



# Frisch's Outreach: Inquiry 101 (Gr. 1-3) Extensions

Session Two



## At a glance

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

### Goal(s)

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

data. **Did you prove what you think? Did you check what you think to what you see?**

### Objective(s)

- 1) While using a Data Collecting Tool students will conduct direct observation of two visiting Zoo animals. **What do you see?**
- 2) After completing a direct observation and data gathering, students will compile and review data. **What did you scientifically see?**
- 3) Students will determine if their prediction was supported by their

- 4) Students will construct ways to creatively share their discoveries. **What can you tell others?**

### 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 1,2 Nature of Science, Scientific Inquiry
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	1B/P1,1B/P3,1B/P4 <i>Grade 3</i> Nature of Science, Scientific Inquiry 1B/E1,1B/E2,1B/E2b,1B/E3a,1B/E4
Ohio Science Academic Content Standards	Benchmark -Scientific Inquiry <i>Grade 1-2 A,B,C</i> Benchmark- Scientific Ways of Knowing <i>Grades 1-2 A,B,C,D</i> Grade Level Indicators Doing Scientific Inquiry <i>Grade 1 1,2,3,4,5,6,8,9</i> <i>Grade 2 1,2,3,4,5,6,7,9,10</i> <i>Grade 3 1,3,4,5,6</i> Nature of Science <i>Grade 1,2 1, 2</i> <i>Grade 3 1</i> Ethical Practices <i>Grade 2 3</i> <i>Grade 3 2</i> Science & Society <i>Grade 1 3</i> <i>Grade 2 4</i> <i>Grade 3 5</i>
Kentucky Core Content— Science	<i>Grade Primary Through Gr. 4</i> Scientific Ways of Thinking and Writing 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 can explore and determine their own questions. **What do you want to know?**

Using Inquiry students can make Predictions about the possible answers to their questions. **What do you think?** Learners can understand the importance of collecting data and using scientific tools for that collection. By carefully

examining their collected data they can confidently answer the question. **How do you know?** They will be challenged to check what they think to what they see. Once their questions can be scientifically answered by using Inquiry they can share with other learners their new found discoveries!

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 someone thinks will happen

*question(n)*- a quest for information or understanding

*record(v)* an account of something, preserved in a lasting form, e.g. in writing

*scientific(adj)* relating to, using, or conforming to science or its principles



## **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! Students may choose to do the same activity by creating cartoon strips.

## **Resources**

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

Louv, Richard.Last Child in the Woods:Saving Our Children From Nature Deficit Disorder. Algonquin Books, 2005.

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

Cincinnati Zoo & Botanical Garden  
[www.cincinnati-zoo.org](http://www.cincinnati-zoo.org)

National Wildlife Federation (NWF)  
Schoolyard Habitats Program  
<http://www.nwf.org/schoolyard/index/cfm>

Project Dragonfly  
[www.muohio.edu/dragonfly](http://www.muohio.edu/dragonfly)

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

Project Wild  
<http://www.projectwild.org>