CINCINNATI ZOO & BOTANICAL GARDEN

Frisch's Outreach: Inquiry 101 (4-6)

Session Two

Extensions

At a glance

Students will begin to understand how to use the Scientific Process to find answers to their questions

Goal

Students will begin to use the QUEST model to find answers to their questions.

Objectives

1. While using a Data Collecting Tool students will conduct direct observation of two visiting Zoo animals.
2. After completing a direct observation and data gathering, students will compile and review data.
3. Students will determine if their prediction was supported by their data.
4. Students will construct ways to creatively share their discoveries.

Theme

The Scientific Process can be utilized to discover answers to our questions.

Sub-themes

1. The QUEST model is an aide in the discovery of answers to questions.

Academic standards

Benchmarks for Science Literacy (Project 2061)	*Grade 5* Nature of Science, Scientific Inquiry 1B/E1,1B/E2b,1B/E *Grade 6* Nature of Science, Scientific Inquiry 1B/M1b,1B/M3ab
Ohio Science Academic Content Standards	*Grade 4,5* Doing Scientific Inquiry: 3,6 *Grade 6* Doing Scientific Inquiry 1,2,3,4 *Grade 4-6* Scientific Ways of Knowing Nature of Science 1,2,3,4 *Grades 4-6* Ethical Practices 2,4,5 *Grade 6* Science and Society 3
Kentucky Core Content—Science	*Grade 4* Scientific Ways of Thinking and Working 2.1 *Grade 5-7* Scientific Ways of thinking and Working 2.1

Background

Imagination and inventiveness are always involved in Inquiry. Students can learn about our world by gaining experience in conducting their own investigations and in working within small groups. Students determine their own questions, the tools for collecting data, the method of collecting data, and the means to share their discoveries with others. They will be challenged to check what they think with what they see.

The QUEST model can be a formula for the Scientific Process but it can also allow for creativity and flexibility as determined by the learners.

Vocabulary

comparative (adj.)-compared with others considered relative to something known

data(n)-information often in the form of facts found from experiments and observations

ethogram(n)-catalog of behaviors on which an observer may record the numbers of such acts or the amount of time engaged in the behaviors

hypothesis(n)-tentative explanation used for basis of further investigation

observe(v)-to watch something attentively

prediction(n)-statement of what

Assessment

Unsatisfactory—student seems uninterested, does not participate, and does not answer questions.

Satisfactory—student seems somewhat interested, participates to some degree, and attempts to answer questions when asked

Excellent—student seems very interested; participates willingly in all activities, and answers questions. Student offers his or her own questions.

Extension

A Fantastic Finish!
To encourage students to make Predictions have them divide up into small groups. Each group begins to write a very short action filled story about fantastic places or events. (no more than a few short paragraphs). The ending is purposefully omitted. After editing, pass the story onto another group. That group can now come up with a Fantastic Finish! Be sure to share the Ending!
If the group is comfortable with Drama perhaps they would like to act out the ending!

Resources

Broda, Herbert, Schoolyard Enhanced Learning:Using the Outdoors As An Instructional Tool, Stenhouse Publishers, 2007.

Sobel, David, Place Based Education:Connecting Classrooms and Communities, Orion Society, 2004

Cincinnati Zoo & Botanical Garden
www.cincinnatizoo.org

National Wildlife Federation (NWF)
Schoolyard Habitats Program
http://www.mwf.org/schoolyard/index/

Project Dragonfly
www.muohio.edu/dragonfly

Project Feeder Watch
www birds.cornell.edu/pfw/index.html
(classroom data gathering)

Project Wild
http://wwwprojectwild.org