

Owls & Bats

Pre-Visit Packet

The activities in this pre-visit packet have been designed to help you and your students prepare for your upcoming What Goes “Bump” in the Night? program at the St. Joseph County Parks. The information in this packet will help your students become more familiar with the owls and bats that live in Indiana as well as introduce you to characteristics of owls and bats and their basic lifestyles. Of course, if you do not have time to do the activities prior to your park visit, they will also work as a review for what the students learned during the program.

Test Your Bat IQ



Discuss the following questions and answers as a group:

1. What kind of animals are bats: birds, reptiles, mammals or amphibians?
Answer: Bats are mammals. They are warm-blooded, have fur, give birth to live young and feed their babies milk.
2. What is the wingspan of the biggest bat in the world: 1 foot, 6 feet or 50 feet?
Answer: The world’s biggest bat is called a Flying Fox. It lives in Java (in Asia) and has a wingspan of about 6 feet.
3. The smallest bat in the world is the size of what animal: a guinea pig, an ant or a bumblebee?
Answer: The smallest bat in the world is the Bumblebee Bat, which lives in Thailand. It is about the size of a bumblebee!
4. Which of the following foods are eaten by bats: insects, fish, blood, nectar or fruit?
(*Hint: There is more than one correct answer.*)
Answer: Bats eat all of the foods listed! However, all of the bats that live in Indiana are insect-eaters.
5. How many kinds of bats are there in the world: 10, 500, or 1,000?
Answer: There are about 1,000 kinds of bats worldwide. In Indiana, there are 10 species of bats.
6. How many babies does a female bat have in 1 year: 1, 5, or 10?
Answer: Most female bats have only one baby per year.
7. Bats are important to people because they: eat pesky insects, spread fruit seeds or pollinate flowers?
(*Hint: There is more than one correct answer.*)
Answer: All three are correct! Bats help people by eating insects, distributing plant seeds and pollinating flowers so that they can produce fruit!



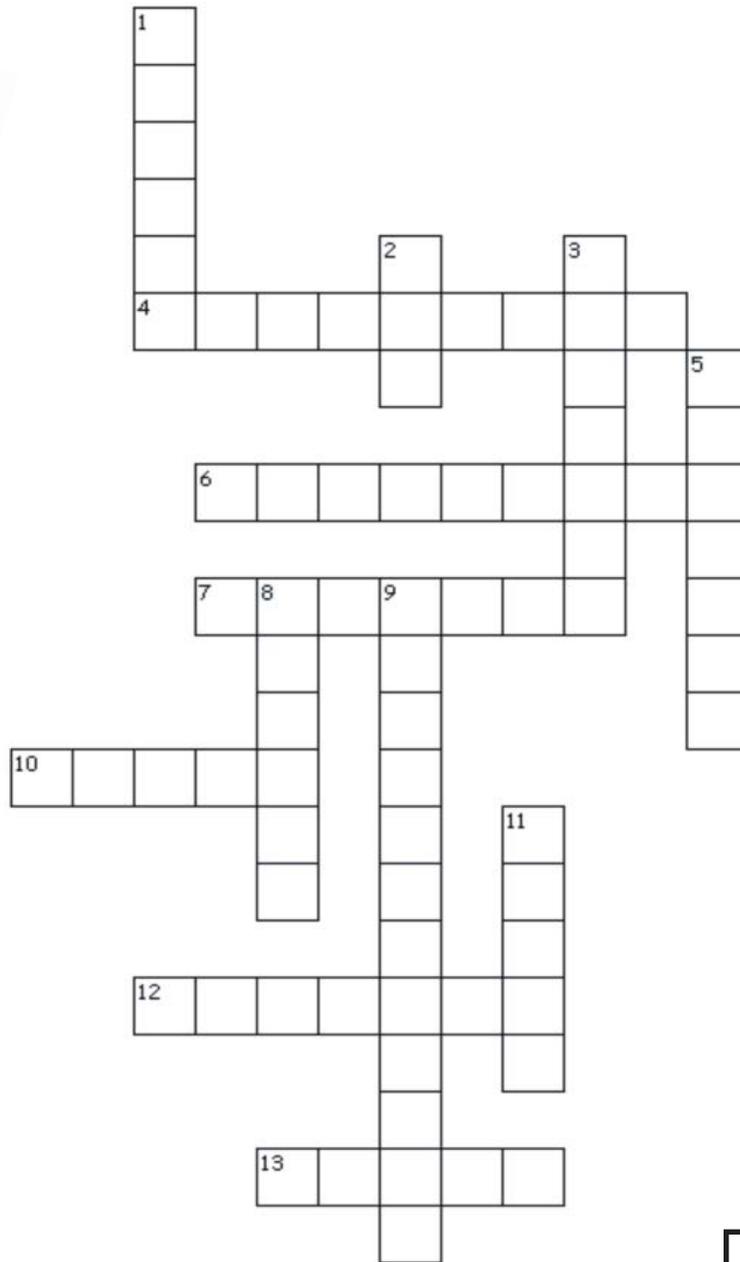
Bat Math



1. A Little brown bat ate 527 insects between 8:00 and 9:00. It ate 461 insects between 9:00 and 10:00. How many insects did it eat altogether?
2. An active bat's heart beats 900 times per minute. An active human's heart beats 150 times per minute. What is the difference between the two?
3. When a bat hibernates, its heart beats only 20 times per minute. How many times will it beat in two minutes?
4. A female Evening bat has two babies every year for three years. How many babies does she have altogether?
5. A Little brown bat flaps its wings 360 times in half a minute. How many times will it flap its wings in one whole minute?
6. A colony of 600 Little brown bats lives in the Red Barn at St. Patrick's County Park. If 12 of those bats are eaten by owls, how many will be left?
7. In Anna's backyard, bats visited flowers on 12 different plants in one night. Six plants did not get visited by bats. How many plants are there in Anna's backyard?
8. A mango tree has 75 fruits growing on it. A fruit bat eats four mangos. How many mangos are left?



Beautiful Bats



Clues:

Across

4. Bats are _____ (active at night).
6. During cold weather, some bats _____ (sleep) in caves.
7. All of the bats of Indiana eat _____.
10. Many tropical bats eat _____.
12. During cold weather, many bats _____ (travel) to warmer places.
13. The Vampire Bat drinks _____, usually from animals like cows.

Down

1. Bats help plants by spreading _____ from flower to flower.
2. A baby bat is called a _____.
3. Because bats have fur and feed their babies milk we know they are _____.
5. There are ten different _____ (kinds) of bats in Indiana.
8. Some bats drink _____ from flowers.
9. Many bats find their way in the dark by using _____.
11. During the day, many bats roost in _____.

Answers

- | | |
|--------------|-----------|
| Blood | Migrate |
| Caves | Nectar |
| Echolocation | Nocturnal |
| Fruit | Pollen |
| Hibernate | Pup |
| Insects | Species |
| Mammals | |

Bat Math Answers

1. $527 + 461 = 988$

2. $900 - 150 = 750$

3. $20 + 20 = 40$

4. $2 \times 3 = 6$

5. $360 + 360 = 720$

6. $600 - 12 = 588$

7. $12 + 6 = 18$

8. $75 - 4 = 71$

Beautiful Bats Crossword Puzzle Answers

ACROSS

4. nocturnal

6. hibernate

7. insects

10. fruit

12. migrate

13. blood

DOWN

1. pollen

2. pup

3. mammals

5. species

8. nectar

9. echolocation

11. caves

Who is Wise about OWLS?

Try this true or false to see what you know!

- _____ All owls are nocturnal.
- _____ Some owls nest in woodpecker holes.
- _____ The male owl is larger than the female owl.
- _____ An owl can turn its head all the way around - 360 degrees.
- _____ During breeding season, owls defend their territory from other owls.
- _____ Owls catch their prey with their strong hooked bills.
- _____ Some owls eat insects.
- _____ If a human or a predator threatens her nest, the female owl will fly away until the danger has passed.
- _____ During courtship, a male owl will bring “gifts” of food to the female.
- _____ Pesticides (chemicals that kill insects and rodents) can kill owls.
- _____ Owls shred their prey with their hooked bills.
- _____ When an owl flies, its wings are silent.
- _____ Owls don't see fine in the daytime.
- _____ An owl can hear a mouse from 75 feet away.
- _____ Owls eat things they can't digest.



Throughout history owls have been feared and worshipped in human culture.

Who is Wise about OWLS?

Answer Key



- _____ All owls are nocturnal. **FALSE. Some are diurnal, such as Snowy owls and Burrowing owls.**
- _____ Some owls nest in woodpecker holes. **TRUE. Screech owls and Barred owls nest in tree holes, usually left by woodpeckers.**
- _____ The male owl is larger than the female owl. **FALSE. The female is up to 50% larger.**
- _____ An owl can turn its head all the way around - 360 degrees. **FALSE. It can turn its head 270 degrees, but not the full 360.**
- _____ During breeding season, owls defend their territory from other owls. **TRUE.**
- _____ Owls catch their prey with their strong hooked bills. **FALSE. They catch their prey with their strong talons (feet).**
- _____ Some owls eat insects. **TRUE. Many species eat insects as well as larger prey.**
- _____ If a human or a predator threatens her nest, the female owl will fly away until the danger has passed. **FALSE. She will vigorously protect her nest.**
- _____ During courtship, a male owl will bring “gifts” of food to the female. **TRUE.**
- _____ Pesticides (chemicals that kill insects and rodents) can kill owls. **TRUE. When an owl consumes prey that has been exposed to poisons, the owl ingests the poison. If this happens enough, the owl will be poisoned as well. If the poisons kill all the prey, owls can starve.**
- _____ Owls shred their prey with their hooked bills. **TRUE, usually. Owls will swallow their prey whole if they can. If they can't they will use their bills to tear it into smaller pieces.**
- _____ When an owl flies, its wings are silent. **TRUE.**
- _____ Owls don't see fine in the daytime. **FALSE. They see fine.**
- _____ An owl can hear a mouse from 75 feet away. **TRUE.**
- _____ Owls eat things they can't digest. **TRUE. Hours after they eat, they “cough” up pellets of fur, bone, feathers and insect exoskeletons, which they cannot digest.**

Hungry Owl Math



Most owls consume rodents like rats and mice; some species also eat large insects, like moths. In the wild, owls are excellent at controlling rodent populations, so much so that some communities build nesting boxes to keep owls around. A small owl like a screech owl eats about 5 mice in a single day. A larger owl, like a great horned owl, can eat 12 mice daily and a barn owl feeding a nest full of young may catch more than 20 mice in one day.

1. You are lucky. A screech owl and a barn owl with a nest full of young live by your home.
 - a. Based on the information above, about how many mice per week could the owls remove from your neighborhood?

 - b. How many more mice can the great horned owl eat in a week than the screech owl?

2. A barn owl caught 15 mice Monday night, 18 mice on Tuesday and Wednesday nights, 21 mice on Thursday night and 13 on Friday night. What is the average number of mice per night the barn owl caught?

3. A screech owl was hunting for moths and katydids to feed its young. Hunting insects is not easy and the owl tried and missed 4 times for each insect caught. To catch one insect, how many times did the owl have to try to catch an insect?

4. An owl's eyes are so big that they can not move them. So, in order to see from side to side the owl must turn its head in the direction it wishes to look. If an owl can turn its head 270 degrees, how many degrees is it short from turning its head in a complete 360 degree circle?

5. A farmer is having trouble with rodents in her fields. Based on the information above, what kind of owl do you think that she would like to live on her property? Why?

Hungry Owl Math

Answer Key

- 1.a. Screech owl: $5 \times 7 = 35$; Barn owl: $20 \times 7 = 140$; $35 + 140 = \mathbf{175}$ mice could be removed
- 1.b. Screech owl: $5 \times 7 = 35$; Barred owl: $12 \times 7 = 84$; $84 - 35 = \mathbf{49}$ more mice
2. $15 + 18 + 18 + 21 + 13 = 85$; $85/5 = \mathbf{17}$ mice per night
3. 5 attempts
4. $360 - 270 = \mathbf{90}$ degrees short of completing a 360 degree circle
5. (opinion)

Find the Owl's Prey

p s g g f p d n q b f f m f s
c a t e r p i l l a r u w t d
k l p c o a e b m t s h u w r
n a e x g k s n e s a r w g a
u m b r a u x s o e t b r v z
k a d n r c s p h l t o t t i
s n s w e i o t e o u l u e l
q d l t e s u o m n p l e q r
i e s b i r d q d w o p t n a
i r v m s x h h s z e d e k b
b e o f n n o s m b r w f r b
q t t j i g r a c c o o n t i
h t h d d s p h r d e h a a t
k n u m p i h c o u z l x r d

ant
bat
beetle
bird
caterpillar
chipmunk
fish
frog
grasshopper
groundhog
lizards

moth
mouse
opossum
rabbit
raccoon
rat
salamander
shrew
skunk
snake
squirrel
turtle

