Spiral Inquiry Model

green LEARNING

GreenLearning's **Spiral Inquiry** gets learners excited about research and investigation. New inquiry models that encourage open-ended and learner-centred investigations are now key components in provincial curricula across Canada, and our Spiral Inquiry method is a robust model that's clear and helpful to educators and learners.

The educator-facilitated spark stage paired with the four remaining stages of inquiry guides learners as they explore ideas and actions. The spiral nature of the model helps students understand that inquiry is not linear nor circular, but a process with many loops and possibilities. Learners will recognize that the conclusion of one inquiry can lead to new inquiries in the future.

1

SPARK

The "spark" is the key to igniting learner curiosity and drawing learners into thinking critically about a topic or an issue. The spark piques the learner's interest in a particular topic or question and becomes the starting point for an investigation into something that engages them. As the key facilitator of the inquiry, the educator provides an enticing spark. This could be anything from a scenario or case study to a video, editorial cartoon or a story from the media that helps learners see the many possible avenues of investigation within the topic.

Example:
An educator hosts a pancake breakfast, but only half of the learners get maple syrup on their pancakes because maple syrup wasn't produced that year in their area. Was it because of climate change or normal weather changes? This can spark learners to think about the impact weather changes have on other things, too, like skiing.

3

EXPLORE & RESEARH

Learners research and collect data which could include interviews, fieldwork, surveys and contacting experts. They should be open to a wide range of sources and ideas. Educators need to help guide learners to finding reliable and age-appropriate source material.

Example:
Learners could gather data on the ideal weather conditions for maple sap production, actual weather conditions that year, how much maple syrup was produced in the area that year, and how the conditions and maple syrup production compared to previous years.

2

HYPOTHESIZE & PLAN

Learners take their spark, and brainstorm possible hypotheses, ultimately picking a hypothesis that's testable and for which reliable information can be found. They also make a plan for their research and note-taking. Educator feedback at this stage is key to help learners focus on workable inquiries.

Example:
If climate change is negatively affecting maple trees in Ontario, then maple syrup production in the province will decrease.

4

ANALYZE & CHECK

Learners analyze their data and begin to draw conclusions. At the same time, the educator helps them check against their hypothesis, encouraging them to be open to modifications if necessary, which could mean additional research.

Example:
The learners exploring maple syrup production could discover it was an El Niño year, so the winter and spring were warmer than usual. They'll need to explore what impact that would have had on maple syrup production.

5

COMMUNICATE & ACT

Learners plan actions that are natural outcomes of their research to reinforce what they've just investigated and learned, and to help them feel connected to creating a better tomorrow. They'll share their conclusions with a wider audience by creating memes, videos, a social media account or campaign, charts, artwork, written reports, or giving presentations. The educator helps learners connect to these opportunities and designs appropriate assessment material.

Example:
If learners conclude that climate change had a negative impact on maple syrup production, they could create memes to share that information widely and raise awareness, or they might present their findings to a local maple syrup producers association.

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