Perusing the Parameters Activity

Perusing the Parameters is an activity used to learn about different water quality parameters. Parameters may include: alkalinity, hardness, total dissolved solids, pH, dissolved oxygen, conductivity, turbidity, nitrate, phosphate, bacteria, and temperature.

Materials/Information:

- Art supplies, such as poster board and markers, for presentations
- Water testing equipment, such as PRIDE Clean Stream Kit, Lamotte, and/or Hach testing equipment
- Tap water and paper cups to put tap water in for testing
- Access to water body, such as stream, pond, lake, etc.
- Pens/pencils and paper for recording results
- Parameter information found in the *Healthy Water, Healthy People Testing Kit Manual*. For more information visit: www.healthywater.org.
- Remember safety rules when testing near a water body. An adult should always be present. Life jackets may or may not be needed depending on each individual situation. Please use your best judgment.

Instructions:

- Divide participants into groups of four or five and assign each group one parameter to study
- Challenge each group to find a creative way to teach the other groups about their parameter and what it measures. They must present this information in a way that will ensure that the entire group will never forget that parameter and also what it measures. Each group will be given a maximum of five minutes to present their findings to the rest of the participants. Ideas to present information: skit, song, rap, poem, poster, mime, model, etc… For example, alkalinity: plop, plop, fizz, fizz, oh what a relief it is.
- Have each group make their presentation for the entire group
- After all presentations, each group will receive the necessary water testing equipment to measure their parameter in water (such as PRIDE Clean Stream Water kit). They will be required to learn how to use the equipment to measure their parameter and also they will need to know what the data they collect means. For example, if a group measures a pH of 5 they will need to know that the water they measured is acidic.
- Have groups practice measuring their parameter in the classroom (using water from the tap).
- Have each group make a second presentation to teach the other participants how to measure their parameter.
- Have all participants come back together. Now divide participants into new groups, with one participant from each parameter group in each new group. That participant will be considered the "expert" of the parameter he/she learned in their previous groups and will assist the others in his/her group when testing for this parameter. Example: The group of students that learned about pH will each go to a different new group so that each new group will have one expert in pH.
- Have new groups measure all parameters in the field (at a local water body, such as pond, lake, or stream).
- Have everyone come back together and discuss data collected and also discuss other sources of available data (Water Watch, etc.).

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