION. It is estimated that more than 100,000 people visit Congress Ave Bridge in Austin, TX to witness the bats leaving the bridge on their nightly flight. This generates $10,000,000 in tourism revenue annually.

f. BATS OFTEN GET A BAD RAP - Contrary to popular misconception, bats are not blind or dirty. They do not become entangled in human hair and seldom transmit disease to other animals or humans. Like dogs, cats and all other mammals, bats can contract RABIES. However, it is estimated that less than a half of one percent of bats may contract rabies. Even rabid bats normally bite only in self-defense and pose little threat to people who do not handle them. NEVER PICK UP ANY BAT – IF YOU CAN CATCH IT, IT’S LIKELY SICK.

g. WE NEED BATS AND THEY NEED US - Bats are exceptionally vulnerable to extinction, in part because they are the slowest reproducing mammals on earth for their size, most producing only one young annually. More than 50% of American bat species are in severe decline. Scientists are baffled by a disease called White-Nosed Syndrome that is affecting cave bats in the US.