



TaHome Nature Education: Spring Migration

Grades 3-5

Reading: About Migration

Many animals move over great distances from one place to another in search of resources, such as food, space to raise their babies, mates, or better weather.

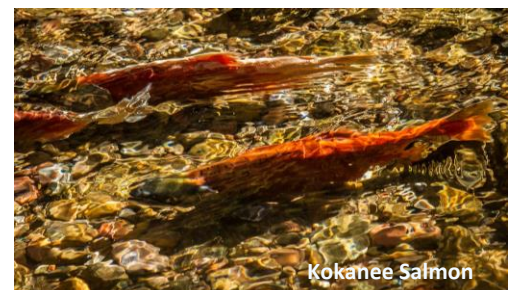
Although some animals are able to find food despite the harsh snowy conditions, many animals can't find enough food during Tahoe winters, forcing them to travel elsewhere. In spring, the snow melts, plants grow, and more food becomes available, inviting animals from all over North and South America to spend their time here in Tahoe, and sometimes breed in the warmer months.



In springtime, Tahoe sees animals arriving, leaving, and passing through. Bald Eagles and several duck species may travel north to Alaska and Canada from Tahoe at this time. Other animals, like American Robins, Tree Swallows, and Mule Deer migrate back into the area in the spring.

A third group, including Snow Geese, Sandhill Cranes, and Painted Lady butterflies, may be seen migrating through the Tahoe area at this time. Other animals may only use Tahoe as a rest stop on their journey to somewhere else. For example, Arctic Terns are birds that travel from the North Pole to the South Pole each year and have been spotted in Tahoe along the way.

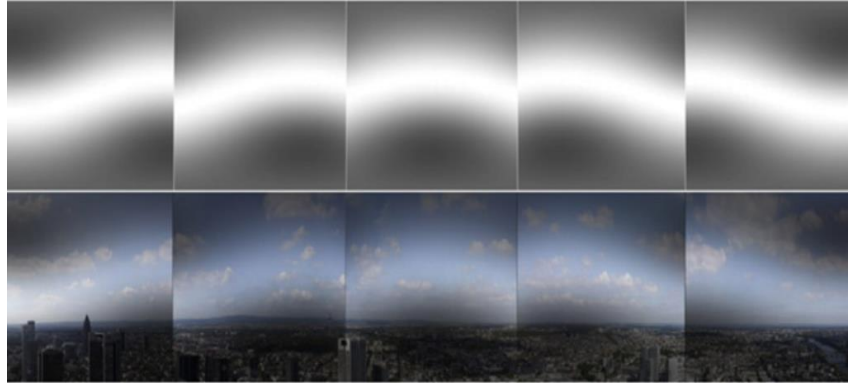
Scientists can predict when animals will migrate because these travel patterns typically occur around the same time, such as with changing seasons. While most animals migrate seasonally, some, including fish or zooplankton that live in Lake Tahoe or in the ocean, migrate up and down through the water column daily.



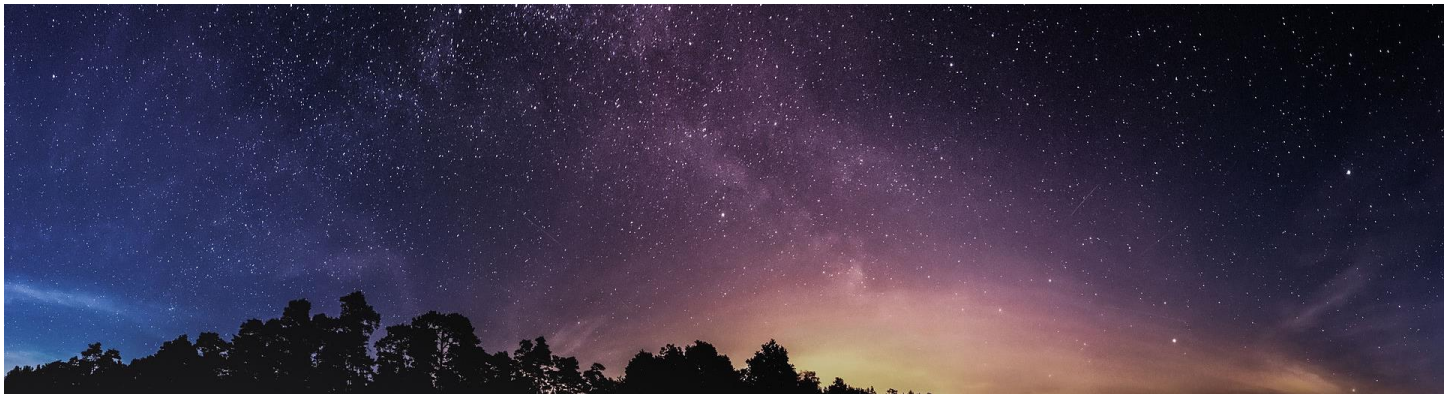
Reading: Navigating through Migration

There are a few ways animals find their way during migration. One method is called Magnetoreception. The earth has magnetic fields all over. Many animals (including humans) have a mineral called magnetite in their bodies, that help them sense these fields, much like an internal compass. Others have a special protein in their eye to help them see the magnetic fields. Animals know where to go based on the patterns of magnetic fields.

If you were a bird, the magnetic fields might look like the image to your right:



A second way animals navigate during migration is using features in the sky. Birds can figure out where they are in the world based on where the sun is in the sky. Many animals use the night sky to navigate. Some animals look for a bright star like the North Star, while others look for star patterns or track the moon. Other animals may simply follow landscape features, such as mountain ranges or rivers, often along pathways learned from older animals.



Sandhill Crane

The following birds are some migrating species to look out for in Tahoe right now:

[Canada Goose](#) - Search areas near water or look overhead for these birds flying in formation.

[American Robin](#) - Look for this common bird to increase in numbers in the trees or on the ground near your home.

[Sandhill Crane](#) - Watch and listen for large groups of these tall birds flying overhead in the evenings.

Activities for 3-5 Grade Students:

Know Where to Go

Knowing where to go is the first step in migration. Learn more about where you are in your home using a compass.

1. Find a compass. If someone in your house has a smart phone they likely already have a compass on their phone, or can download a free compass app.
2. Face your front door from the inside of your house. Point your compass toward your door to figure out which direction it faces.
3. Draw a picture of your home and draw a compass rose showing the four directions: North, East, South, and West. Make sure in your picture that your front door facing the correct direction.



Bird Migration Discussion Questions

Have you ever noticed how some flocks of birds fly in a V shape? Why do you think they do this? Think of two possible reasons this might help the birds. Discuss why you think this with a family member or friend.

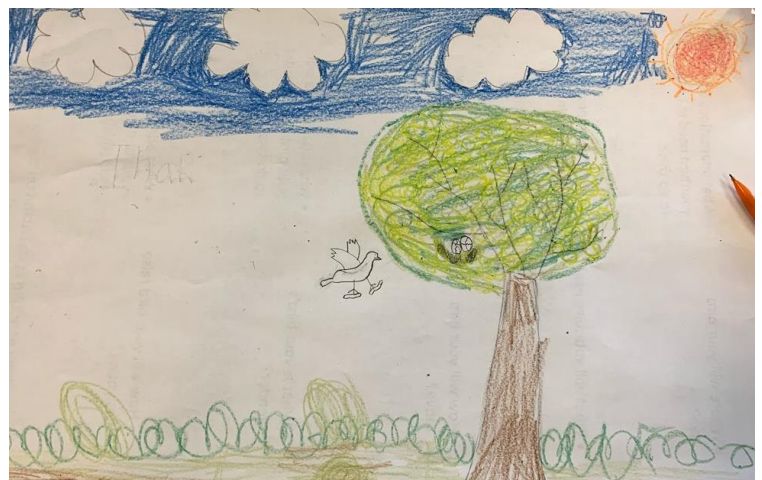
Birds are most often seen migrating in the evening. Why do you think this is? Think of a possible way this could help the birds and tell it to a family member or friend.

Migration Art

Pick an animal that migrates to or from Tahoe in the spring. This could be an animal you saw this week or an animal you read about, like a Mule Deer, American Robin, or a Bald Eagle.

Research where this animal spends the winter and where this animal spends the summer. Look at a world map or globe to see how far they travel between these two places.

Use what art supplies you have to paint, sculpt, draw, or build this animal migrating from their winter home to their summer home. If you love art, you can also paint, sculpt, draw, or build the winter and summer habitats of your animal.



TINS wants to see your art! Have your parent post a photo of your art project to Facebook and tag Tahoe Institute for Natural Science. You could also email the photo to us at kendal@tinsweb.org.



Animal Survey

Even if we don't see animals actively migrating, we know migration is happening when we see increased activity among migrant animal species. Note that we also see increased activity from animals waking up after hibernation. This week, take a survey for five days in a row of your wild animal sightings.

In order to be a good scientist, you should make some predictions first. Talk about each of these predictions with a family member:

1. How many total animals do you think you will see in one day?
2. How many do you think you will see of each of the following animals over the whole five days: mammals, birds, and insects?
3. How many total animals do you think you will see over the whole five days?
4. Which animals do you think you will see the most?
5. Do you think you will see more animals at the start or end of the five days?
6. Do you think you will see more animals on a sunny day, cloudy day, snowy day, or rainy day?



Good scientists also set some controls for their experiments. This means you should count all of the animals you see at the same time each day, and in the same place. This place could be in your backyard, out a window in your home, or on a set route walking around your neighborhood.

Each day, write down the kind of animals you see and how many you see of each. After five days, compare your experiment results with your predictions by answering the following questions:

1. What was the greatest number of animals you saw in one day? Why do you think there were more animals out this day?
2. What was the smallest number of animals you saw in one day? Why do you think there were fewer animals out this day?
3. What kinds of animals did you see? Is that what you predicted you would see?
4. Did you see more mammals, birds, or insects?
5. Did weather have an effect on your counts?

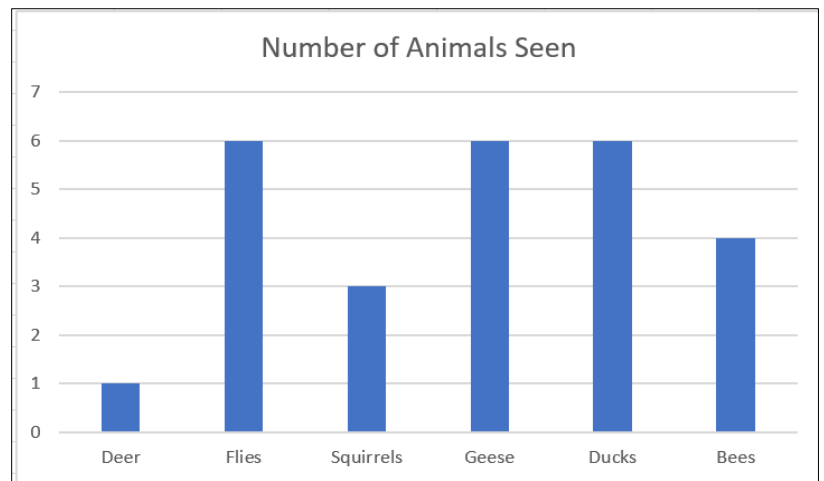
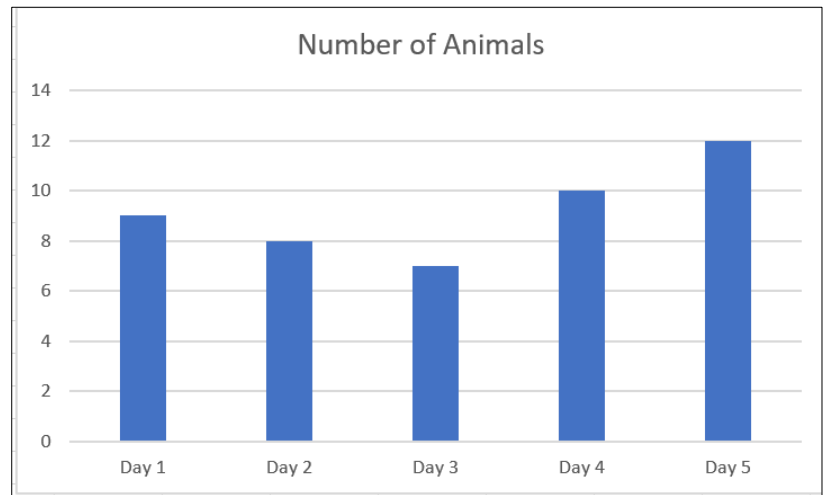


Call a grandparent, cousin, friend, or tell a sibling about your experiment, your predictions, and your results.

Create a Bar Graph

As you do your Animal Activity Survey, you will also create two bar graphs to keep track of the total number of animals you see and the kinds of animals you see. An example of each kind of bar graph is seen on the right.

If you need some help with how to make a bar graph, check out [this video](#).



Do People Migrate?

Humans migrate too! Human migration is different from animal migration because it is not always on a predictable schedule. Like all animals, humans who migrate are looking for a resource, like better weather or education, a new job, or to be close to family and friends. Do you or your family know any humans who migrate? Some people live in different parts of the world during different times of year, making them seasonal migrators. One example of this are the people who come to Tahoe to work at ski resorts during the winter and go other places to work and live the rest of the year. Other times people migrate when they move from one town or state to another.

Think of a human you know who has migrated in their life. Call them to ask them these five questions:

1. Where did you migrate from?
2. Where did you migrate to?
3. Why did you migrate?
4. What resource did you gain by migrating?
5. How did you decide where to migrate?

Write down the person's answers. Share what you wrote with a family member.



Further Learning: Use these websites to learn more about migration around the world.

[See real time data on the movement of birds today.](#)

Learn what birds are expected to be where with this [bird migration forecast](#).

Play this online [Bird Migration game](#).

Find bird migration games and discuss the advantages of migrating in groups [here](#).

Watch this [Wild Kratts episode](#) about Monarch Butterflies and their migration patterns.

Learn this [whale migration song](#).

[Follow migration paths, make a bird feeder for migrating birds, and think more about human navigation.](#)