

Canada geese are large, black-necked birds found throughout New York State. Their



north-to-south yearly migrations are iconic, filling the sky with V-formations. However, as lawns on private property have expanded, more and more of these animals are choosing to stay in local areas year-round. Lawns provide food for them and are great areas to raise their young, called goslings. Wide open spaces, such as parks, golf courses, and large yards, also allow for unobstructed views of potential predators.

Canada geese are herbivores; their plant diet will consist of what is locally available, including grasses, plants, berries, seeds, and grains. Breeding pairs often mate for life. During nesting, the female will do all of the incubation while her mate stands guard defending their territory. Females can lay between two and eight eggs each season. The young often remain with their parents for the first year. Sometimes multiple groups of young geese will gather together to feed and travel, always accompanied by at least one parent.

Key Points for Dilemma Discussion Activity

- Do not feed geese. Feeding increases nuisance behavior, putting both geese and people at risk. Nuisance behavior often occurs when animals lose their fear of humans and come into closer proximity as they associate humans with food.
- Observe and enjoy geese from a distance. The best way to ensure both your safety and the safety of the animal is to keep your distance.

Eastern coyotes are found throughout New York State including parts of New York



City. Coyotes have been present in New York since the 1930s, and have been firmly established throughout the state since the 1970s. Home ranges of eastern coyotes in suburban habitats have been known to average a little over 2 square miles, but coyotes can defend areas up to 15 square miles. Eastern coyotes can be solitary or live in a family group consisting of a mated adult female and male, their young, and possibly yearlings from the previous year.

Eastern coyotes are comparable in size to a medium-sized dog. On average they are 4 to 5 feet in length, including a 12 to 15 inch tail, and usually weigh between 24 to 45 pounds, with males weighing more than females. Eastern coyotes are active throughout the year and tend to be crepuscular, meaning they are most active at dawn and dusk, although they can be seen at any time of day. They become more vocal in late summer and early fall, and will howl and yip to advertise territories or reunite family groups.

Eastern coyotes are opportunistic omnivores, eating both plants and animals. They will hunt small mammals including mice, rats, squirrels, and rabbits. They will also eat fruits, berries, and insects depending on what is seasonally available. They may be attracted to pet food that is left outside, bird seed from feeders, and garbage. Coyotes employ a variety of hunting strategies including hunting and scavenging--alone, in pairs, or with their family group. They are naturally wary of humans, but are curious. Once they find an available food source, like uncontained garbage, they become more and more tolerant of humans. This can become a safety hazard and lead to nuisance behavior.

Key Points for Dilemma Discussion Activity

- Do not feed coyotes. Feeding increases nuisance behavior, putting both coyotes and people at risk. Keeping coyotes wild is the key to coexistence. Nuisance behavior often occurs when animals lose their fear of humans and come into closer proximity as they associate humans with food.
- Observe and appreciate coyotes from a distance. Though they may look similar to dogs, coyotes are wild animals. The best way to ensure both your safety and the safety of the coyote is to keep your distance.
- Protect your pets. Walk dogs on a leash and keep cats inside for safety.
- Keep coyotes wary. If you are approached, make yourself look bigger by putting your arms up, and make loud noises until the coyote retreats. Appreciate coyotes from a distance.

Monarch butterflies may seem to be one of the most delicate creatures alive.



Despite their frail appearance, every year monarchs make a long and perilous journey thousands of miles south to escape the harsh winters of the north. While on this journey, the monarch can often be seen resting and feeding on a plant called the butterfly bush (*Buddleia davidii*).

The monarch butterfly begins its migration in September and travels for 30 to 45 days. Monarchs originating east of the Rocky Mountains and as far north as Canada make their way to the quiet, cool mountains of the Transvolcanic Region in central Mexico, about 60 miles west of Mexico City in the state of Michoacan. Migrating monarchs can be observed along New York City's beaches and coastal parks. Monarchs from New York City travel as much as 2,100 miles, averaging 50 miles a day, to reach their destination by the end of October. Resting in the chilly treetops, the butterflies hibernate for four months, covering oyamel fir trees (*Abies religiosa*) in thick layers that resemble black and orange leaves. During this period, the monarchs sit quietly with their wings folded, living off of fat reserves.

When the weather warms, usually in March, the monarchs come out of hibernation and mate. After mating, they begin their return trip to the southern United States. There they lay their eggs on milkweed (*Asclepiadaceae*) plants and die, entrusting their offspring to fend for themselves. The milkweed is an important food source for monarch caterpillars. As the larvae gorge themselves on the leaves, they accumulate the milkweed's toxic cardiac glycosides and become poisonous to birds and other predators. An unknowing bird that tries to eat a monarch soon finds out how distasteful these butterflies are and vomits it up, and the bird learns to avoid the monarch's distinctive colors.

After about a month of feeding, the caterpillars will create a cocoon around themselves and change into adults. The adult monarchs continue the journey north and also lay eggs. By late June, the third generation of monarchs reaches New York City, and, by August, their offspring reach Canada. This fourth generation spends its time storing energy from nectar so they can make the long journey to Mexico in September.

How monarchs are able to navigate their way across unfamiliar terrain is unknown. Some speculate that the butterflies rely on the earth's magnetic field for guidance, while others believe that the directions are embedded into the monarch's genetic code.

Piping Plovers are small shorebirds that weigh 1.5 to 2.25 ounces and measure 5 to



7 inches long. They can be found using New York City beaches to nest and rear young. They begin to arrive at their breeding grounds in early and mid-March and begin to migrate south in August. Before mating, piping plovers will perform courtship displays to attract mates. This includes courtship flight in which males fly in a figure eight while constantly

making a peeping sound near the female. Males also create several shallow scrapes in the sand, sometimes lined with pebbles and shells, for females to choose from to make their nest. The male will present the nest to the female by fanning out his tail. The nests are made far away from high tide, on open sandy ground with sparse grass for cover.

An average of four eggs per clutch is laid between May and June, with one egg being laid every other day. Their eggs are a pale beige color with splotches of black and brown. If a nest is unsuccessful, the adults can lay a second, or even a third clutch. Parents take turns incubating their eggs and foraging by the shoreline. Piping plovers are precocial, meaning chicks are able to walk, run, and feed by themselves within hours of hatching. Females often leave the breeding area shortly after the chicks hatch, leaving the male to raise the chicks alone. Parents brood their chicks during cool and adverse weather conditions during the first few days, but the chicks begin to explore on their own afterward. Plovers have an average lifespan of five years, with the oldest recorded individual living 14 years. The highest mortality rate for chicks is within the first two weeks of life due to predation, human disturbance, and vehicular accidents.

Plovers mainly run across the beach to find food, rather than flying. They perform a circular flight and call out to alert chicks when a threat is perceived. When deterring predators from their nests, plovers feign a broken wing to make themselves look vulnerable. Plovers will also actively maintain breeding territories against other plovers and birds.

Piping plovers eat a broad range of invertebrates, such as marine worms, insect larvae, beetles, and small crustaceans. Due to their short beaks, they mainly feed on organisms on the surface of the sand or on the shoreline by continuously running and pausing when they see viable prey. They even shuffle one foot over the sandy surface to stir up organisms hiding below.

The main predators to chicks and eggs are foxes, ghost crabs, gulls, and crows. Dogs and cats often harass and kill adults and chicks. People can accidentally crush eggs or chicks by foot or vehicle. High disturbance can cause adults to abandon their nests.

Raccoons are mostly solitary animals, except for mothers with young and possibly siblings of the same sex. They mate in late winter or early spring and are not monogamous, meaning both sexes mate with multiple partners during one breeding season.



Adults can weigh between 9 and 30 pounds, and males usually weigh more than females. They can run 10 to 15 miles per hour for short periods of time and can swim long distances. Raccoons can rotate their back feet, allowing them to descend from trees headfirst. Raccoons are considered nocturnal animals, but they can be seen at any time of day scavenging for food. Seeing a raccoon out during the day does not necessarily mean it is sick or has rabies.

In New York State, raccoons are the most widespread animal, found everywhere from secluded forests to urban cities. They can live in almost any habitat including urban and residential areas, deciduous forests, agricultural lands, and marshes. Raccoons live in one or more dens formed from tree cavities, hollow logs, rock crevices, burrows abandoned by other mammals, storm sewers, and/or spaces underneath buildings.

Raccoons are opportunistic eaters, feeding on whatever is easily available. Their diet can include fruit, nuts, fungi, insects, worms, mussels, crayfish, certain birds, turtles, eggs, mice, bats, squirrels, fish, snakes, frogs, carrion, bird feeder seed, pet food, and human food.

Key Points for Dilemma Discussion Activity

- Do not feed raccoons. Feeding increases nuisance behavior, putting both raccoons and people at risk. Nuisance behavior often occurs when animals lose their fear of humans and come into closer proximity. Raccoons are attracted by food available in gardens, pet feeders, garbage, compost, and certain plants.
- Raccoons can be seen day or night. If seen out during the day, they should not be considered dangerous or assumed to carry rabies.
- Observe and enjoy raccoons from a distance. The best way to ensure both your safety and the safety of the raccoon is to keep your distance.

Red-tailed hawks are a monogamous species that can have the same partner for years. Mating takes place in early March. In early April, the female lays one to five eggs that are then nest-incubated by both parents for 28 to 35 days before hatching. Comprised of twigs, pine needles, and other plant material, red-tailed hawks' nests are constructed by both parents on trees or on buildings.



Both male and female red-tailed hawks can be aggressive in terms of protecting the nest and defending their territories. The parents typically raise their young for up to six weeks until they fledge. The fledglings learn how to hunt independently of their parents; four weeks after fledging, the young hawks evolve into proficient hunters.

Red-tailed hawks are found throughout the United States, Canada, Mexico, and Central America. In fact, they are the most common hawk seen in North America. Red-tailed hawks can live in an array of habitats including open fields, deserts, parks, woodlands, and forests. The average lifespan of red-tailed hawks is 12 years in the wild.

Geared with keen eyesight, red-tailed hawks can perch on urban platforms such as street telephone poles, waiting to spot prey from above and then capturing them with their talons. Their diet is mainly comprised of small rodents (80-85% of their diet), rabbits, reptiles, and other birds. As an opportunistic species, they also consume what is seasonally available.

Key Points for Dilemma Discussion Activity

- Red-tailed hawks fall under the protection of the Migratory Bird Treaty Act. The possession, transportation, removal, or sale of hawks and their eggs is strictly prohibited.
- Use snap traps rather than poison to control rodent populations. Eating rodents that have been poisoned can make red-tailed hawks ill.
- Store all food and garbage in animal-proof containers. Animals, including rats, are very resourceful, and will find ways into unsecured trash bins and pet food containers.

Striped skunks are appropriately described by their Latin name; *Mephitis mephitis*



translates to “double foul odor.” Skunks are well known for their ability to squirt attackers with a foul-smelling spray. This is their last line of defense. Most encounters can be avoided by giving skunks a wide berth. They can be found in a variety of habitats throughout New York State. They prefer open areas and will create dens in hollow logs, abandoned

buildings, or burrows of other animals.

They forage at night or early dawn, and their omnivore diet can include berries, nuts, plant material, worms, insects, and small animals like baby mice or birds. Skunk activity levels decrease during winter season, but they do not hibernate. An adult skunk is about the size of a house cat, weighing 7 to 14 pounds.

Key Points for Dilemma Discussion Activity

- Skunks are primarily nocturnal but can be seen day or night. If seen out during the day, they should not be considered dangerous or assumed to carry rabies.
- Observe and enjoy skunks from a distance. The best way to ensure both your safety and the safety of the skunk is to keep your distance.
- Store all food and garbage in animal-proof containers. Animals are very resourceful, and will find ways into unsecured trash bins and pet food containers.

White-tailed deer

(does). Breeding season, or rut, generally takes place from October to January. Females give birth to one to three fawns in late spring or early summer. Although fawns are able to immediately stand on their own, they are unable to keep up with their mother. For the first month, fawns hide in brush or tall grasses while the mother goes off to feed.

They are able to avoid detection by predators due to their lack of scent at their young age and by remaining motionless. Fawns are visited several times throughout the day by their mother. Fawns usually stay with their mother through their first winter.

Males begin to grow noticeable antlers after one year of age. By the end of September, the antlers reach their maximum size and harden. Bucks with larger antlers and body size tend to be more aggressive and more successful during the breeding season. They will shed their antlers between January and March. Antlers regrow the following spring and summer. As they age, males develop larger sets of antlers.

Deer populations are established within NYC, and are mostly found in the Bronx and Staten Island due to the availability of food and shelter. White-tailed deer are extremely adaptable. They can be found in forests, grasslands, and areas where two or more habitats intersect (e.g. where the woods meet an open meadow). Most white-tailed deer home ranges are about one square mile throughout the year, however males will travel farther during the rut.

These large mammals can measure up to 3.5 feet tall at the shoulder and weigh up to 300 pounds. Their coat appears reddish-brown during summer and a duller grayish-brown during winter. They are named for the white underside of their tail, which is used as flagging when disturbances are detected.

White-tailed deer are herbivorous ruminants, meaning they have a four-chambered stomach for processing different plant materials. Depending on the season, they browse on leaves, flowers, berries, grasses, acorns, other nuts, fungi, twigs, and bark. They primarily eat during twilight hours in the spring, daylight hours in the summer, and late afternoon in the winter. They can, however, be seen at any time of day.

Key Points for Dilemma Discussion Activity

- Do not feed white-tailed deer. Feeding increases nuisance behavior, which occurs when animals lose their fear of humans and come into closer proximity. This puts both deer and people at risk.
- In areas with high deer populations, homeowners may want to protect their yards with deer fencing. A solid fence at least 5 feet tall can be effective as deer rarely jump if they cannot see their landing zone.
- Leave fawns alone. It is normal for females to leave fawns unattended for long periods

Bird migration occurs twice a year. New York City falls right underneath the Atlantic



Flyway—a route many species use to travel up and down the eastern coast of the United States that takes advantage of food resources and prevailing weather patterns. In the spring, many birds in the northern hemisphere tend to migrate north to take advantage of the increased availability of nesting locations, budding plants, and increasing insect populations for food. As the colder seasons approach, these resources decline and birds start to migrate back south in order to find food and shelter.

Not all types of birds migrate, and distances traveled vary by species. However, any type of migration places extra stress on individual birds, both physical and mental. Along the journey birds face hazards such as exposure to predators, extreme weather, and lack of food. In addition, birds are facing a growing threat from human-made structures. Tall buildings present a collision hazard for migratory species, as the reflection of open space in glass windows may confuse birds.

Many species also migrate during the evening hours when temperatures are cooler. Scientists have suggested birds use the position of starlight to navigate and that the bright lights of urban areas may be complicating their internal navigation abilities. In recent years, scientific studies have demonstrated that birds are also attracted to these bright light sources—either out of confusion or to forage for insects which also collect in the light. Campaigns have been created across the country to dim bright building lights during migration season, to provide safer passage for birds.

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