Science 7 Earth’s Crust and Resources Unit

Big Idea: **How on earth did the soil form?**

Outcome:

EC7.3 Investigate the characteristics and formation of the surface geology of Saskatchewan, including soil, and identify correlations between surface geology and past, present, and possible future land uses.

Understandings:

There are three main types of rocks formed in the rock cycle: igneous, metamorphic and sedimentary.

 The fossil record provides evidence of geological history.

 Rocks weather in many different ways.

 Soils have different physical properties that allow them to be classified.

 Past and current land practices have had environmental consequences.

Essential questions:

1. -What are they three main types of rocks?
2. -What is the rock cycle?
3. -How does the fossil record provide evidence of geological history?
4. -How do chemical, physical and biological weathering processes form soil?
5. -What is the difference between weathering and erosion?
6. -What physical properties can we use to classify soil?
7. –What environmental consequences have resulted because of past and current land practices?

Students need to know: (essential questions they are related to are in brackets)

 -three main types of rocks (1)

 -rock cycle (2)

 -fossil record provides evidence of geological history (3)

 -soil is formed by many processes (4)

 -weathering and erosion differ (5)

 -soil can be classified (6)

 -environmental consequences of land practices (7)

And be able to: (essential questions they are related to are in brackets)

 - construct a visual representation of the rock cycle and types of rocks (1, 2)

 - explain how scientists use the fossil record (3)

 -develop and use a classification key for rocks (1)

 -describe examples of weathering and erosion (4, 5)

 -document local surface features (5)

 -collect local soil and classify it (6)

 -identify predominant soil types (6)

 -assess environmental impacts (7)