

Inquiry for Benchmark Two

In the State of Oregon, there are four components to inquiry science: form, design, collect, and analyze.

In the scientific process used in the past, students would pose a question and then their suggestion for an answer, a hypothesis. Using the inquiry method today, **form** is like hypothesis but there's more. In addition to what a scientist wants to know and what might happen, scientific background must be stated. This requires a lot of language. At this point, form is not a required part of a formal inquiry work sample at benchmark 2.

Design is like procedure from the scientific process. It's important to students to state their plan step by step, label everything, and be as clear as possible.

Collect is collecting data but, again, there's a bit more. The data is listed on a table but must be converted into a chart, graph, percentage, something that can be analyzed.

Analyze is like conclusion. I tell students to imagine that the paper is being handed in and I ask "Well, how did it go?" or "What did you learn?" I encourage students to go back to each of the first three steps and review their work:

FORM

Were you able to answer your question?

Did you get the results you expected?

Did you learn anything new with this activity?

DESIGN

Was your procedure clearly stated? clearly labeled?

Could another scientist follow your design?

Did your design have only one variable?

Would you change anything if you repeated the activity?

COLLECT

What were your results? Did they match your hypothesis?

How does your result change with the variable?

Were the results different from what you expected?