

# Tears of Joy Theatre's

# Stellaluna

By Emily Alexander  
Adapted from the book by Janelle Cannon

## Curriculum Guide

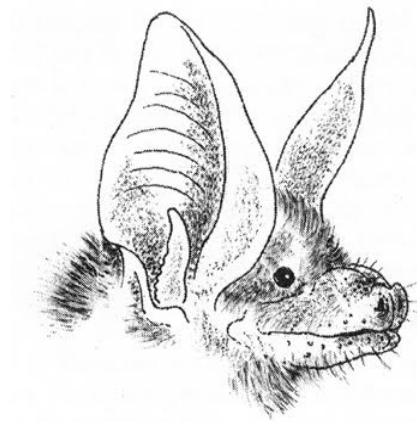
### ALL ABOUT BATS

Bats are everywhere! Bats are flying mammals that live all over the world, except for some islands, and the Arctic and Antarctica. They mostly prefer warmer areas that are closer to the equator, and they can be found in rainforests, mountains, farmland, woods and cities. There are so many different kinds (species) of bats, even the experts don't know how many there are. Around the world there are between 950 and 1,200 species (different kinds) of bats.

Bats roost in trees, caves, mines and barns — anyplace that provides shelter from the weather, protection from predators and privacy for raising their babies (pups). Bats live together in groups called colonies, which contain 100 to 1,000 bats. These mammals are also nocturnal, meaning that they sleep during the day and are awake at night. Some may fly up to 31 miles to find food during their nightly journeys. In the day, they sleep upside down from trees or the roofs of caves, holding on with their sharp claws.

### HEARING

Different bats 'see' in different ways. In general, small bats use echolocation. This means they make sounds and listen to those sound echo back, which helps them create a map of their surroundings in their brains. Unlike these smaller bats, fruit bats do not echolocate. They have large eyes and pronounced visual centres in the brain. They can see in the dark! Fruit bats need a good sense of vision, because when they forage at night for nectar and fruit, they orient by vision and the sense of smell. Here's a good rule of thumb to tell which kind of bats use what kind of hearing:



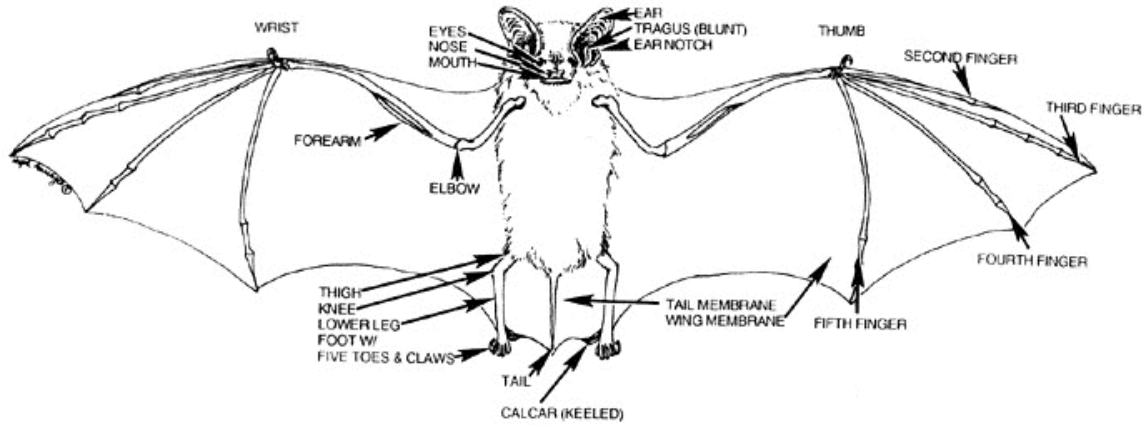
If a bat has big ears and small eyes,  
it uses echolocation.



If a bat has small ears and big eyes,  
it uses night vision.

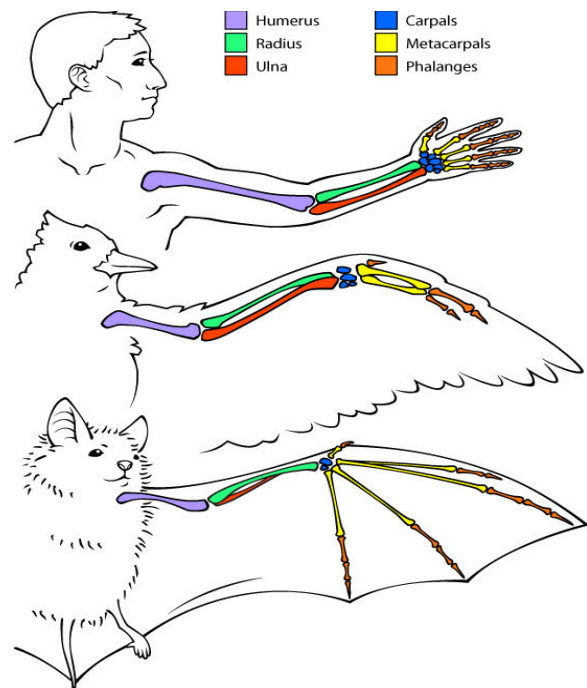
## FLYING

You can tell just by looking at a bat that even though it flies, it is not a bird. They are different in almost every way. A bat has fur and a bird has feathers. A bat gives birth to babies (pups), and a bird lays eggs. A bat's wing is designed differently, too. Look carefully at the diagram below. You will notice that the inside a bat's wings arm bones, four fingers, and a thumb!



## COMPARISON

Compare the bones in a bat wing to a bird wing and a human arm. Even though they may look very different, we all have the same bones, even finger bones! (These are called 'phalanges'.)



## FOOD

Most bats eat flowers, small insects, fruits, nectar, pollen and leaves, though it depends on the type of bat. Usually, big bats eat plants, and small bats eat insects. Fruit bats live in Africa, Europe, Australia, and Asia. That's four continents! Some favorite fruits are bananas, dates, figs, carob, avocados, guava, and mangoes. Stellularia is a fruit bat, also commonly known as a 'flying fox', and is one of the biggest species of bats on the planet.

## THE IMPORTANCE OF BATS

First, there are many species that can eat thousands of mosquitoes and crop destroying insects in a single evening. Imagine a whole colony of bats eating away. Because the majority of bats eat night-flying insects, including many agricultural pests, bats play an important role in natural pest control. Many people are unaware that over 500 plant species rely on bats to pollinate their flowers, including species of mango, banana, cocoa, durian, guava, agave, and even some nut trees. So, next time you eat some chocolate, say thanks to the bats! Large Fruit Bats (like *Stellaluna*) spread seeds throughout the rain forest helping to plant new growth.

## STORY SYNOPSIS

*Stellaluna* is the enchanting story of a baby fruit bat that falls into a bird's nest. Poor *Stellaluna* tries her best to adapt to her new home but living like a bird when you are really a bat can be a hard thing to do.

## DISCUSSION



Have you ever felt out of place or like you didn't belong? This is a pretty normal feeling when you meet new people at a new school or a new group.

When a new person joins your group, what could you do to help them feel more comfortable?

## ABOUT THE AUTHOR



Artist and writer Janelle Cannon was born on November 3rd, 1957. Ms. Cannon always loved animals, especially creatures that tend to make people uncomfortable. Ms. Cannon also noticed that animals like bats, spiders, and snakes are often feared and therefore misunderstood or neglected. While conducting research about bats, she found only two books on the subject, both out of print. She decided it was time to make her own story about these wonderful creatures. Janelle created *Stellaluna* in hopes that she would transform young people's fears of bats into informed affection. "I hope to show them in a positive light so that they might be given more respect," she says. The artist and writer also wanted to touch readers with a story about a friendship shared by two different kinds of creatures, a bat and a baby bird.

## YOUTUBE VIDEOS

<https://www.youtube.com/watch?v=FkeSSdwnPg>

An orphan short-tailed fruit bat hand-raised by Bat World Sanctuary. 4:12 min

Channel: Bat World Sanctuary

<https://www.youtube.com/watch?v=b3w9ZbRQIek>

Fun Facts About Bats. 7:38 min

Channel: OBC Bat