

## Adaptations and Survival

Vocabulary	
<b>adaptation</b>	A trait that helps a living thing survive in its environment
<b>survive</b>	To continue to live
<b>advantage</b>	Something that helps
<b>migrate</b>	To move from one place to another because seasons changed
<b>impact</b>	A strong affect
<b>hibernate</b>	To go into a deep sleep during the winter months
<b>dormant</b>	A state where a living thing slows its natural activity to survive winter

### Survival of Individuals

- Migration, hibernation, and molting are types of adaptations.
- Adaptations do not happen quickly.
- Groups of animals and plants adapt naturally over a long period of time.

#### Cactus (see pages 218-219)

- A Saguaro cactus with more arms produces more offspring.
- A Saguaro cactus with fewer arms will not reproduce as much as a Saguaro cactus that has more arms.
- A cactus that has more arms is also able to store more water in a desert environment, which is another type of adaptation.

#### Bird Beaks

Different shapes of bird beaks are adapted to be effective in picking up certain types of food.

- Long, narrow beaks can reach nectar in a flower, and insects and worms in the soil, but not easily break small seeds.
- Short, strong beaks can open seeds.
- Sharp, curved beaks can tear apart fish or meat.

## **Sea lions**

Sea lions can survive in cold environments because a thick layer of fat protects them from the cold.

## **Survival in Groups**

Animals from groups to:

- **Keep warm** - Emperor penguins share body heat and protect one another from the wind.
- **Protect** - Safety in numbers. Some members of a group will eat while others look out for predators.
- **Capture prey** - Some predators work together to help capture prey that is much larger than themselves.
- **Raise young** - Elephants form groups, or herds, to help raise and protect each other's young.
- **Share work** - ants work together to feed their colony.

## **Drafting**

- Bike racers and birds use drafting to save energy and go faster
- By following closely behind one another, the lead bird makes the air easier for the other birds to fly in.

## **Environmental Changes**

Three factors of environmental change:

- **Humans** - cutting down trees
- **Other organisms** - beavers building dams
- **Natural events** - wildfire caused by lightning

## Responses to Seasonal Changes

- 1) **Migration** - animals move to a warmer location, when seasons change, in order to find food. They return to their original locations during spring.  
Some animals that migrate are birds and butterflies.
- 2) **Hibernation** - a state of rest. Animals hibernate in the winter when there is less food. When they hibernate, they need less food.  
Some animals that hibernate are bears and bats.
- 3) **Molt** - when animals molt, they shed and then regrow their body coverings.  
Some animals that molt are bison and moose.
- 4) **Dormant** - similar to hibernating but for plants. Plants go dormant (state of rest) when there is less food and sunlight available. In a dormant state, they do not need as much food to survive.