

Achievements and Competencies

Learning Outcomes

Grades 4-6
Habitats and communities
Diversity of life

Achievements and Competencies are based on the Common Framework of Science Learning Outcomes (K-12) set by the Canadian Council of Ministers of Education (1997).

Specific Expectations

Grade 4

LIFE SCIENCE

Habitats and communities

104-6 Demonstrate that specific terminology is used in science and technology contexts (e.g., use appropriate terminology such as habitat, behavioural and structural features, food chain, population, and community).

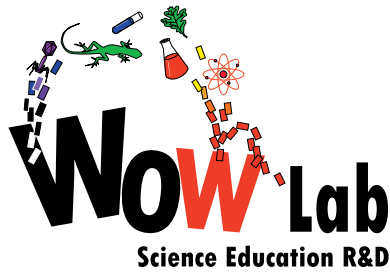
Each student will create their own Lego car which represents an organism in a population. While participating in the activity, students will use the individual cars they have created to help understand specific terms and concepts such as: evolution, natural selection, genetic variability and recombination.

204-1 Propose questions to investigate and practical problems to solve (e.g., propose questions such as "What is camouflage and how does it help an animal survive?").

As each car goes through the obstacles (environment), it will become apparent that some cars are, by chance, better adapted to the environment than others. Students will propose questions such as "what specific traits allowed some cars to survive?"

204-3 State a prediction and a hypothesis based on an observed pattern of events (e.g., predict the structural adaptations needed of an animal to live in a particular habitat, real or imaginary).

The students will be able to predict the structural adaptations that the cars need to overcome the different obstacles.



a WOW Lab

BLUEPRINT

Selection in Action - Achievements and Competencies

206-3 Identify and suggest explanations for patterns and discrepancies in data (e.g., identify population trends in data collected from a simulation game).

Specific attributes will be necessary for the cars to successfully overcome the obstacles. For example, the cars will need a specific structural feature to hold onto the gumball to survive the *Vibrating Surface Station* obstacle. The students will be able to observe a pattern from the cars' specific structural features.

300-1 Compare the external features and behavioural patterns of animals that help them thrive in different kinds of places.

The Lego cars are representative of organisms in a population. Certain external features of the cars will allow them to thrive in different kinds of environments or situations. For example, small, fast cars will be more likely to survive the *Monster Pendulum* obstacle.

Grade 6

DIVERSITY OF LIFE

Knowledge

300-16 Distinguish between vertebrates and invertebrates.

300-17 Compare the characteristics of mammals, birds, reptiles, amphibians and fishes.

300-18 Compare characteristics of common arthropods.

Selection in Action can lead to a discussion of the differences between vertebrates and invertebrates, mammals, birds, reptiles, amphibians, arthropods and fishes.