

## CONTINUUM FOR SCIENTIFIC INQUIRY/EXPERIMENTATION SKILLS

Beginning → Exploring → Emerging → Competent → Proficient			
<b>Initiating and Planning</b>			
<b>The student:</b>			
asks questions that demonstrate curiosity about the world around him or her	asks questions that can be answered through tests/experimentation, and chooses one to investigate	asks questions that can be answered through tests/experimentation, and formulates a specific question to investigate	asks questions that arise from practical problems and issues, and formulates a specific question to investigate
with support, follows the steps in a simple, teacher-prepared procedure for a test/experiment	follows the steps in a simple, teacher-prepared procedure for a test/experiment	creates, from a variety of possible methods, a plan to find an answer to the question he or she has formulated	plans for safe experimentation, showing some awareness of variables to be considered
recognizes when a test is fair or unfair	recognizes when a test is fair or unfair	with support, builds fair testing elements into plans for an experimental procedure designed to answer the question he or she has formulated	builds fair testing elements into plans for an experimental procedure designed to answer the question he or she has formulated
makes “guesses” about possible outcomes of simple procedures	with support, makes simple predictions about the outcome of the procedure prepared by the teacher	makes predictions, based on personal experience, about the results of the investigation	makes predictions, based on prior knowledge from explorations and investigations, about the results of the investigation
<b>Performing and Recording</b>			
<b>The student:</b>			
safely uses teacher-selected tools and equipment to extend the senses for observation	selects, with support, and safely uses tools and equipment to extend the senses for observation	selects and safely uses tools and equipment to observe and measure	selects and safely uses tools and equipment to observe and measure
records data orally, in pictures, in written words, and/or in tally charts	records data orally, in pictures, and/or in written words or sentences	records and organizes data using standard measurements, sentences, lists, and/or simple labelled diagrams	records and organizes data using standard measurements in simple tables, graphs, or charts, or in labelled diagrams

## Analysing and Interpreting

### The student:

discusses data, and asks new questions based on data	identifies patterns in the data, and summarizes the data	identifies patterns and discrepancies in the data, and summarizes the data	identifies patterns in the data, suggests explanations for discrepancies, and summarizes the data
proposes an answer to the question being investigated, on the basis of observations	draws a simple conclusion on the basis of observations	draws simple conclusions on the basis of data gathered	draws conclusions on the basis of data gathered
describes what was done and what was observed	makes a simple evaluation of the experiment	evaluates the experimental procedure, explains changes that could be made to improve it, and gives reasons for the changes	evaluates the experimental procedure, explains changes that could be made to improve it, and gives reasons for the changes

## Communicating

### The student:

orally recounts steps in and results of an investigation to answer a specific question	orally presents steps in and results of an investigation to answer a specific question	presents steps in and results of an experimental procedure orally; in charts, graphs, or diagrams; and/or in sentences	presents steps in and results of an experimental procedure using numeric, symbolic, graphical, and/or linguistic methods
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