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IERG Pro-D - KB Woodward Elementary

Title: Let's Start Early: Developing Students Who Imagine, Inquire and Investigate

Synopsis: Using Egan's Mythic Framework, this session will show how cognitive tools can engage students in the mystical exploration of plant life.

K Big Ideas - Plants and animals have observable features

Gr. 1 Big Ideas - Living things have features and behaviours that help them survive in their environment

Introduction

(IE) Imaginative Education typically:

- engages through story
- diversifies instruction
- develops voice through active learning & teaching
- enriches possibilities through imagination and risk taking
- conveys & encourages natural link with core competencies of new curriculum - Communication, Creative/Critical Thinking, Positive Personal & Cultural Identity, Personal Awareness and Responsibility, Social Responsibility
- demonstrates student growth in meaningful ways - assessment practices

Starting Point - The Hook: How can we engage students emotionally?

IE Narrative:

- a) Develop sense of wonder/mystery by relating plant life to what the student knows:
- Are you alive? How do you know you are alive?
 - Does everything/anything that is alive live forever?- bristlecone pines
 - What other things are alive?

IE Binary Opposites - begin/end; alive/dead

IE Sematic Understanding/Rhythm: Aboriginal drumming - pulse as heartbeat/energy
- native dance to demonstrate movements of life - animals - cultural

Ministry Competencies: Demonstrate curiosity & sense of wonder about the world
(K/1 Science)

Now What . . . And How?

b) Natural Environment

- Where do we get our food? i.e. purchase
- Traditional First Nations relationship with nature i.e. gathering (AB Support)

IE - *Drama:* How we get our food - historical and present day

Ministry Competencies: Acknowledge/Explore different perspectives on people, places, issues, and events in their lives (perspective) (K/1 Socials)

c) Garden/Nature Walk - exploration

- Set purpose - to explore a garden and record what they see via sketch.

Discuss what they imagine they might find.

- Share our findings - recall the images through drawings & oral language
- Story: Mysteries in the Garden by Aileen Fisher ISBN 0-8372-2392-0

IE - Mystery, Forming Images - by setting purpose, children are building their experiences through imagination and observation

Ministry Competencies: Make exploratory observations using their senses (K)/Make and record observations (Gr. 1 Science)

d) Planting - small groups (can be done in garden, or in classroom pots)

- technique - how can we have our own plants?
- language development - soil, trowel, roots, stem, etc.
- could also involve soil study as children observe matter within the soil
- on-going study of our plants & their care
- Story: And a Sunflower Grew by Aileen Fisher ISBN 0-8372-2394-6

IE - Puzzles - planting & care for best results, what constitutes soil

Ministry Competencies: Safely manipulate materials (K) to test ideas and predictions (K/1 Science)

e) Photosynthesis - Plants as Machines

• *defn.* machine - an apparatus consisting of interrelated parts with separate functions, used in the performance of some kind of work

(<http://dictionary.reference.com/browse/machine>)

- plants manufacture food - Learn About Plants - Photosynthesis Experiment video <https://www.youtube.com/watch?v=wnzKdpHGzEc>
- brainstorm what we need for “plant machine” & see if we can create our own plant machine within small groups to reinforce process (water + carbon dioxide makes sugar and oxygen in the presence of sunlight and green plant pigment - chlorophyll) Resource: Photosynthesis Changing Sunlight into Food by Bobbie Kalman ISBN 0-7787-2308-9

IE - Metaphor - a means of understanding the unknown through what is known

Ministry Content: Basic needs of plants (K) Structural features of living things in the local environment (Gr.1 Science)

f) Life Cycles

- Discussion - compare plants/animals
- Stories - Pumpkin Pumpkin by Jeanne Titherington ISBN 0-590-42871-3 or A Seed Grows by Pamela Hickman & Heather Collins ISBN 1-55074-200-0 The Life Cycle of a Butterfly, Bobbie Kalman ISBN 0-7787-0680-X
- songs e.g. <http://the-science-mom.com/1400/the-parts-plant-song/> fingerplays/games e.g. <http://www.canteach.ca/elementary/songspoems22.html>
- Begin compost - rejuvenation
- Activity - sequence cycle of pumpkin

IE - Binary Opposites - grow/decompose

Rhyming/Games - reinforce knowledge of plant life cycle

Ministry Competencies: Use age appropriate reading, listening, and viewing behaviours and strategies to make meaning from texts (K/1 Language Arts)

g) Figurative Language

- view paintings/sculptures from artists:
 - Georgia O'keeffe <http://www.okeeffemuseum.org/about-georgia-okeeffe/>
 - Giuseppe Arcimbaldo's "Summer"
 - native carvers - <http://www.canadianindianart.com/Artist>
- discuss figurative language i.e. ear of corn, eye of a potato, root of the problem, to have blossomed, branching out, etc.
- art lesson based on O'keeffe's works or native carvings (trees)
<http://www.artforsmallhands.com/2009/09/in-style-of-georgia-okeeffe.html>

IE - Joking & Humour

Ministry Content: Students are expected to know literary elements & devices (K/1 Language Arts); Describe and respond to works of art (K/1 Arts)

How to Conclude . . .

h) Culture Soup & Bannock - alternate groups

- children bring a vegetable (secret) from home to create a class soup
- Eye of the Potato Song (Sesame Street)
<https://www.youtube.com/watch?v=j1quYBqUafo>
- game prior to cooking - mystery box - children guess vegetable inside
- Eye of the Potato Song (Sesame Street)
<https://www.youtube.com/watch?v=j1quYBqUafo>
- allow children to chop, etc. in small groups
- Aboriginal Support - bannock
(could be tied in with potlatch as desired)

IE - Narrative - sense of wonder

Binary Opposites - begin/end

Games & Mystery - identifying various vegetables

Ministry Competencies: Draw upon local First Peoples knowledge and/or expertise to make connections to mathematical topics and concepts (K/1 Math;)