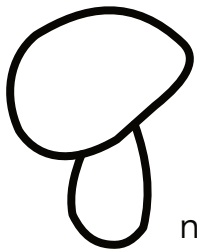
A photograph of a grassy field with a building in the background. The field is filled with tall, thin grasses and some yellow flowers. In the background, there is a building with a brown roof and a chimney, surrounded by trees. The sky is blue with some clouds.

# Junior Naturalist Activity Book

**Black Hill Regional Park**



# What is a Naturalist?

A park naturalist works to help people learn and love nature. A park naturalist is part teacher, part scientist, and part park ranger. They are resources for park visitors to learn about local plants and animals as well as larger ecological systems. They are advocates for playing outside and facilitators of muddy mischief. The park naturalists at Black Hill manage wildlife habitat and nature play spaces, lead summer camps, grow community around Black Hill Discovery Center, Black Hill Regional Park, and much more!

## What it means to be a Junior Naturalist

As a Junior Naturalist, you are learning skills that will help you become a great park naturalist someday! Nature knowledge, keen observation skills, and never-ending curiosity are musts for any successful naturalist!

## How to become a Junior Naturalist:

### 1. Complete as many pages as you can



Activities with the frog are designed for naturalists of all ages



Activities with the dragonfly are designed for the younger naturalists (under 7)



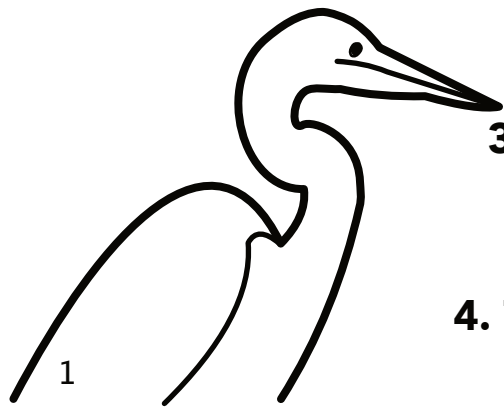
Activities with the beetle are designed for the older naturalists (7-12)

Complete any of the activities, for any age, that interest you - these are just suggestions!

### **2. Attend a naturalist-led program if you can. To find available programs visit [www.activemontgomery.com](http://www.activemontgomery.com)**

### **3. Bring your completed book to the Discovery Center for a patch.**

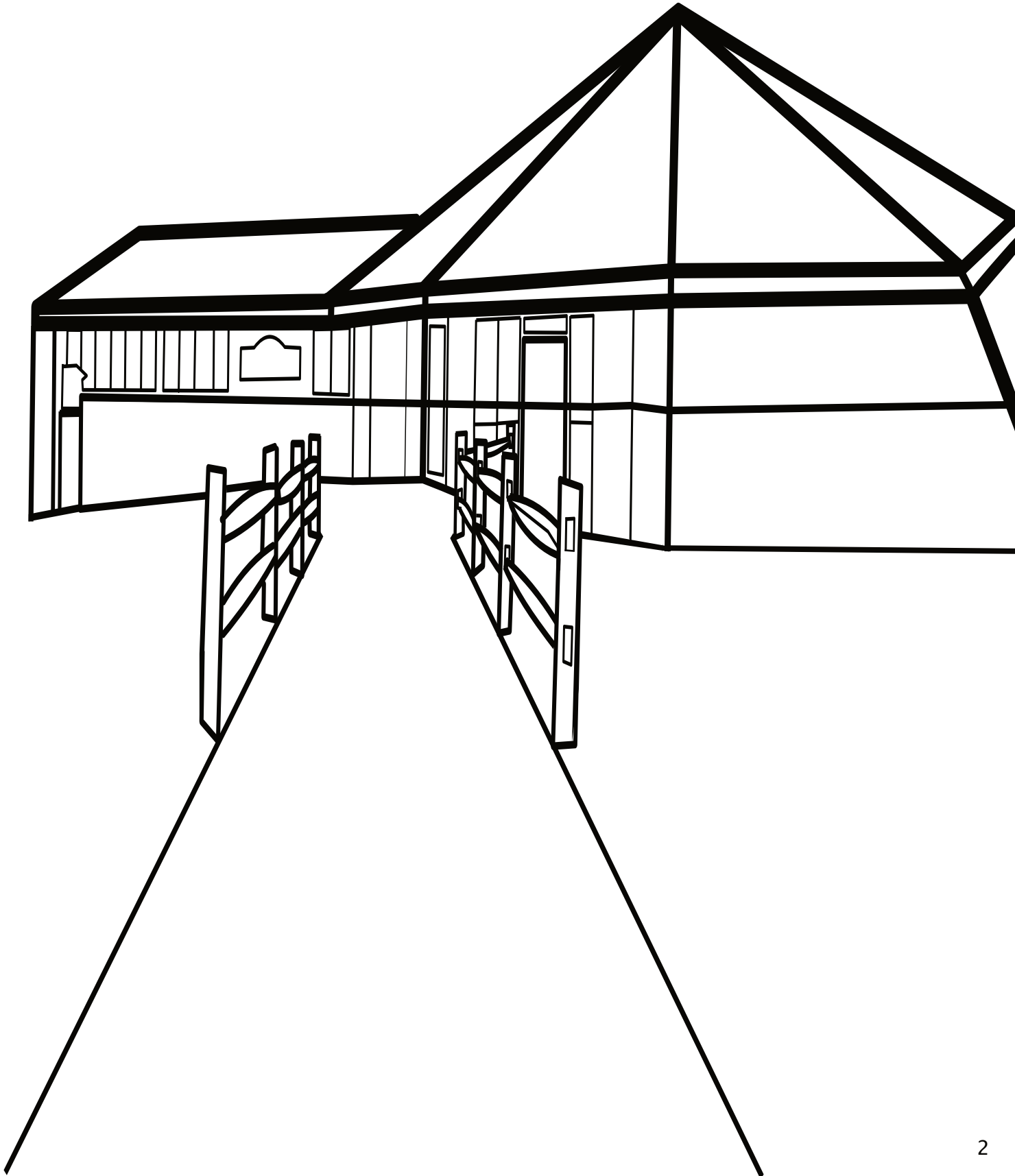
### **4. Tell us your best nature-themed joke!**



# Design Your Own Flower Garden



As you color in the picture of the Discovery Center, be sure to add some colorful flowers in front of the Center and around the fence.





# Around the Park Word Search

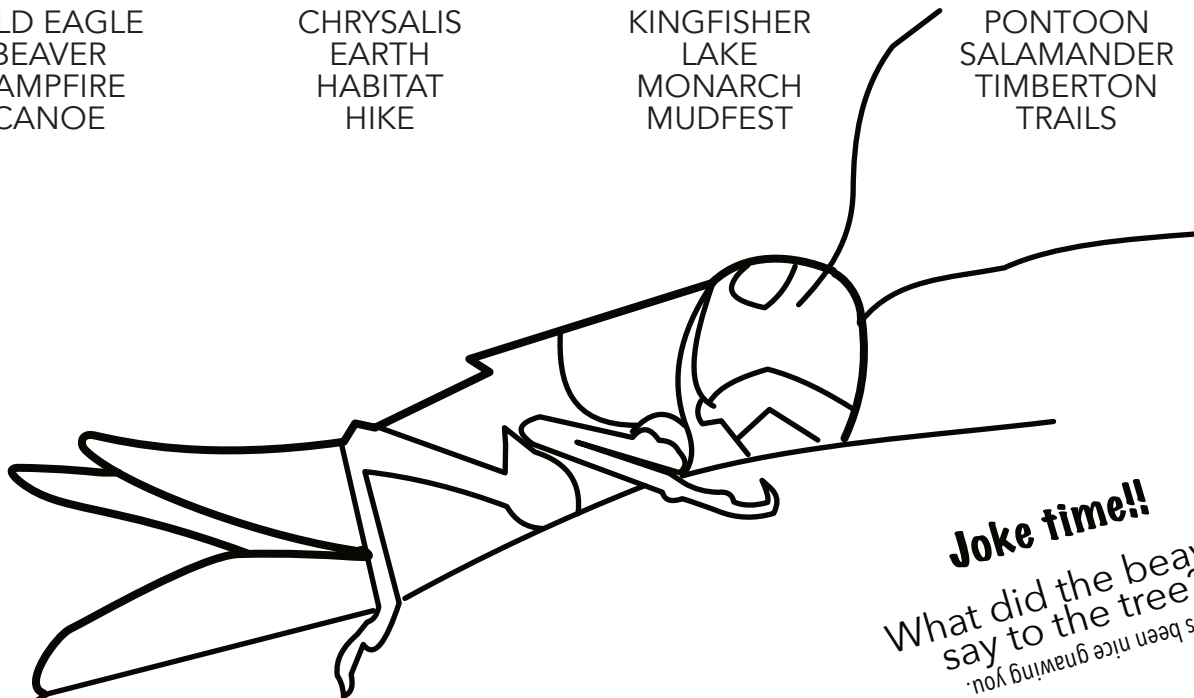
K C T T R A I L S L M D E B E M A B  
 I H H I T C E P S A E M O A P N E I  
 N R A S R A V O S A L C U L R A S V  
 G Y B I T N M N R G N A T D V E D T  
 F S I S I O E T E Z F M M E F I Y M  
 I A T G M E H O A L E P R A A E E E  
 S L A O B E I O S E I F H G N A S T  
 H I T C E F K N E O H I E L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

BALD EAGLE  
 BEAVER  
 CAMPFIRE  
 CANOE

CHRYSALIS  
 EARTH  
 HABITAT  
 HIKE

KINGFISHER  
 LAKE  
 MONARCH  
 MUDFEST

PONTOON  
 SALAMANDER  
 TIMBERTON  
 TRAILS



**Joke time!!**  
 What did the beaver  
 say to the tree?  
 "It's been nice gnawing you."

# MUDFEST

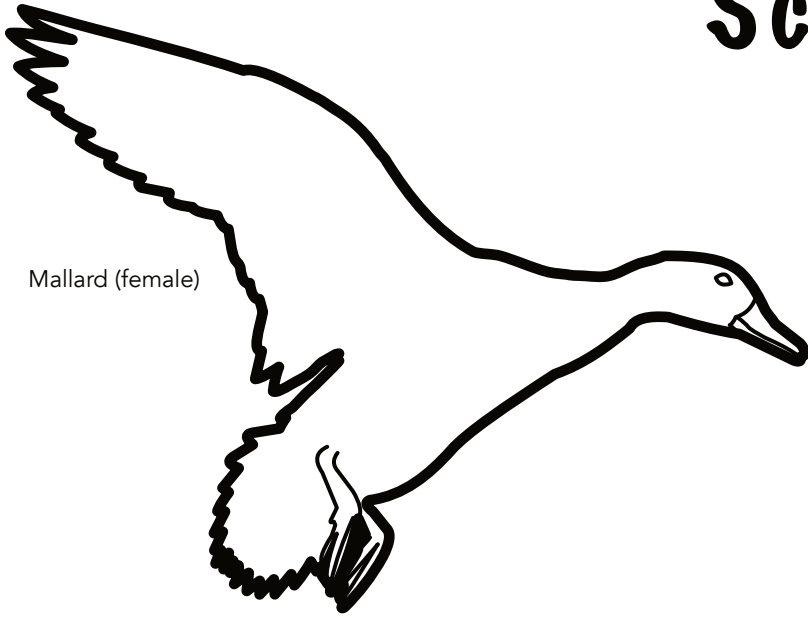


MudFest is about getting messy and having fun in the mud! When you color in the picture, be sure to include some mud being poured out of the bucket!

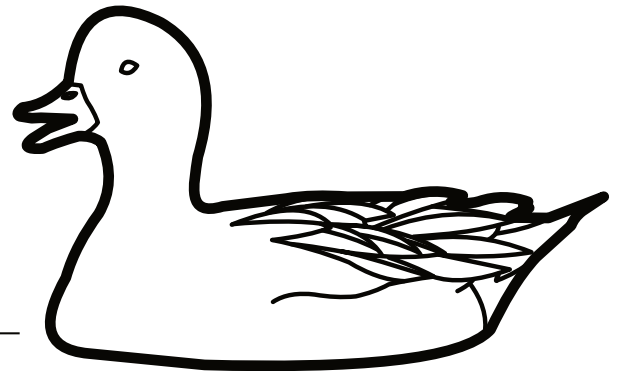




# Duck, Duck, Goose Scramble



Mallard (female)



American Wigeon

1. llaMdra \_\_\_\_\_

2. anCaad esooG \_\_\_\_\_

3. odoW ucDk \_\_\_\_\_

4. kvsaCnabca \_\_\_\_\_

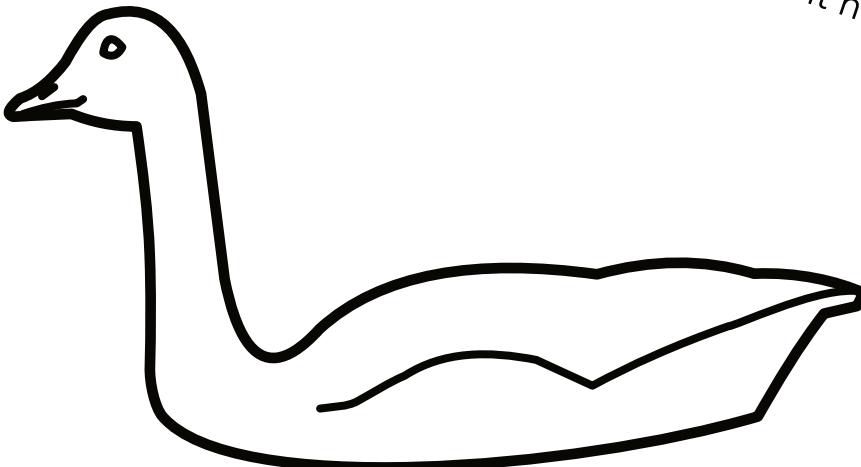
5 fedfahuBle \_\_\_\_\_

6. mcinaeAr noWgie \_\_\_\_\_

## Joke time!!

What does a duck do when it hears a good joke?

It quacks up!



Canada Goose

# Park Bingo

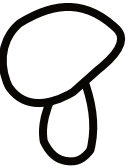
Search all around the park for the items below. Check them off as you find them.

Draw a picture or write about what you have found in the boxes below.

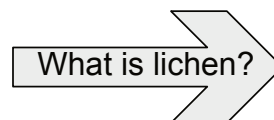
Please leave the items where you find them (they might be an animal's home).



<b>Fairy Garden</b>	<b>Water's Mill sign</b>	<b>Trash can</b>	<b>4 different types of leaves</b>
<b>Trail sign</b>	<b>Fungus</b>	<b>Picnic table</b>	<b>Something smooth</b>
<b>Pinecone</b>	<b>Something on the water</b>	<b>Trail blaze</b>	<b>Earthbench</b>
<b>Bug</b>	<b>Bird/bird sounds</b>	<b>Lichen</b>	<b>Gold Mine sign</b>



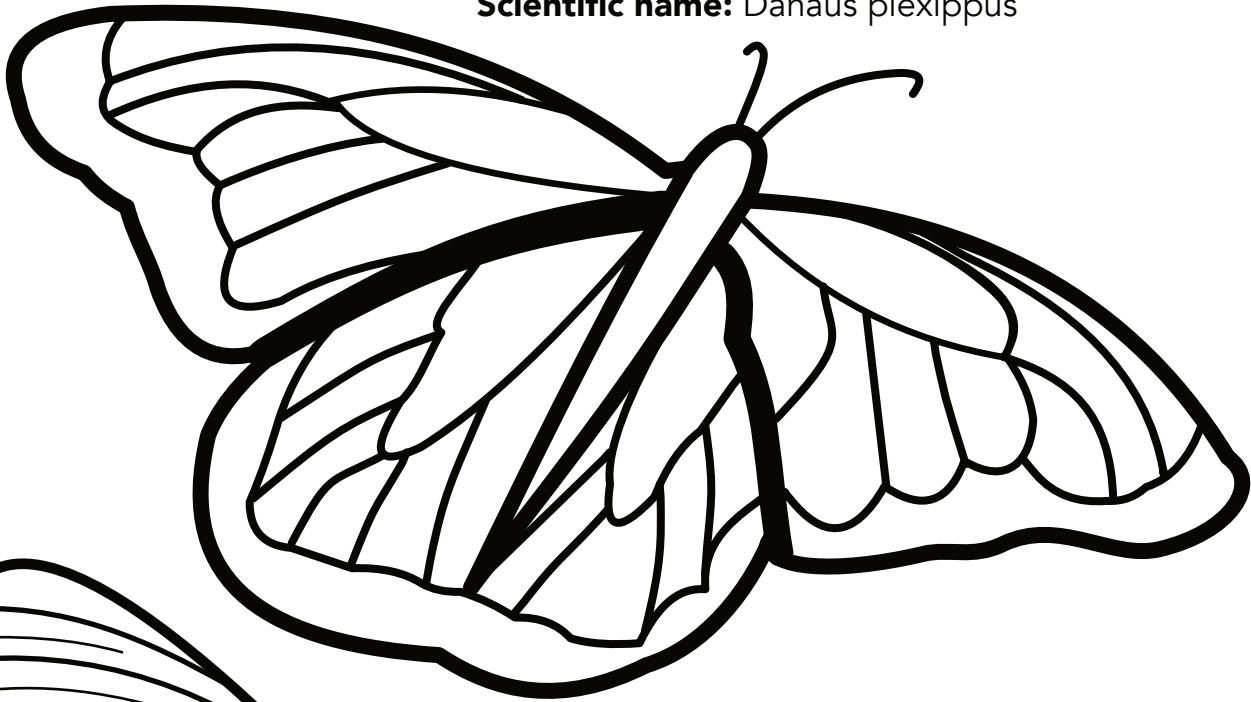
Hint: A trail blaze is a painted marking found on a tree as you walk along a trail to indicate you are still on the trail.



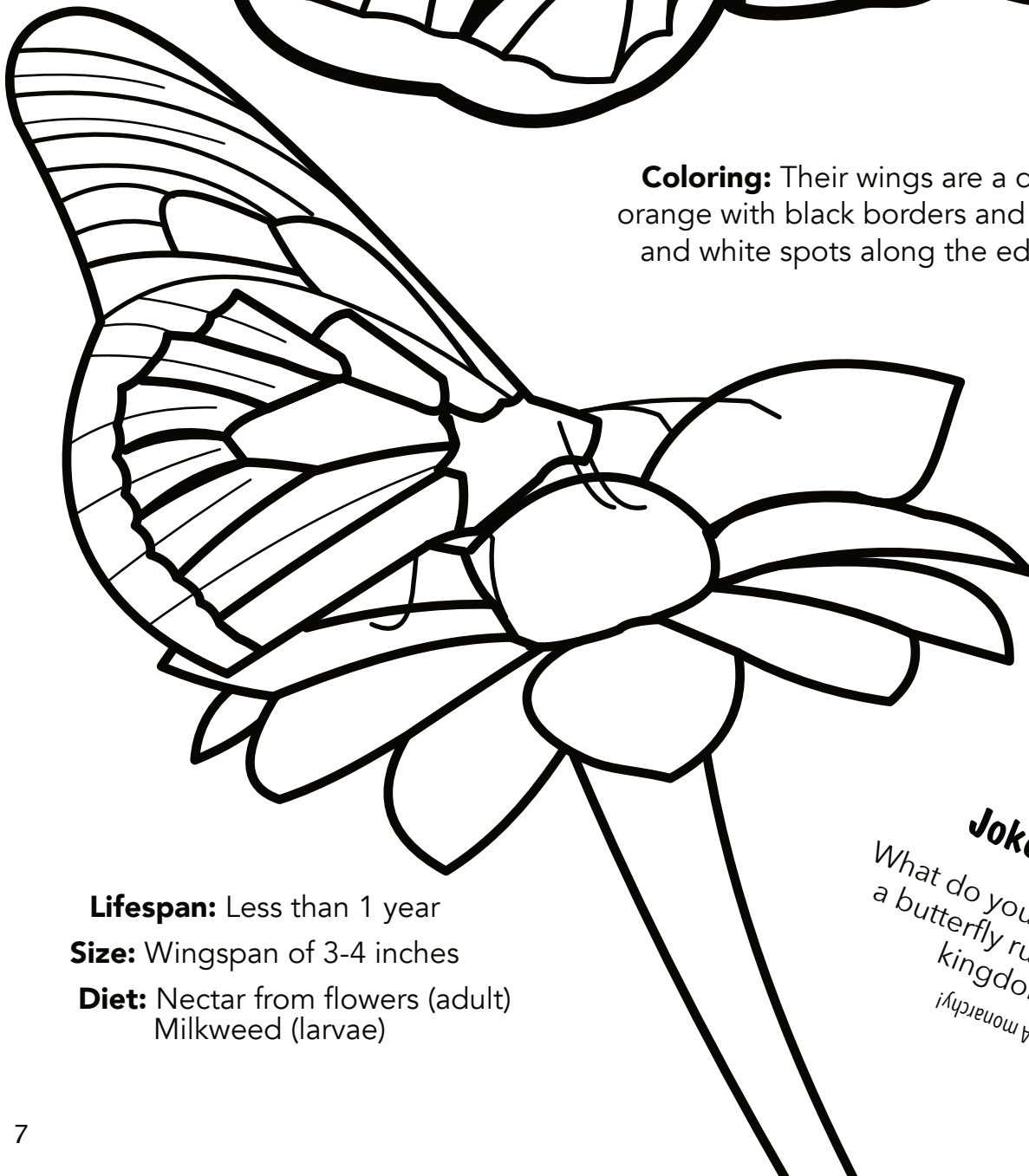


# Monarch Butterfly

**Scientific name:** *Danaus plexippus*



**Coloring:** Their wings are a deep orange with black borders and veins, and white spots along the edges.



**Lifespan:** Less than 1 year

**Size:** Wingspan of 3-4 inches

**Diet:** Nectar from flowers (adult)  
Milkweed (larvae)

**Joke time!!**

What do you call it when  
a butterfly rules over a  
kingdom?  
*A monarchy!*





# Sit Spot for Your Senses



Taking time to see, listen and observe nature will help you notice things that you wouldn't notice otherwise. Find a place in the park that is away from traffic and human noise. Sit quietly and use your senses.

**What do you...**

**See?** \_\_\_\_\_ **Hear?** \_\_\_\_\_

**Smell?** \_\_\_\_\_ **Feel?** \_\_\_\_\_

If possible, return to the same spot over different days and times and see if you notice anything different.

## Now it's time to hit the trails!



Circle the things you should bring on your hike and put an X across the items you shouldn't bring. Choose a trail to explore. Keep an eye out for signs of wildlife. Record your findings and answer the questions below.



**Trail name:** \_\_\_\_\_

**Weather:** \_\_\_\_\_

**Signs of wildlife:** \_\_\_\_\_

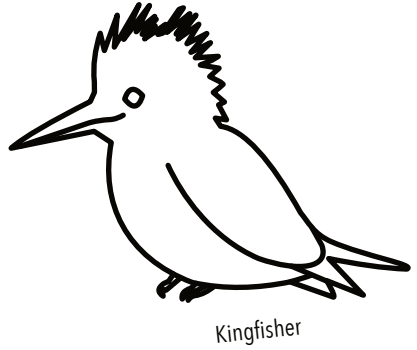
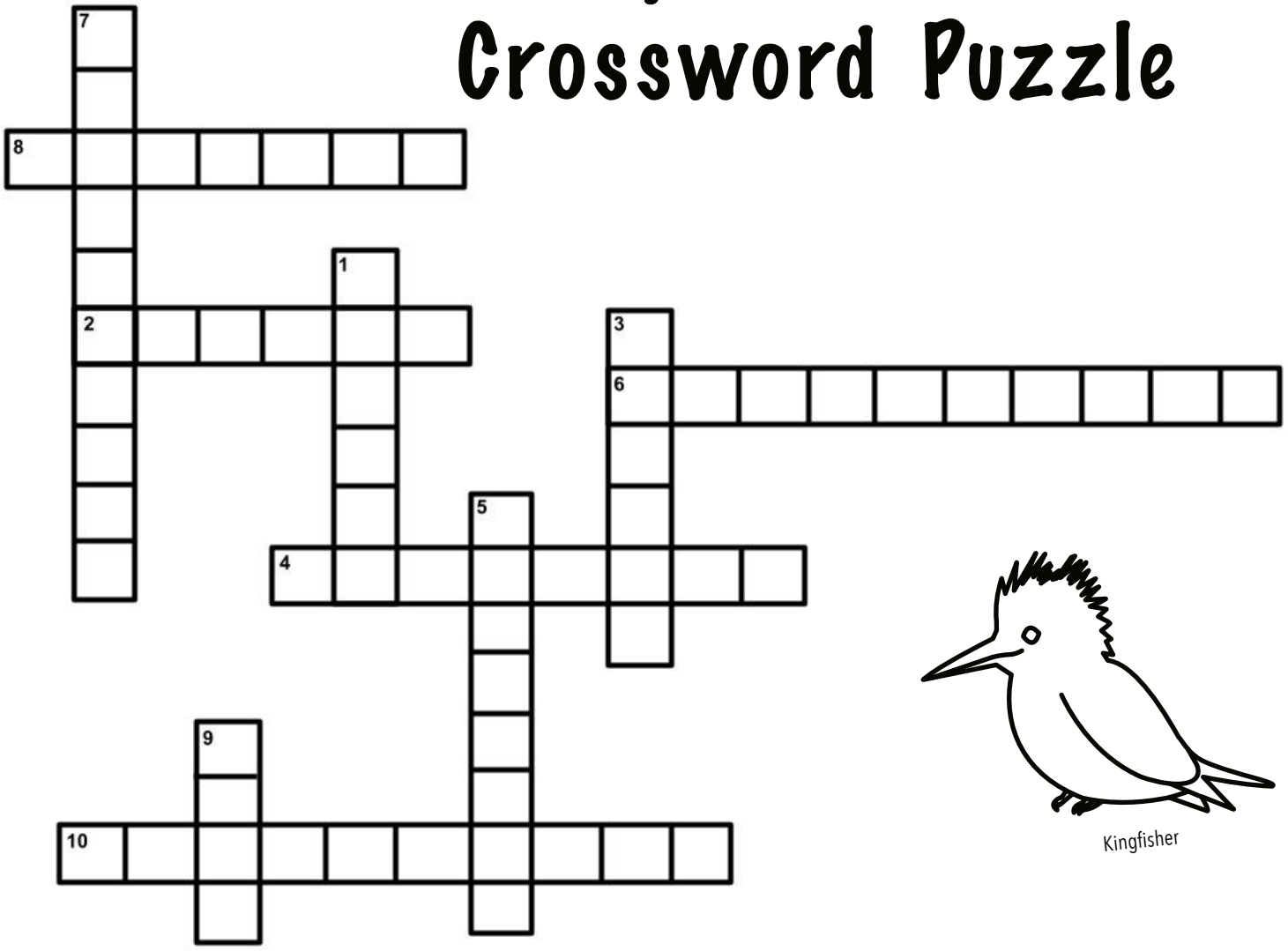
**What story can you tell based on the wildlife clues you found?**

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# Explore More Crossword Puzzle



Kingfisher

### Across

- 2. The \_\_\_\_\_ is the second-largest living rodent.
- 4. A trail in the park and also one of the Founding Fathers of the United States.
- 6. These birds peck at decaying trees to find small insects and larvae.
- 8. The \_\_\_\_\_ of Black Hill Nature Programs donated the telescope on the back deck of the Discovery Center. (Hint: find the sign.)
- 10. According to the sign in front of the Discovery Center, who maintains the gardens at the center?

### Down

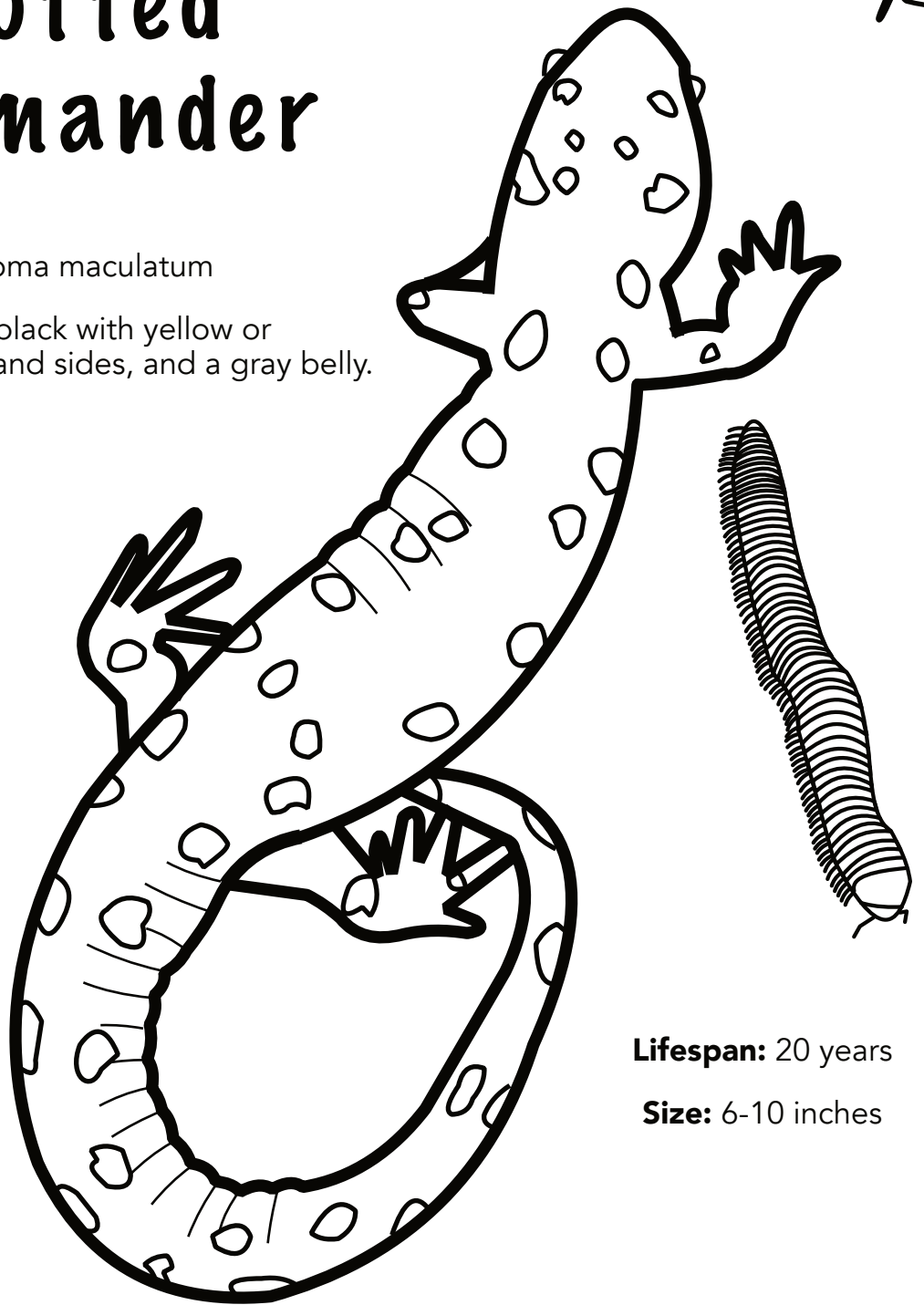
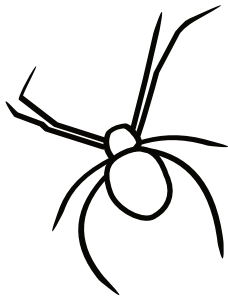
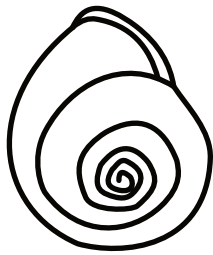
- 1. Little \_\_\_\_\_ Lake is a 505-acre reservoir, built to provide an emergency water supply for the DC area.
- 3. There are over \_\_\_\_\_ miles of hard and natural surface trails for hiking, mountain biking, and horseback riding. (Hint: it's also the first two numbers of the building on the Discovery Center.)
- 5. Monarch larvae eat only this plant.
- 7. Taking volunteers 1,100 hours, the \_\_\_\_\_ outside the Discovery Center is made up of old plastic bottles filled with recyclables which were then covered with cob (sand, straw, clay and water) and then covered with broken tiles.
- 9. Behind the park office you will find an old entrance to the Black Hill \_\_\_\_\_ mine.

# Spotted Salamander



**Scientific name:** Ambystoma maculatum

**Coloring:** Dark brown or black with yellow or orange spots on its back and sides, and a gray belly.



**Lifespan:** 20 years

**Size:** 6-10 inches

**Diet:** Insects, snails, spiders, earthworms and other invertebrates.

**Did you know:** Vernal pools provide a great habitat for amphibians like salamanders and frogs. Why do you think they prefer these seasonal pools of water over permanent ones?



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# Rainbow Scavenger Hunt

Color the words and then try to find something around the park for every color of the rainbow. Write down what you find - some things might be trickier than others, but do the best you can! And remember to leave things where you find them.

Red	
Orange	
Yellow	
Green	
Blue	
Indigo	
Violet	

# Make the story yours!

Find a partner. One person will ask the other person for words to fill in the blanks. Once all the blanks are filled in, read the story out loud!  
Swap roles for the second story!



## Adventures at Black Hill

Today I spent the day at \_\_\_\_\_ Hill. It is so much fun to  
\_\_\_\_\_ in the \_\_\_\_\_. I get so excited when I see  
the \_\_\_\_\_ on the lake or the \_\_\_\_\_ in the tree.  
Whenever it's time to go I shout \_\_\_\_\_! I can't wait to come  
back so I can \_\_\_\_\_ in the \_\_\_\_\_.

**Noun:**  
Person, place,  
or thing  
(house, circus,  
sister)

Hopefully I'll be back soon!

**Verb:**  
action word  
(jump, roll,  
gallop)



## A Day at \_\_\_\_\_

It was a \_\_\_\_\_ and \_\_\_\_\_ day at the \_\_\_\_\_. As we were  
\_\_\_\_\_ through the woods, a/an \_\_\_\_\_ in front of us.  
\_\_\_\_\_, I said! We continued on our hike down \_\_\_\_\_ trail  
and heard \_\_\_\_\_ and \_\_\_\_\_.  
We even got to see a \_\_\_\_\_ floating on the \_\_\_\_\_.



I love when we visit the \_\_\_\_\_.

**Adjective:**  
describes a  
noun  
(bumpy, purple,  
silly)

**Exclamation:**  
a sudden cry or remark  
(wow!, Yippie, ahhh!)

**Hint time!**  
Plural means  
more than  
one!



# Bald Eagle

**Scientific Name:** *Haliaeetus leucocephalus*

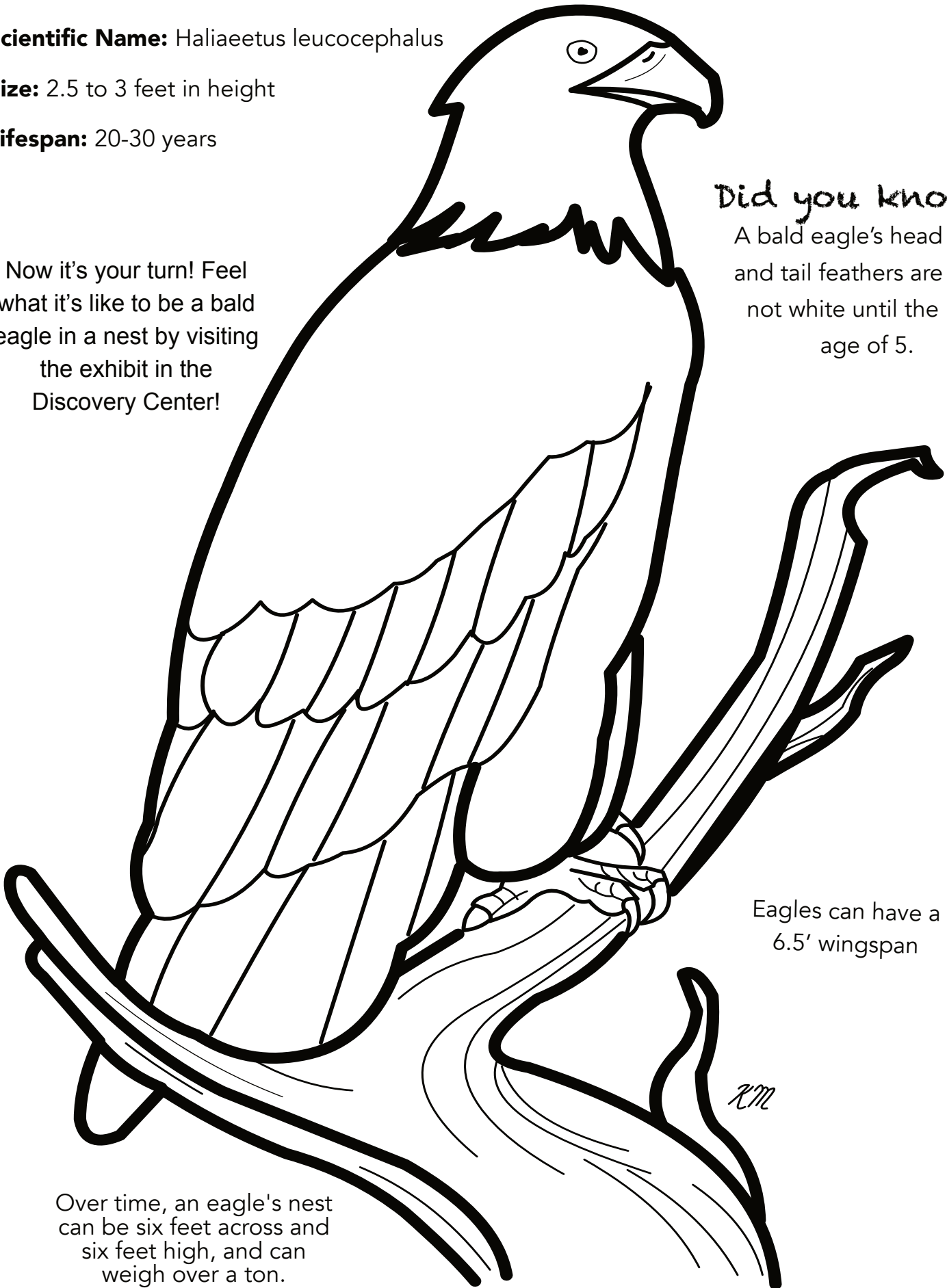
**Size:** 2.5 to 3 feet in height

**Lifespan:** 20-30 years

Now it's your turn! Feel what it's like to be a bald eagle in a nest by visiting the exhibit in the Discovery Center!

## Did you know:

A bald eagle's head and tail feathers are not white until the age of 5.



Eagles can have a 6.5' wingspan

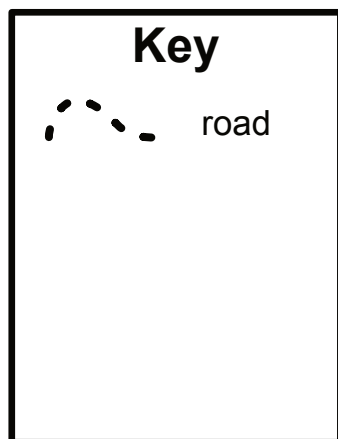
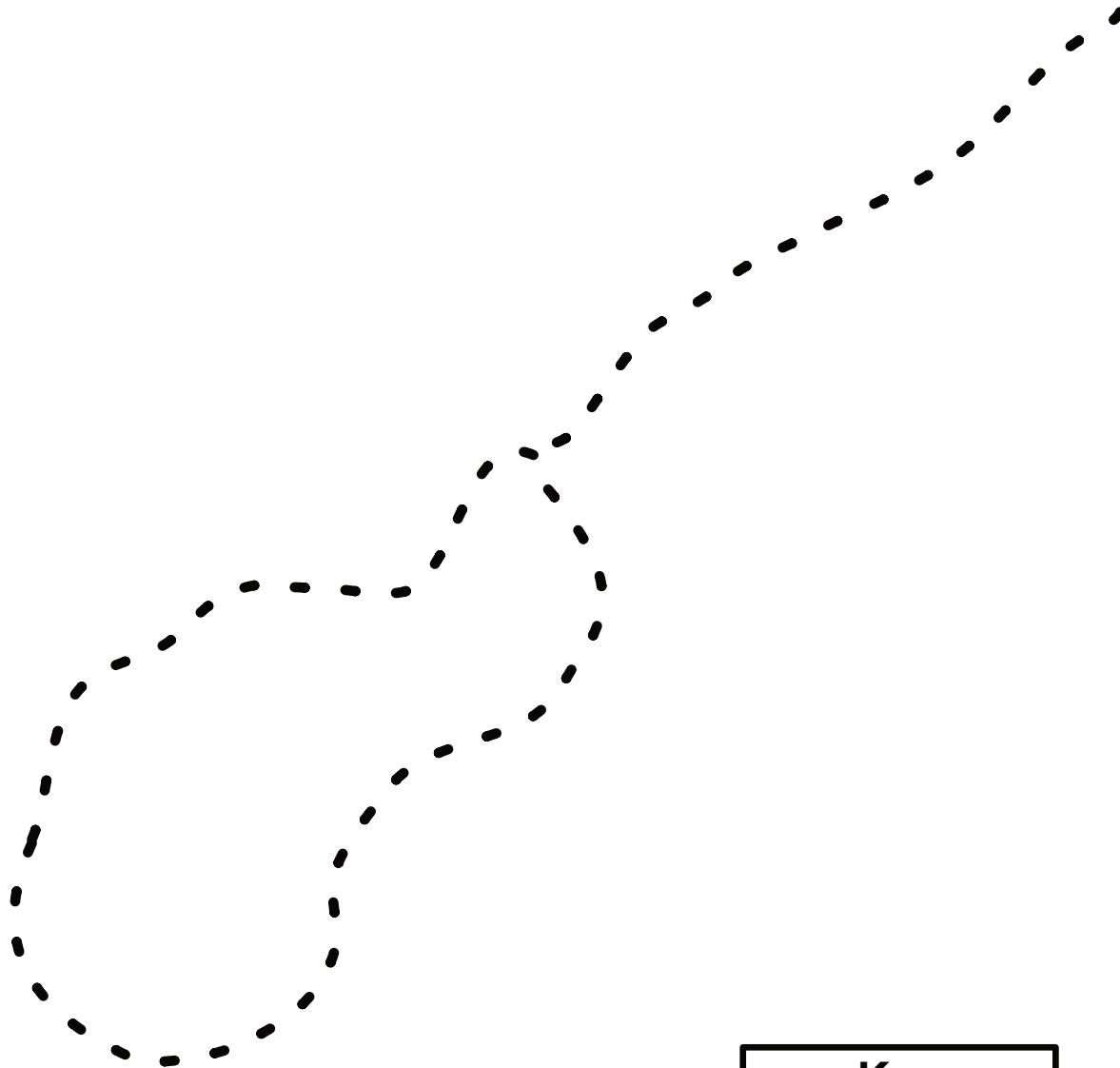
*RM*

Over time, an eagle's nest can be six feet across and six feet high, and can weigh over a ton.



# Design Your Own Park!

Now it's your turn to design your own park. We've started the road for you but the rest is up to you. If you could include anything at the park, what kinds of things would you want to see? Don't forget to name your park!



Welcome to \_\_\_\_\_ Park!



# Watershed Warrior

## What is a watershed?

It's a land area that channels rainfall and snowmelt to creeks, streams, and rivers, and eventually to outflow points such as reservoirs, bays, and the ocean.

## Why are watersheds important?

Healthy watersheds protect water quality and benefit the community. We all live in a watershed, and watershed condition is important to everyone and everything that uses and needs water.

## Get informed!

Interested to see the condition of your local watershed? Visit the "How's My Waterway" website by scanning the QR code and entering your information.

How's My Waterway?



## Make a difference!

Think of some things you can do to make a difference, like:

Conserve water every day. Take shorter showers, fix leaks and turn off the water when not in use.

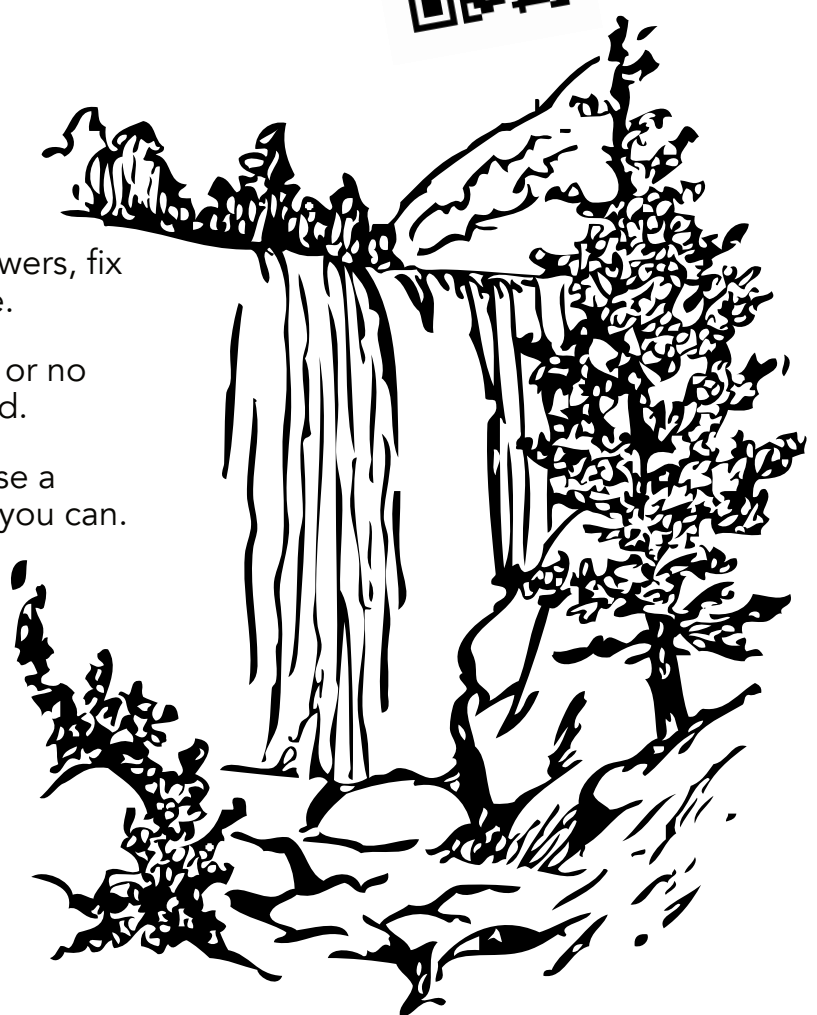
Use hardy or native plants that require little or no watering, fertilizers or pesticides in your yard.

Recycle yard waste in a compost pile and use a mulching mower or leave the leaves where you can.

What are some other ways to protect our watersheds?

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# Explore Your Watershed

## Experiment #1



By Alice Ferguson Foundation and East Bay Regional Park District

- Supplies needed for both experiments:**
- spray bottle filled with water
  - pages 18-21 of this book ripped/cut out
  - Blue, red, black and brown **washable** markers
  - tape and extra paper optional

Scan the QR code for experiment directions in video form.

**Step 1.** Clear off your work area as things will get a little wet, or do the experiment outside.

**Step 2.** Crumple page 18 of this book and smooth it back out slightly. It should still be a bit crumpled, showing small ridges (high points) and valleys (low points).

**Step 3.** Imagine that this paper is a section of land, and find the ridgelines (the tops of the fold-lines).

**Step 4.** Use a washable blue marker (not permanent) to color along the ridgelines on your "land." (we'll be skipping the step of taping the paper to a blank sheet of paper as seen in the video but you can do that step if you have the supplies.)

**You are going to "rain" on your landform with the spray bottle. Answer the following questions to make your hypotheses before conducting the experiment.**

1. What do you think will happen to your land when it "rains"?

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2. What will happen to the blue ridgelines you colored?

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3. Where will the "rainwater" travel?

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**Now make it rain!**

**Step 5.** Use a spray bottle of water to create a "rainstorm" over your land. You want to create gentle sprays of mist.

**Step 6.** Observe what happens after every misting.

**Step 7.** As your "rainfall" accumulates, observe the pathways where the excess "rainfall" travels.

SCAN ME





# Explore Your Watershed

## Experiment #2

**Step 1.** On a fresh sheet of paper (you can use pages 20-21 of this book), draw some of the ways people use the land. Include a house/community, farm, factory, and some streets/highways using the color key below,

Brown - Farms  
Red - Landfills/Factories  
Black - Houses/Streets

**Step 2.** Crumple this paper, and smooth it out the same way you did the first one.

**Step 3.** Use the blue marker to trace the ridgelines on this paper.

**Now make it rain!**

**Step 4.** Gently mist your new land with water from your spray bottle. Observe what happens, and how the water travels.

### Write your observations:

1. What happened in the second experiment?

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2. What do you think the colors could represent in real life?

• Brown = \_\_\_\_\_

• Red = \_\_\_\_\_

• Black = \_\_\_\_\_

3. Where were the colors in the end? \_\_\_\_\_

4. Where are you in this watershed? What kinds of pollution do you think you add to the watershed?

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# Congratulations

## Black Hill Regional Park Junior Naturalist



This certificate recognizes

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print your name

as a Junior Naturalist  
having completed  
the activities  
within this book.

---

Discovery Center Employee/Volunteer Signature

---

Date



Oh deer, it looks like you have come to the end. This book was made possible by the Friends of Black Hill Nature Programs.

[www.friendsofblackhillnature.org](http://www.friendsofblackhillnature.org)

**Photo/Image credit:**

Montgomery Parks (meadow, Discovery Center, Mudfest, beetle, spider, millipede, fish, butterflies, frog)  
Katie Marchese (bald eagle on branch)  
Karen Plá (great blue heron, fungus, dragonfly, bluebird, grasshopper)  
Carol Gregoire (hummingbird, ducks, goose, kingfisher, bluebird box, deer)  
Lynette Lenz (salamander)  
Pixabay (all additional clipart images not mentioned above)

**Word search credit:** Brainzilla.com

**Information credit:**

The National Wildlife Foundation (spotted salamander, bald eagle, monarch)  
Audubon (eastern bluebird)

**Experiment Credit:**

Alice Ferguson Foundation - Experiment text  
East Bay Regional Park District - Experiment video

