Welcome! This family field trip guide provides an opportunity for parents and their students to explore Rocky Mountain National Park and connect learning to Colorado State Educational Standards. While each activity is listed as a specific grade level, the whole family can participate. Parents are encouraged to read the additional resources and bring the materials listed so that they can support their students’ learning. During busy times, arriving early avoids crowds.

Supported Grade Level Standard: 3rd Grade Science 2.1
“Being part of a group helps animals obtain food, defend themselves, and cope with changes.”

Objective: Students can give examples of how animals benefit from forming groups.

Duration: 60 to 90 minutes

Location: Hollowell Park, Upper Beaver Meadows, Sprague Lake, Lily Lake, or any natural space.

Materials: If available, binoculars for observing animals from a distance and a hand-lens for up-close observation.

Engage: Tell your students that you are excited to go for a hike and see what the animals are doing this season. Ask them to help you prepare for the trip by suggesting possible destinations, what clothing to wear, items to bring for lunch or a snack, or any gear to make your trip safer and more enjoyable. How does being part of a group help you prepare?

Explore: At your trailhead, tell students that the goal of their hike is to closely observe the animals they encounter to see if animals spend their days alone, in families, or in larger groups. Brainstorm some names of animal groups – a herd of deer, a flock of birds, a colony of beaver. How does forming groups help animals? When might it be better for an animal to be alone? As you hike, use your senses to search for different types of animals, or signs that they have been present. Consider insects such as ants or tent caterpillars. Look for mammals like beaver or chipmunks. Listen and watch for birds like magpies, ravens, or the tiny mountain chickadee. Don’t forget the big animals like elk and deer. Take your time and observe if they are alone or in groups, how many are in a group, and how they interact with other members of their group.

Explain: After students have closely observed several different species of animals, find a cozy spot for lunch or a snack. Review what you’ve observed. Explain that many animals form groups of individuals that help them survive. Like people, some species form family groups. Others form colonies, sort of like a neighborhood. Still others, such as ants, form complex societies, almost like towns or cities. There are many types of animal social groups and they may vary greatly in size, from just a few animals to many thousands. Animals may form groups to help raise young, to find food, to warn or defend against predators, to protect nest sites or territory, to protect against nasty weather, or to migrate with the seasons. Animal’s groups and their social behavior are part of how animals survive in their environments.

Elaborate: As you resume your hike, continue to look for groups of animals and notice their behavior. Try to observe interactions within the group. How do they communicate with one another? Share your ideas about how the social behavior of an individual benefits the whole group (for example, alarm calls). Also, consider how animal groups may change seasonally during the course of a year. A few days after your field trip, watch a nature documentary together. Watch for animals that form groups and talk about how the groups help their members survive.

Evaluate: During the next few days, watch for opportunities to reflect on your field trip. As you see or hear various animals, ask your students if they think that species forms groups. Have them describe how the animals benefit from being in a group.
Many animals form groups that help them obtain food, defend themselves, and cope with changes in their environment. People give different names to animal groups – such as **herds, packs, flocks, colonies** and many others. These names reflect the fascinating variety of grouping strategies and social behaviors that enable animals to survive. Following are just a few examples of wildlife from Rocky Mountain National Park.

**North American Elk** - Elk are very social animals and are often seen in herds. Herds vary in size with the season. Larger herds, which may number several hundred individuals, consist of cows, calves, and young bulls. Older bulls typically are solitary or form small groups. In fall, elk gather in large numbers as the bulls gather “harems” and compete for cows. Gathering in herds helps protect elk from predators. There is safety in numbers. In winter, herds help the elk to stay warm and to move through deep snow.

**Beaver** - Beaver are not as common in RMNP as they once were, but look for evidence of their dams, lodges, or wood-cuttings along the streams in the park. If you are lucky, you may see live animals as beaver populations increase. Beaver are very social animals that live in family groups and colonies. Family groups include a pair of adults and their offspring, who stay with the parents until age two. Several families may live together in a large colony. Living in groups helps beavers watch out for predators and warn each other of danger. Members of the colony help with food collection, dam construction, and care of young beavers.

**Black-billed Magpie** - These noisy birds of the jay family are common in lower elevations of the park. In nesting season, the male and female magpies work together to build their nest and to raise their young. Outside the nesting season, they may stay in family groups, or join in larger flocks, up to several hundred birds. Their noisy voices warn of danger and they will band together to chase off a threatening hawk. Larger groups can more effectively find food. In winter, they may roost overnight in large flocks which helps them stay warm and to stay “up-to-date” on magpie news.

**Western Terrestrial Garter Snake** - Garter snakes occur near streams, lakes, and ponds in lower elevations. These snakes are usually seen alone as they search for insects and other small prey, or warm themselves on a rock. They are solitary from late spring until fall, but when cold weather arrives, they gather in large groups in underground dens to hibernate for the winter. This helps them survive the long, cold winter.

**Western Tent Caterpillar** - In shrubby, lower elevations regions of RMNP, you may encounter a silky tent-like structure on aspen, willow, mountain mahogany, or other trees or shrubs. Inside, you will see dozens or hundreds of western tent caterpillars, which spin silken tents and live together in large social groups. The communal tent provides protection from predators and the elements. Caterpillars move around the nest as needed to find the correct temperatures. The large number of caterpillars helps maintain the proper temperature and reduces the chance of predation. Tent caterpillars give off chemical signals that recruit others to join them on nightly foraging trips outside the tent and point out the direction to food.

**Bumble Bees** - On warm summer days, you may glimpse large bumble bees gathering pollen from RMNP’s flowers. Bumble bees are social animals that live in colonies. In the spring, a queen bee awakes from hibernation and busies herself feeding on pollen and nectar. She establishes a nest, lays eggs, and cares for her young when they hatch. When they mature, these bees become worker bees which gather food outside the nest, care for the next batch of eggs, or tend to the nest. More and more eggs are hatched and mature, so the colony grows. Towards fall, the queen now produces new male bees, which leave the colony to mate, and new queens which leave the colony.