



## Up Close and Palaeo Topics

### Division 4

**Thank you for booking "Up Close and Palaeo" with ATCO Tyrrell Distance Learning!**

This document contains a selection of topics for you to share with your class in an effort to focus the questioning your students will engage in during your program. Please select those topics that you feel fit your current curriculum needs best, then ask your students to formulate their questions based on those topics.

**Note:** Questions do not need to be forwarded to the Royal Tyrrell Museum. However, please ensure all students have a copy on hand at the time of the program.

#### **1. Palaeontology: The Story of Life**

Scientists estimate the Earth to be approximately 4.5 billion years old, and throughout that time life has progressed and changed considerably. Think about what you would ask a Palaeontologist about the history of life, being a palaeontologist, and the various careers in that field.

- Curriculum connections:
  - Energy Flow in Global Systems (Science 10)
  - The Changing Earth (Science 20)
  - The Biosphere (Biology 20)
  - Career and Life Choices (Career and Life Management)

#### **2. Dinosaurs, the Birds and the Bees: The Process of Evolution**

The fossil record indicates that diverse species have sprung from common ancestors over long periods of time. Mutations and adaptations result in new creatures, while other species fail to adapt and become extinct. Think about what you would ask a Palaeontologist about the process of evolution.

- Curriculum connections:
  - Living Systems Respond to Their Environment (Science 30)
  - Change in Populations and Communities (Biology 30)

#### **3. Fire and Ice! Climate Change Through the Ages**

The climate on Earth has always been changing; gradually shifting from temperate oceans and forests to glaciers and freezing temperatures, and back again. Think about what you would ask a Palaeontologist about the Earth's climate, including its past, present and future.

- Curriculum connections:
  - Energy Flow in Global Systems (Science 10)
  - Changes in Living Systems (Science 20)
  - The Changing Earth (Science 20)
  - Energy and the Environment (Science 30)

#### **4. Sudden Death! Mass Extinctions through Earth's History**

The fossil record indicates several times where something wiped out almost every living thing on Earth; sometimes more quickly, and sometimes more slowly. Think about what you would ask a Palaeontologist about ancient global disasters and their resulting extinctions.

- Curriculum connections:
  - Energy Flow in Global Systems (Science 10)
  - The Changing Earth (Science 20)
  - Changes in Living Systems (Science 20)
  - Energy and Matter Exchange in Ecosystems (Biology 20)
  - The Biosphere (Biology 20)