

Basic

Observing – a statement made using the senses (Taste, touch, sight, sound, and smell). There are two kinds of observations:

- 1. Quantitative Using numbers to observe
- 2. Qualitative Using descriptive words to observe

Inferring – drawing a tentative conclusion based on prior knowledge. An inference is an interpretation of observations.

Measuring – quantitative (with numbers) observations

Communicating – giving explanations of observations.

- 1. Verbal
- 2. Written
- 3. Graphically (line graph, bar graph, histogram)
- 4. Visually

Classifying – arranging objects or information by using their attributes

- 1. Binary sorting into two groups
- 2. Multistage set of binary sorts resulting in one unique attribute for each object
- 3. Serial sorting objects in a logical order (size, alphabetical, etc)

Predicting – making statements about future outcomes based on prior knowledge or experience. This is a forecast for what might happen.

Comparing – Noticing the similarities or differences between the objects to be compared.

Integrated

Hypothesizing – a suggested explanation based on background knowledge. **Making models** – creating a visual representation of an event or object **Data collection**

- 1. Data tables quantitative data in chart form
- 2. Graphing a representation of data

Data Interpretation

- 1. Interpolation interpretation within a set of data
- 2. Extrapolation interpretation of information beyond the data

Experimenting

1. Controlling variables