



BAT ACTIVITY TRENDS

Community Science Program



YOUTH SCIENTIST PARTICIPATION PACKET

Watch for bats.
Count bat passes in
your neighborhood.
Collect data for science
and conservation!

Recommended for ages 6-12

A GUIDE FOR BAT OBSERVATIONS IN WASHINGTON STATE



Getting out into nature and observing our local wildlife is a great way to connect with your local environment. A personal experience, from a safe, comfortable distance, can help us better understand our local wildlife species and inspire us to take actions to protect them. Here are some tips and tricks for going out and observing bats in your area, so you can take part in the Bat Activity Trends (BAT) Community Science Program.



Bats are
common in
urban areas.



Bats are at peak
activity levels June
through August.



Bats are best seen
between sunset
and last light.



Bats are not out in
heavy rain or high
wind nights.

TO PICK A GOOD OBSERVATION SPOT:

- Find a place with some open sky.
- Stay near home to help us gather data across the area.
- **Get creative!** Some suggested locations for observations include: yard, balcony, window with a view, sidewalks, public parks and community areas, local school yard, rooftop patios.
- Or, take a walk in your neighborhood. Always use the buddy system!
- See our safety tips for more information.

Keep your eyes open! More than just bats like to be out at this time of day. You might spot some other common wildlife species too! Report animals like raccoons, coyotes, opossums and more on Carnivore Spotter at carnivorespotter.org



LEARN ABOUT WASHINGTON BATS



Washington
has 14 species
of bats



Washington bats are
insectivores, meaning they
feed on insects. Bats can eat
up to $\frac{1}{2}$ their body weight in
insects every single night.



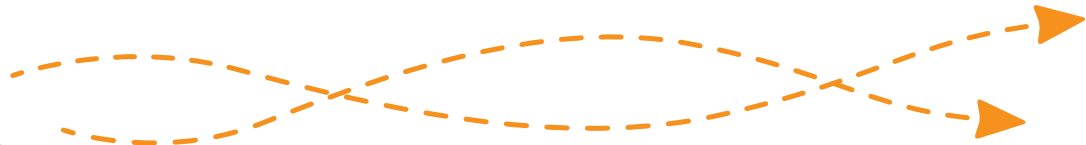
Our bats live in all kinds of
habitats. Some bats here love
trees, while others live in
rock crevices, caves, mines,
buildings or bridges!



Baby bats are called pups! Bats have babies just once
a year, and most bats have just one pup at a time.



In the winter, some bat species hibernate all winter long,
while others migrate south to warmer places!





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This program will help scientists with future studies and contribute to the conservation of bats in our area! Starting at sunset, spend 30 minutes observing the sky and watching for bats!

1. Use our **Bat Observation Guide** to pick a good night and place for bat watching
2. Look up what time **sunset** is on the night you plan to watch for bats
3. Pick a good spot **near your home** to watch the sky for bats
4. Review our Safety Checklist so you are **prepared** to have a good night of bat watching!
5. Watch for **30 minutes** starting 5-10 minutes after sunset. Count all the bats you see!

Thank you for participating in the BAT Program!

Please use the QR code or go to **bat.fieldscope.org** to create a login, then submit your data.

Note: You must be at least 13 to create a login to submit your data. If you are under 13 please find a caregiver or older sibling to help you.



bat.fieldscope.org

DATA COLLECTION SHEET

Where are you watching from?

List the address or closest street

What city and state?

What is today's date?

What time is sunset today?

What time did you start your 30-minute watch?

Who is watching with you?

Did you watch from one spot?
Or did you take a 30-minute walk?

Where did you walk?

Did you see any bats?

How many bats did you count?

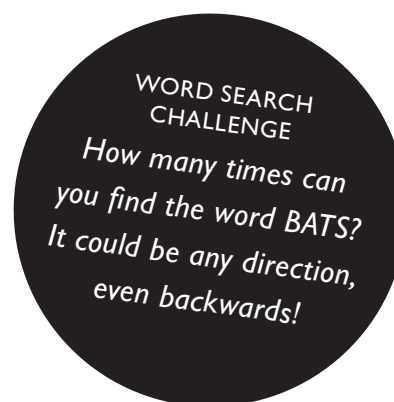
What other wildlife did you see?

Make notes about your bat watch here:



B	S	N	B	A	T	S	B	N	A	T	C	S
A	C	O	N	S	E	R	V	A	T	I	O	N
T	I	C	B	T	A	O	S	T	T	A	M	E
S	E	T	B	B	S	O	P	U	P	S	M	I
E	N	U	S	A	A	S	B	R	T	T	U	G
C	C	R	U	B	T	T	A	E	S	A	N	H
O	E	N	N	D	T	S	S	T	A	B	I	B
S	W	A	S	H	I	N	G	T	O	N	T	O
Y	I	L	E	S	B	S	B	A	T	S	Y	R
S	L	B	T	T	S	A	C	B	A	T	B	H
T	D	A	B	A	T	S	T	O	A	S	A	O
E	L	H	A	B	I	T	A	T	V	T	T	O
M	I	S	C	O	E	X	I	S	T	E	S	D
B	F	I	N	S	E	C	T	I	V	O	R	E
A	E	O	B	S	E	R	V	A	T	I	O	N

BATS
 COMMUNITY
 CONSERVATION
 COEXIST
 DISCOVER
 ECOSYSTEM
 HABITAT
 INSECTIVORE
 NATURE
 NEIGHBORHOOD
 NOCTURNAL
 OBSERVATION
 PUPS
 ROOST
 SCIENCE
 SUNSET
 WASHINGTON
 WILDLIFE



HABITAT FEATURES

WATER: Bats can't land to drink from a bird bath or fountain, they need a wide spot where they can swoop down to skim the surface for some water. Find a body of fresh water like a lake, stream or pond.

SHELTER: A place where bats sleep or rest is called a "roost." Bats love snags because they produce heat while they decompose. A different way that bats live in trees is by hiding underneath a peeling strip of bark! Peeling bark gives them a safe and warm place to snuggle in and stay warm. To help bats, some people put up bat houses or bat boxes. They are typically mounted high up on a pole or on someone's house.

FOOD: All of our local bat species are insectivores. This means they eat insects! Mosquitoes, moths or beetles all make a great meal for a hungry bat!

FLYWAY: Many bats will use openings in tree canopies or a forest edge for a flyway. That way they can hunt without having to dodge tree limbs. Do you see any open areas near trees? This can look like a large lawn area or even a hiking trail!

HABITAT HUNT

How many features can you find? What do you think makes the best bat habitat?

- | | | |
|---------------------------------------|------------------------------------|-------------------------------------|
| <input type="checkbox"/> Fresh water | <input type="checkbox"/> Tree snag | <input type="checkbox"/> Large tree |
| <input type="checkbox"/> Peeling bark | <input type="checkbox"/> Crevices | <input type="checkbox"/> Flyway |
| <input type="checkbox"/> Insects | <input type="checkbox"/> Bat house | <input type="checkbox"/> Bats |

IT'S TIME FOR MORE BAT FUN!

Thank you for participating in the
Bat Activity Trends (BAT) Program!

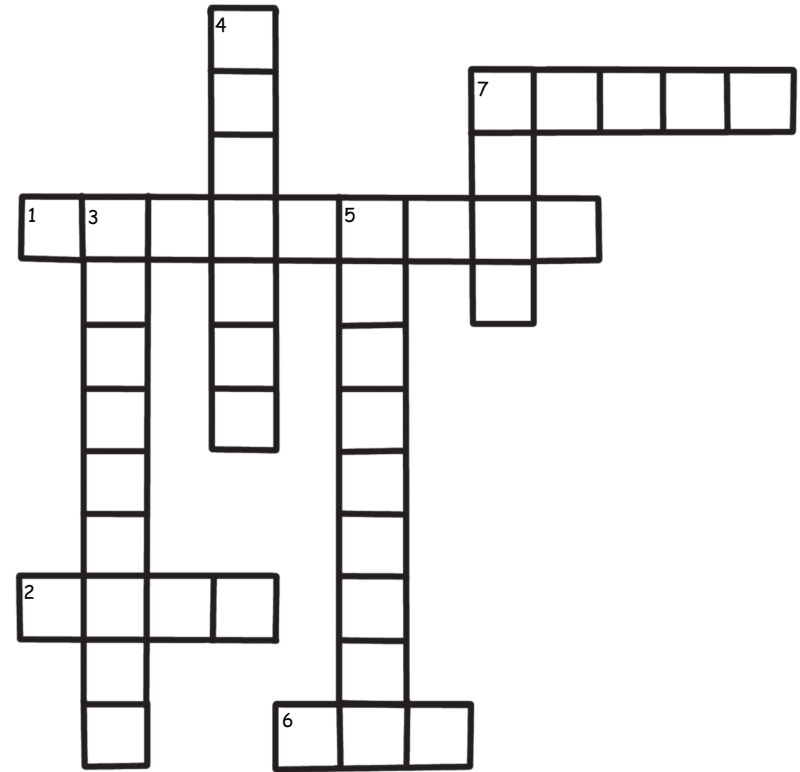
Follow this QR code to find more free activities by
local artist and bat volunteer Kami Koyamatsu.



Activities by Kami



Copyright © 2020 by Kami Koyamatsu



ACROSS:

1. A deep long sleep that usually happens during the winter.
2. Some bats sleep in this large stone structure.
6. The main way a bat moves from one area to another.
7. Bats are not _____, they actually have pretty good eyesight.

DOWN:

3. Bats are very _____ to the ecosystem.
4. Most bats eat these.
5. Term for being active during the night and sleeping during the day.
7. The only true flying mammals.



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RESOURCES FOR ENGAGING YOUNG BAT SCIENTISTS

Sitting and waiting for bats to appear can be a challenge for young scientists. Our kid-friendly data sheet and activities page can help keep kids engaged. Plan ahead and use some of these podcasts, books, and videos to help pass the time, all available free online or at your local library.

BOOKS FOR KIDS OF ALL AGES

(Check your local library!)

Story books:

Stellaluna, by Janell Cannon

Bats in the Library, series by Brian Lies

Nightsong, by Ari Berk

Bat Count: A Citizen Science Story, by Anna Forrester

Amara and the Bats, by Emma Reynolds

The Bat, by Elise Gravel

The Bat Book, by Charlotte Milner

YA novels:

The Silverwing, series by Kenneth Oppel

The Underland Chronicles, by Suzanne Collins



PODCASTS

Orange is the New Bat: Wow in the World (28 min)

<https://open.spotify.com/episode/432DtZ3VoNfgnEB2vU34e8?si=b7bRwNqCSEqDR7hKqoWTeg>

Ah, Bats! Wow in the World (30 min)

<https://open.spotify.com/episode/6npd3yDqmw3XJgl3sMIA5?si=qxD-KNDkQ4alfXli2u2rJQ>

Science in the City: Chasing Bats and Tracking Rats: Short Wave Radio (13 min)

<https://open.spotify.com/episode/0Vnb5XMKabAjD4cvyAJ5fl?si=717c3-9fSr66L3dZQDgE8Q>

YOUTUBE VIDEOS

3 Fun Facts About Bats! | SciShow Kids (4 min)

<https://youtu.be/2Mii45v85YY>

Wild Kratts: Creatures Come Out at Night! | Kids Videos (25 min)

<https://youtu.be/Q6ba7dBhxe0>

Kids Book Read Aloud: BATS AT THE BEACH by Brian Lies (5 min)

<https://youtu.be/j5TZYFyD0Sg>

Tinga Tinga Tales Official | Why Bat Hangs Upside Down (30 min)

<https://youtu.be/eGyl3j4Epl0>



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HOW TO PARTICIPATE IN THE BAT PROGRAM

1. Use the Bat Observations in the Washington guide to **select a night** for an observation. Bats are active in summer and are best observed on calm nights. Finding a spot where you can see open sky will help spot the silhouettes of bats against the darkening sky.
2. **Pick a spot** close to home! This is safest and helps us create a complete map of the area. If everyone did an observation right outside their front doors we would have perfect data for our trends map! So don't feel like you need to travel far to participate. Balconies, windows, and front steps can work just as well as backyards, parks and driveways. Anywhere you can see the sky might be a place you can spot a bat!
3. **Read the safety checklist** if you are leaving your own property for your observation. Stay smart and stay safe! We highly recommend the buddy system for all observations.
4. If you choose to do your observation as a walk, map out your route ahead of time and walk it once in the daylight so you know if there are any obstacles you will face after dark.
5. Look up the **official sunset time** for the night you are going to do your observation. You can find this information on the Internet (search sunset, the date, and your city), on a weather app, or in the newspaper. You will start your observation 5-10 minutes after the official sunset time.
6. If you are 13 or older, use the QR code or URL on the Data Collection Sheet (next page) to **create a login** on Fieldscope so you can submit your data after you do your observation. We highly recommend you do this before you do your observations. If you are under 13, find an adult or older sibling to create a login for you.
7. Review the Data Collection Sheet and the instructions on the back to be sure you understand the information you will be collecting during your observation.
8. If you are **participating with young kids**, download our **Youth Scientist Participation Packet** which includes a Data Collection Sheet just for kids, a word search and coloring activity to work on while they wait for bats, and a list of recommended podcasts, books, and YouTube videos all about bats to **keep them engaged** during the 30 minute observation. Podcasts are ideal for listening to while keeping their eyes on the sky to see local bats.

TIPS FOR OBSERVATION NIGHT SUCCESS

- Check out your selected spot in the daylight to know what supplies you need.
- Arrive 15-20 minutes before sunset to set up your spot and fill out the first half of the data sheet.
- Use the alarms on your phone to alert you to the start and stop times so that you observe on time and for the full 30 minutes. It's easy to get distracted by your surroundings and lose track of time!
- Be patient! Some bat species emerge early in the night and some emerge late after sunset. Depending on your location and common species, bats could come out any time in those 30 minutes.
- You might not see bats every time you observe, but your data is still important to our project. Please submit your results even if you do not see bats, and visit our website for tips on finding another spot to view bats in your area.
- Observing bats is a great opportunity to appreciate some of the other great things about being out in nature at sunset. Take a few minutes to watch, listen, and feel the changes that happen in our environment as the sun goes down!



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SAFETY CHECKLIST

Thank you for taking part in the Bat Activity Trends Community Science Program. While all activities contain some risk, we believe this program can be conducted safely with a little planning. If your planned observation site is outside your home or in a public space, please review our guidelines and plan ahead to ensure a safe experience.

Below you will find a simple health and safety checklist. We ask you to think about the hazards and risk level which may be present for your survey along your planned route. Our aim is to help you improve your own personal safety while carrying out surveys of bats in the field.

This program begins at sunset and ends at or after dark. Please bring protective clothing and lights for your safety and so you can be seen by others.

The aim of this survey is to observe bats and other nocturnal wildlife close to your home.

If leaving your household to carry out the program you should only go to locations which are:

- *Close to home (short walking distance)*
- *Familiar to you and safe to walk after dusk or before dawn, with safe footpaths along the entire route*
- *Public open spaces (or if private land then you have permission to be there)*
- *Not too busy with other people so that social distancing is easy to maintain*

If conducting your observation in a public space we highly recommend using the buddy system and not doing your observation alone. Some public meet up events are planned if you want to participate and do not have access to a buddy. See our website for more information.

* Safety Checklist is adapted from the Bat Conservation Trust's Sunset Survey program resource.

Checklist for safety supplies:

- ☐ Flashlight and/or headlamp with extra batteries
- ☐ Cell phone (with full battery)
- ☐ Reflective clothing if walking near roads
- ☐ Appropriate footwear

Safety checklist:

- ☐ Do not survey alone – enlist friends/family to accompany you on the surveys
- ☐ Consider any health/mobility issues that you or your helpers have and ensure the length/nature of the route is appropriate
- ☐ Stay on designated paths and sidewalks to protect natural areas and for your own protection
- ☐ Plan route beforehand and walk in daylight in advance – stick to footpaths
- ☐ If visiting private land, contact landowners before carrying out your survey
- ☐ Identify hazards to be avoided on your survey, such as trip hazards, sudden drops, trouble spots (danger from other people), presence of animals, etc.

Will watching bats put me or my family in any danger?

No, watching bats in the sky will not endanger you or your family. Bats pose no threat to humans if they are left alone. Never handle a bat without proper training and protective gear. If you find a bat, please leave it alone. If the bat looks like it needs help or to be relocated, please reach out to the Washington Department of Fish and Wildlife or a local wildlife rehabilitation center.

Thank you for participating in the Bat Activity Tracking program. Visit zoo.org/batactivity or wdfw.wa.gov/bats for more bat information.