

Threats to bats

Lesson

7

What we will learn this week:

- Why bats need our help
- Types of threats
- Declines of bat numbers



Life can be quite tough for bats. Read on to find out some of the problems we face...

If you see this symbol:



you may need help from an adult.



Don't forget, the pencil symbol means it's your turn to do an activity!

We've included all the new words in the word list at the end!



You will need :

Everything you need is written with the activities this week!



1

What a bat needs

Before we think about the threats that bats face, let's think about what bats need for a happy, healthy life.

1

A safe home

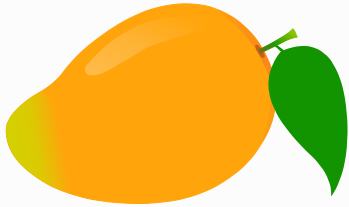
Bats need shelter from the sun, wind and rain and protection against predators. They need to be able to rest during the day and bring up their babies without disturbance.



2

Food and water

Bats need enough good food to keep them healthy and strong, and clean unpolluted water to drink.



Having a variety of food available throughout the year is really important for us bats. It offers us different sources of food at different times of the year, with different nutrients too. Imagine if there are hundreds of ripe mangoes one week but nothing the next week, fruit eating bats will have to find another place to feed the next week. It would be better if there was a mixture of different fruits around so there is always something to eat.

3

A safe way to fly between home and food

For many bat species (particularly smaller ones like our insectivorous species), flying out in the open can expose bats to predators. These species prefer to fly close to tree lines (think woodland edges, alongside water, hedges, trees) to keep safe. This is called a commuting route. Changes to a known commuting route can make it much more difficult for bats to get safely from one place to another.



Finally bats need friends! Of course that means other bats - remember mums all gather together when they are pregnant so that the babies can all snuggle up together to keep warm.

But bats also need humans to be their friends and speak up for them.



2 Threats to bats

There are, unfortunately, lots of threats to bats across southern Africa (and around the world). Homes can be lost when trees are cut down, or buildings demolished. Building works, noise, lighting and harmful chemicals (such as those used in pest control) can also all disturb or make a roost unuseable. Good feeding and drinking places can be threatened by changes to the habitat (trees cut, water polluted, areas cleared for human use), and commuting routes can also be affected by changes in the habitat as well as things like lighting making an area too bright to fly through. Finally you humans can also be a threat to us bats - some people think bats are scary because of what they have seen on TV and in films, bats can sometimes be killed or poisoned, or disturbed when people don't want to share their homes and gardens with bats.




I promise we're really nice, it's just that available trees and food are becoming more difficult to find so sometimes we have to ask if we can share your home or your garden!






DID YOU KNOW?

Silly fun fact – in the days of black and white Dracula films two fruit bats were used as “vampire” bats. The film makers would paint strawberry jam on something for example a coffin so the fruit bats would fly to it and lick the jam. (It was supposed to look like blood!). Real vampire bats are rather small, would not have looked very scary and certainly would not fancy strawberry jam.

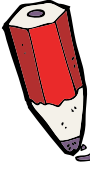
This table below shows some of the threats we face!



Threat	How it affects bats
<p>Loss of roosts (through development or cutting down of trees)</p>	<ul style="list-style-type: none"> • Bats have less choice of roost. • Bats are forced to roost in places that aren't as good. • Bats are forced to roost in locations near people where the people don't like them.
<p>Loss of old woodland</p> 	<ul style="list-style-type: none"> • Fewer old trees means fewer trees with holes, nooks and crannies for bats to roost in. • The smaller a woodland gets the more likely it is to be damaged by storms. A vicious circle of roost loss. • Small woodlands can become isolated islands of trees. This gives the bats less area to feed in, less cover while feeding and puts them at risk from predators and wet or windy weather. • Flying from one small woodland to another over open ground exposes bats to predators and bad weather.
<p>Loss of woodland corridors</p>	<ul style="list-style-type: none"> • Loss of commuting routes. • Loss of shelter. • Loss of feeding areas.
<p>Loss of individual trees</p>	<ul style="list-style-type: none"> • Loss of landmarks that bats use for navigation. • Loss of roosts. • Loss of places for feeding.

Threat	How it affects bats
Use of herbicides 	<ul style="list-style-type: none"> • Fewer wild flowers means less food for nectar and pollen eating bats, less wild fruits. • Less wildflowers also means less insects around for insect eating bats.
Use of pesticides 	<ul style="list-style-type: none"> • Less insects for bats to eat. • Insects that contain chemicals can build up in the bat's body and may make it unhealthy.
Disturbance at roosts	<ul style="list-style-type: none"> • The noise people make can disturb bats. • Lighting can disturb bats.
Light pollution 	<ul style="list-style-type: none"> • If the building is also a bat roost it can put bats off using it. • Makes the bats easier for predators to see. • Attracts insects into open areas where shy bats do not want to hunt.
Climate change (summer storms, constantly changing weather) 	<ul style="list-style-type: none"> • Bats are slow breeders. They usually have only one baby a year (twins are rare). If the weather is poor (too hot, too cold, too windy or too wet) when the mothers are pregnant or feeding young, they may not get enough food for the young bats to survive. • Poor weather when young bats are learning to fly can wipe out (or seriously reduce) that year's generation.
Persecution	<p>Bats are very misunderstood, they just want to be your friends. But sometimes when people are scared or don't like bats, they can be injured, killed or disturbed.</p> 

Over to you!



Activity 1: Race to Roost

Play our snakes and ladders inspired board game!

You will need :



A **printer**



Scissors



A **counter** and die

How to play

Aim of the game:

- Be the first bat to get to the baobab tree (in square 99).

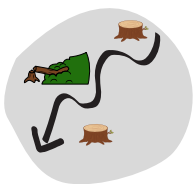
What you need to play:

1. Something to represent your bat and that is different to everyone else's "bat" (for example a coloured counter, shell, nut or button).
2. A die.
3. A print out of the "board".
4. Printed or written chance cards.

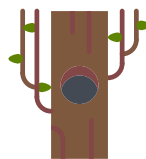
How to play

- The game is a little bit like snakes and ladders but with the addition of "chance cards".
- All the bats start in square 1.
- Let the youngest player start by throwing the die then move the number of squares shown on the die.
- Take it in turns for everyone to throw the die and move on.

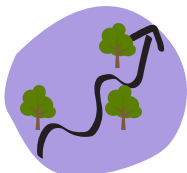
The Key



Oh dear! The forest has been cut down. Move down the board.



A tree roost.



Follow the trees up the board.



A cave roost.

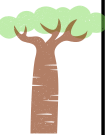
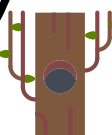





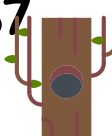






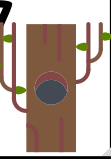











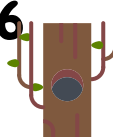







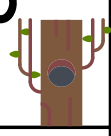












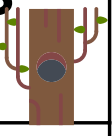
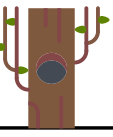










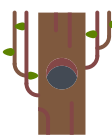





Pick up a chance card, it might be good luck or bad! Once you have read your card put it at the bottom of the pile.

Race to Roost

Race your friends to get to the Baobab tree roost. You will notice some threats that will slow you down on the way. But there are helpful squares too!

FINISH

99 	98	97 	96	95	94 	93 	92 	91
90	89 	88 	87 	86	85 	84 	83 	82
73 	74 	75 	76	77 	78 	79 	80 	81 
72 	71 	70 	69 	68	67 	66 	65	64
55 	56 	57 	58 	59	60 	61	62 	63
54 	53 	52	51 	50 	49	48 	47	46
37 	38 	39	40	41 	42 	43 	44 	45 
36	35	34 	33 	32 	31 	30	29	28 
	20	21 	22 	23	24 	25	26 	27
18 	17	16 	15	14 	13 	12	11 	10
	2	3 	4	5 	6 	7	8 	9

START





It's a warm, still night. You are able to feed well and have lots of energy as a result. Move on 4 places.

You have a baby bat to look after. Miss a turn.

Your favourite tree roost has been cut down, fly back to the next roost you find.

It's too cold, wet and windy to go out to feed. Miss a turn.

Your baby bat can look after itself. Have an extra turn.

Your cave roost has been grilled to keep people out, have an extra turn.

You find a wonderful forest. Fly on until you reach the next tree roost.

School children near you have planted trees, move on three places.

Storms blow down your tree roost, choose either to miss a turn or fly back to the nearest tree roost.

Humans chase you away from your tree roost. Fly back to the next tree / cave roost you can find (it might be square 1).

You find a forest with a mix of fruit trees for fruit bats and flowering trees that attract insects. Have an extra turn.

Tourists visit your cave and disturb you. Fly back to the last tree or cave roost.

You are injured escaping from a predator. Miss a turn while your wounds heal.

You find a place with lots of yummy food, have an extra turn.

Kind humans leave you undisturbed in their garden, move on four places.

A wildfire burns down part of your forest. Move back to the last roost.

The weather gets unexpectedly cold. Go torpid and miss a turn.

The weather is just perfect for good feeding. Have an extra turn.

People instal lights inside your cave. Move back to the next roost you find.

You feel poorly after eating insects or fruit that has been sprayed with chemicals. Miss a turn while you recover.

You get accidentally trapped inside a building. Miss a turn (then someone lets you out).

You escape from a snake! Move on four places.

A cat has discovered your roost and it is no longer safe. Move back to the next cave or tree roost.

You get caught in some fruit nets, miss a turn (while someone untangles you).

Local people go on a bat walk and are so pleased to see you they cheer. Go on three places.

You find a perfect roost, have another turn.

You land on something sticky, miss a turn while you lick your wings clean again.



3

Bats in southern Africa

Here are some of my friends to tell you about particular threats that bats in southern Africa face.



Hi I'm Bella, I'm a striped leaf nosed bat. I roost in caves, but I can be disturbed by tourists who are interested in visiting my home, causing lots of noise and light.

Hi I'm Mwezi, an Angolan free-tailed bat. My friends and I roost in houses but we can sometimes be a bit smelly (sorry I can't help it!) so homeowners sometimes try and get rid of me.



Hi I'm Eidolon the great, we've met before! Loss of woodland means that my friends and I often have to roost in gardens and parks, where some people don't like our noise, smell and droppings. Our numbers have declined so much that we are now listed as "threatened".

4

Why bats need our help

Over the past few decades bat populations have been declining at alarming rates and many species are now endangered. Globally roughly 25% of bats are considered to be at risk of extinction. Southern Africa has over 120 species but for many of these species we currently know very little about them or how they are doing. We need to find out more about them - where they live, what they like to eat, how many of them there are. But what we do know is that all these bat species face a whole range of threats (like the ones described above!), and they need our help!

As well as being super cute, we also do lots of cool stuff which is helpful for humans. We eat insects which saves the crop growing industry lots of money each year because we're a natural pest controller, we keep those pesky insects in check and stop them eating all the plants! We also help to pollinate plants, and through seeds in our poo we help to distribute seeds to new areas. So bats are really important but we need help and we need friends to stand up for us, to tell everyone how great we are and to help show that we can live peacefully alongside you humans.



The good news is that there are loads of great ways that you can help bats from building bat boxes, going on a bat walk, helping to survey for bats and talking to your friends about us. We'll be looking at all the cool things you can do to help in next week's lesson.





Activity 2: A paper puppet play

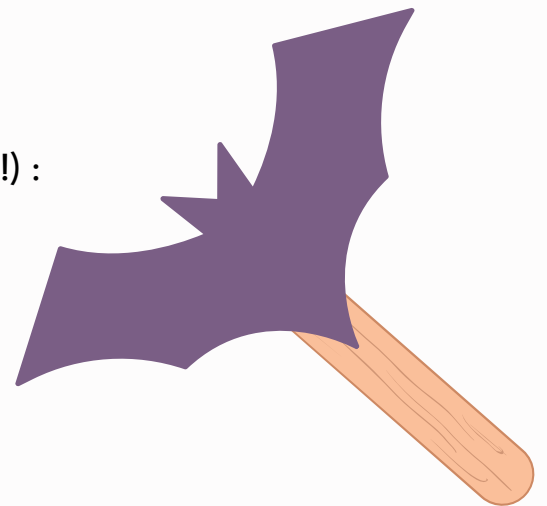
You will need :

- ✓ **Some paper**
- ✓ **Some sellotape**
- ✓ **Coloured pencils/ crayons or paint**
- ✓ **Some thread**
- ✓ **Scissors**
- ✓ **A little bit of imagination**
- ✓ **Some kebab sticks or other slim sticks**



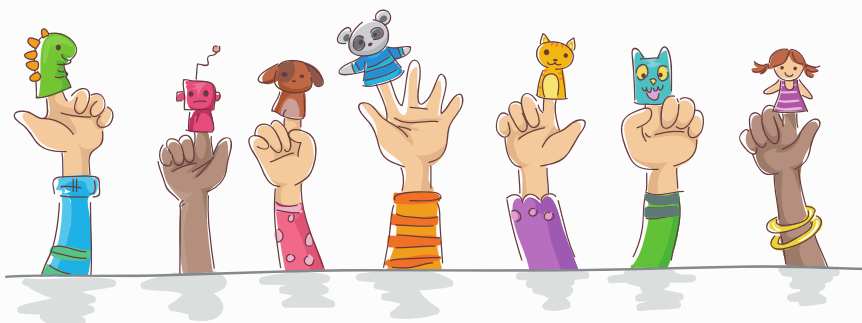
Instructions

- 1 Draw outlines of a (see next sheet for templates!) :
 1. Tree
 2. Some insects
 3. A bat
 4. A boy or girl



- 2 Cut out your shapes and attach the tree, bat, girl or boy each to their own stick. You can attach the insects to a piece of thread.

- 3 Use a storyline to write a script for your cut out puppets (an outline is given below or you can make up your own story!)





Here's a story to tell with your puppets!

Will you live here, bat?

The boy or girl in the story really likes bats. They read stories, draw pictures and even dream about bats. One night they dream that a bat flies into their garden. They ask the bat why it has come. The bat says it must find a new place to live. The forest it used to live in is being cut down and the trees burned. It's no longer safe to live there.

The boy or girl asks if the bat would like to stay and live in the garden. The bat asks if there is a safe place for it to roost. The child says we have big trees. The bat replies that is good. The trees will have places where the bat can be sheltered from the wind, rain and sun and safe from predators .

The child asks, now that the bat has a safe place to shelter will it live in the garden? The bat replies that it also needs a good place to eat. It is an insectivores bat. The child tells the bat there is a pond just outside the garden. The bat replies the pond sounds perfect. It will be able to drink from the pond and hunt the insects that live around the pond.

The child asks again, will you stay and live here bat, now you have a place to roost and a place to eat. The bat replies that it needs to have some commuting routes to fly safely around the neighbourhood. The child replies that they have a school project to plant more trees in the village especially along the routes the children walk to school. The bat is pleased, the shady routes will make safe places for the bat to fly at night.

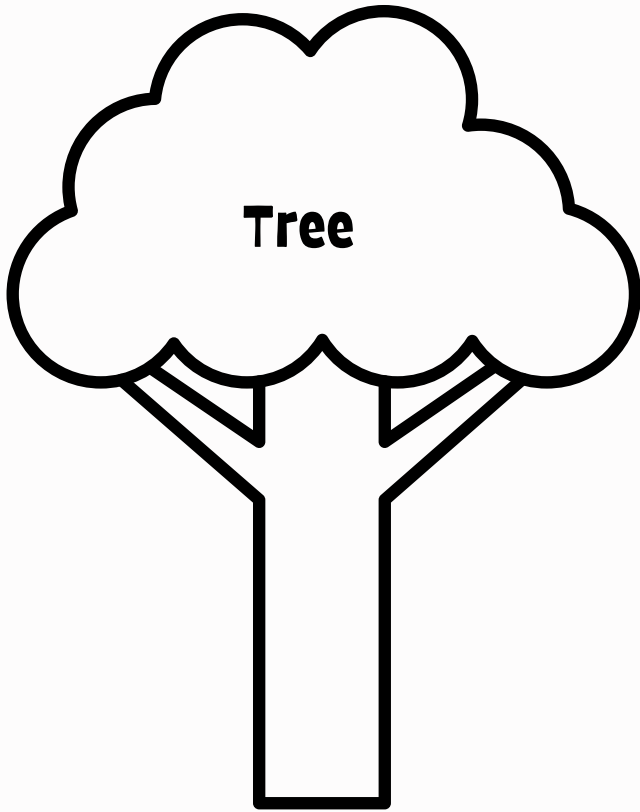
The child asks again, will you stay and live here. The bat replies Yes, it will stay and live in the garden. It has everything it needs for a happy healthy life, It has – a big tree to roost in, a pond to feed over and drink at, commuting routes so it can fly around the village safely, and last of all a human friend, someone who likes bats and will share their garden with him.

The child wakes up and wonders if it was a dream or has a bat really come to live in their garden.

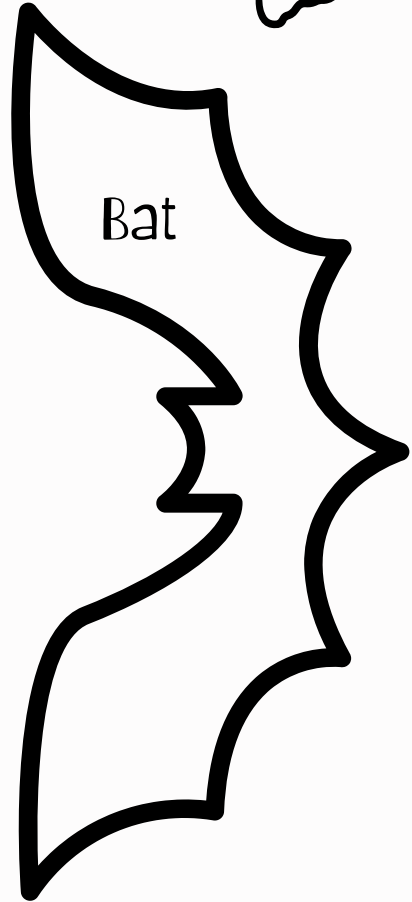
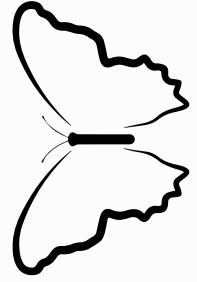
The end



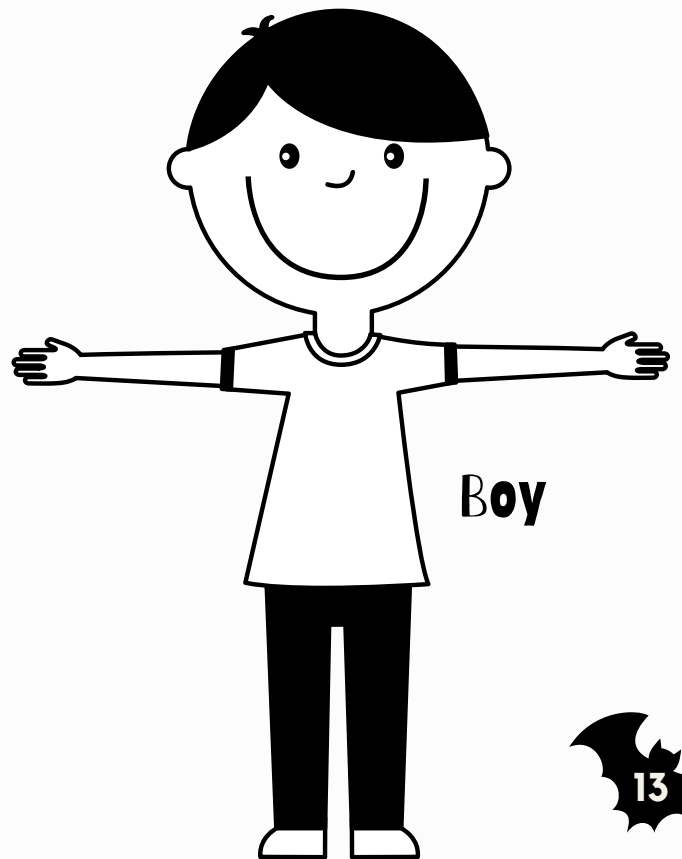
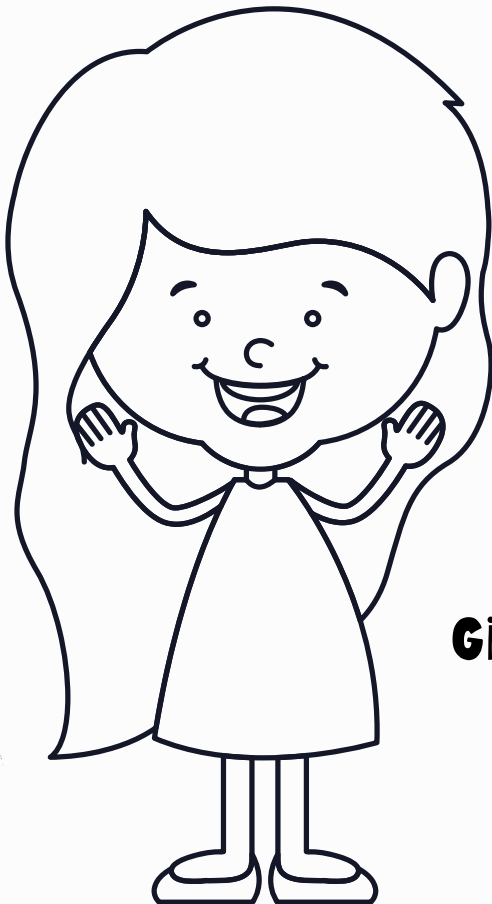
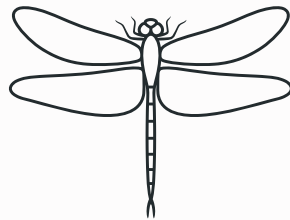
Shapes to cut out !



Insect 2



Insect 1



Glossary

(words we have learned today!)

Predator – an animal that hunts and eats another animal . For examples hawks may hunt and eat bats. Bats are predators of moths.

Prey – the animal that is eaten. A bat is the prey of the hawk. The moth is the prey of the bat.

Commuting route – a route used regularly. For example bats may follow a hedge line that takes them from their roost to a pond or orchard where they feed. The route they take from the roost to the feeding place is called a commuting route, in this case following a hedge.

Herbicide- a chemical used to kill certain plants. Used in agriculture to kill wild plants but not the crop.

Pesticide – chemical used to kill “pests”usually to protect crops from insects.

Biodiversity – the variety of living things in an area. Generally the more diverse the healthier (more resilient) it is.



I hope you learned a lot today!
See you next week, for our last lesson
together, to learn what you can do to
help bats!