

SCOTTY T-REX: INSPIRING HISTORY ALL YEAR ROUND

Phyllis Ray (Zado) Belliveau, Saskatchewan

INTENDED GRADE/SUBJECT AREA

Grades 4 and 5 Integrated Curriculum – Canadian and Saskatchewan History, Science, Language Arts, Fine Arts

CONCEPTS

- Geological time, historical time, change, interconnectedness, interdependence, heritage, identity

INSTRUCTIONAL OUTCOMES

Students will:

- understand the changes that have occurred in geological and historical time;
- identify themselves in relation to the universe, the world, Canada and Saskatchewan in time. Explore abilities to express learning through creative writing, art, drama, music and dance;
- expand knowledge and vocabulary;
- develop critical and creative thinking skills;
- develop independent learning skills;
- develop cooperative learning skills;
- understand the relationship between people and many of the elements of the world in which they live.

BACKGROUND INFORMATION

During the summer of 1994, I became excited about the excavation of the remains of Scotty T-Rex at Eastend, Saskatchewan, and I ventured out to view this find. When I returned, I decided that my global mind wouldn't be satisfied starting an explanation of Scotty T-Rex's existence during the Cretaceous Period. I planned to include all of the geologic history of Saskatchewan in the curriculum, beginning with the Big Bang. Since that time, social studies has been the central theme through which I bring life to the curriculum in my classroom.

There is now a coherent reason behind all that I do; all of the activities in my classroom fit into a bigger picture. My long-range plans are webbed. Science curriculum is pulled in to support the social studies umbrella. Reading materials are collected from libraries, magazines and various basal readers provided stories to support theme topics, and novel studies further expand what the students are learning. Students respond to what they read either orally or through written response. Writing and research assignments evolve from what is happening in the themes. Film and video reviews are written, poetry is composed, independent learning projects flourish, role-play activities are enacted, student interpretations of stories are dramatized, and art projects overflow into the hallways.

My students complete their Volumes of Prehistory and History as published books. All of the assignments, activities, and collected materials, except mathematics, are integrated into one exercise book. The students include a table of contents at the front of their books, into which the titles of each of their numbered pages or chapters are entered. Structure is provided to the topics and students are encouraged to expand their learning by conducting independent research.

Two computers are provided in the classroom with scheduled times provided so that each student can use either the Internet or information available on CD-ROM to explore their topics. Print materials, as well as video and audio references, are also provided for student research. Reports are produced by the students and become a part of their volumes. Students are encouraged to keep their books neat and colourful for the audiences that will want to enjoy them. When the volume is finished, students design a cover page that reflects the contents.

A great variety of evaluation methods are employed to assess the students' work. These methods include formal examinations and short quizzes, project and research assessment, evaluation of the completion of each volume – (title page, table of contents, map work, note-taking, independently chosen work, creative writing assignments), oral presentations, dramatizations, contribution to group projects, behaviour while completing independent and group assignments, evidence of critical thinking strategies in class and small group discussions, and the completion of a great many art activities.

ACTIVITIES

Prehistory and History Themes

The twelve themes outlined below have evolved over the last five years. All of the activities, plus more, have occurred in my classroom over those years. As you can imagine all of these activities could not have occurred during one year. The students in a class and their individual and collective learning styles dictate which of the activities a teacher might choose to use.

Activity #1 — Origin of the Universe and the Earth

The Biblical story of creation, a Chinese creation myth, several North American Native myths, the creation of the gods and goddesses of Greek mythology, the scientific explanation of the Big Bang theory and the creation of the planets in the Milky Way are all read about or presented. An artistic replication of several of the creation stories is completed and several dramatizations follow. Students love learning about Greek mythology.

Activity #2 — Precambrian Era in Saskatchewan

This time in geological history is presented as a time of volcanic activity, mountain building and cooling. The formation of igneous and metamorphic rock and the resources formed in them is discussed. Early organisms and their evidence through fossil remains are presented. The location of the outcropping of Precambrian rock in Saskatchewan and Canada is coloured on maps. A myth about volcanoes is read and students compose their own version about the origin of volcanoes and volcanic action. Famous volcanic eruptions are researched.

Activity #3 — Paleozoic Era in Saskatchewan

Oceans, then and now, are studied along with invertebrate marine animals, fish and amphibians. The formation of sedimentary rocks under water and the resulting fossils and natural resource deposits is discussed and their formation demonstrated. Early marine and land plant life is studied in connection with insects and early amphibians. Coal deposits created at that time are also pointed out. A large personal collection of fossils and invertebrate specimens are used for this study. A visit to the Geological Subsurface Lab to view an extensive collection of fossils and to learn about the drill core that helps geologists learn about early life in Saskatchewan and the possible location of mineral resources has been used with this theme.

Activity #4 — Mesozoic Era in Saskatchewan

Plate tectonics, the formation of the Rocky Mountains, climate change, the dinosaurs and their extinction, Saskatchewan Mesozoic fossils sites, reptiles and birds (then and now), sedimentary rock and resources of Mesozoic origin, plant life, and animal extinction, are all topics discussed for this era. Current paleontological projects are researched. The methods of the paleontologist are studied and then used in a classroom “dig.” Parts of large models of dinosaurs are buried, unearthed and assembled for identification. A novel study about a fictional dinosaur is usually read during this study.

Activity #5 — Cenozoic Era in Saskatchewan

Mammals, then and now, Saskatchewan’s Cenozoic fossil sites, resources found in Cenozoic sedimentary rock, the meaning of the grass plant to mammals, and the migration of mammals between continents are topics covered in this theme. At the end of the Prehistory section, a day-long trip to the Royal Saskatchewan Museum is arranged. Students view the large models of pre and post-glaciation mammals, and go behind the scenes to view paleontologists working, they also are given the opportunity to use magnifying glasses and tweezers to locate fossilized bones in Tertiary Period gravels. Stories about the discoveries of several different paleontologists are read during this theme.

Activity #6 — Ice Age in Saskatchewan

Periods of glaciation and interglacial, erosion and deposition of soils and aggregates in Saskatchewan, animal groups remaining after glaciation, and the arrival of the first human inhabitants in North America are topics covered in this section. Post-glacial mammal sites are located on our maps. Our classroom dig sites are turned into demonstration sites to show the action of glaciers, the ponding of glacial lakes and the cutting of melt water spillways. This section is covered very quickly but one of the basal readers has a non-fiction article about glaciation in Canada that is read at this time.

Activity #7 — First Nations’ Peoples of Canada and Saskatchewan

First Nation’s peoples from the retreat of the glaciers to the arrival of Europeans are studied at this time. Emphasis is on changes in climate, vegetation, weapons used, food sources, clothing, shelter and art forms. Prehistoric petroglyphs and pictographs are studied and reproduced in clay and paint. Pottery is made and baskets woven. First Nations’ legends are read, and stories are reproduced in plasticine and presented in other classrooms. Early tool artifacts are borrowed from the Saskatchewan Archaeology Society for examination. Our trip

to the Royal Saskatchewan Museum allows us to handle weapons used by First Nations' people and to view displays of everyday life before and after the contact with Europeans.

Activity #8 — Ancient Civilizations of the Mediterranean/Medieval Europe

Phoenician, Egyptian, Greek and Roman cultures are examined, clothing modeled, writing replicated, warships reproduced, methods of feasting enacted and famous people studied. Medieval Europe has also been studied, methods of eating food tried, clothing modeled and castles built. Fairy tales about kings and queens and castles are read.

Activity #9 — Early Explorers to North America, Canada and Saskatchewan

Methods of sea travel are examined in the context of the technologies of the 10th to 17th centuries. Ships are built (longships, carracks, caravels), parchment paper prepared and used for map making, and docu-dramas researched and produced about the lives of the explorers. Time lines are constructed and explorers placed as they appeared in time. Norse mythology is read and the lives of the Vikings studied in depth. Dramatization of the Creation and Destruction of the Norse Nine Worlds is a highlight for the students.

Activity #10 — Fur Trade and the Exploration of Canada and Saskatchewan

Individual fur traders and explorers, fur trade companies, and methods and routes of travel across Canada are studied. Upright desks become canoes and York boats, walls and tables become forts, and simulated fur trading games give students an opportunity to put themselves in the shoes of factors and First Nations' people. During this time stories about famous people from Saskatchewan and Canada are read. One special Canadian is chosen by each of the students and they research that person in depth. Displays are made of their learnings, and a riddle is composed about the person. Guests are invited to a presentation of the riddles where students dress like the person and recite their riddle. The audience tries to guess the identity of the famous people. Research topics for the heritage fair are prepared in the same manner.

Activity #11 — Settlers Coming to Eastern and Western Canada

Reasons for settlers relocating are examined, travel modes are considered and living conditions are studied in this theme. The effect of the arrival of Europeans, on the First Nations' people and the Métis are researched. Louis Riel's life is studied. A large wall mural called "This is Our Land" was created to show the West and its people before the arrival of the Europeans. Creative problem-solving is used to give the students a tool for arriving at other solutions to Riel's death and the treatment of the Métis. Guest speakers share their knowledge. Genealogy is introduced at this time and students are asked to place their ancestors in historical time. Field trips are made to local historical museums, to an old school house for a day of school, to a rural community to join the March-West Reenactment and to meet pen pals with whom we had corresponded, and to provincial historical sites.

Activity #12 — Canada after Confederation and Individual Provinces

Confederation and the joining of each of the provinces is traced. The formation of the Northwest Mounted Police and the trek west is studied. The building of the transcontinental railway is read about in a story called "Across the Ribbon of Steel." The geography of Canada and each of the provinces is studied. A wall-sized map of Canada is constructed and students in pairs research one province or territory. Their learning is made

visual as they place symbols or pictures on the province they have researched. Oral presentations follow.

Activity #13 — Beyond our Classroom and Country

Every year students learn about the United Nations and aid in raising money for UNICEF by advertising, pricing articles, setting up tables of merchandise, and performing as clerks at a Kindergarten-Grade 5 Flea Market. Project Love, a project that raises money and assembles educational kits for underdeveloped countries, has offered the children another opportunity to become aware of poverty around the world and to actively help others.

About the Educator

Phyllis R. (Zado) Belliveau uses her life-long love of history as the central theme for the integrated curriculum she developed and uses in her grade four and five classroom. Inspired by a trip to a palaeontology excavation, Phyllis decided to start her history courses at the geologic beginnings of Saskatchewan. Her students begin with the Big Bang and move through prehistory and history to the present. Events such as fossil digs, tours of museums and historical sites and dramatic sketches in period costume captivate her students, allowing them to gain an appreciation for the history that has preceded them. In 1980, Phyllis published a local history of Lake Johnson and Sutton Rural Municipality.