



Achievements and Competencies

Learning Outcomes

| Grades 7-9 | Grades 10-12 |
|--------------------------------|---------------------------------|
| Interactions within ecosystems | Genetic continuity |
| Earth's crust | Evolution, change and diversity |

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 7

LIFE SCIENCE

Interactions within ecosystems

304-1 Explain how biological classification takes into account the diversity of life on Earth.

Students will observe that all the diversity that can be seen between the species represented on the game board is the result of mutations that have accumulated over time.

EARTH AND SPACE SCIENCE

Earth's crust

311-6 Develop a chronological model or time scale of major events in Earth's history.

Students will observe how the different lineages have evolved over millions of years. The timeline on the game board illustrates the concept of deep time, which is necessary for evolution.



a WOW Lab

BLUEPRINT

Tree of Life -
Achievements and Competencies

Grades 11-12

LIFE SCIENCE

Genetic continuity

315-7 Predict the effects of mutations on protein synthesis, phenotypes and heredity.

The students will follow the instructions on the mutation cards to build the species and observe how these mutations are heritable and how the phenotypes change over time.

Evolution, change, and diversity

316-4 Outline evidence and arguments pertaining to the origin, development and diversity of living organisms on Earth.

This activity serves as an introduction to common ancestry, illustrating how all life on Earth can be traced back through time to a common ancestor. Students will observe that all the diversity between the species on their game board is the result of mutations and natural selection.