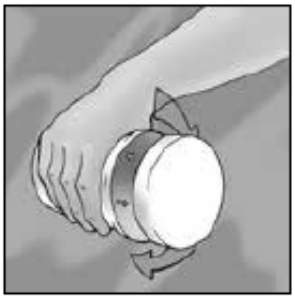
Materials adapted from the Earth Echo Water Challenge by GHS LFI for educational purposes only.

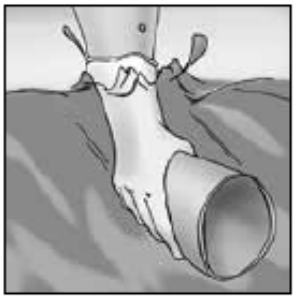
WATER QUALITY TESTING INSTRUCTIONS

STEP 1

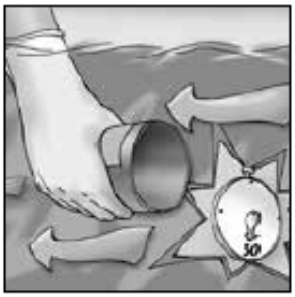
COLLECTION PROCEDURE



1. Remove the cap and rinse the white sample jar 2-3 times with sample water.



2. Hold the jar near the bottom and plunge it (opening downward) below the water surface.



3. Allow the water to flow into the jar for 30 seconds.

4. Cap the full jar while it is still submerged. Then proceed to the temperature procedure.

STEP 2

TEMPERATURE PROCEDURE

1. Place the thermometer ten centimeters below the water surface for one minute.

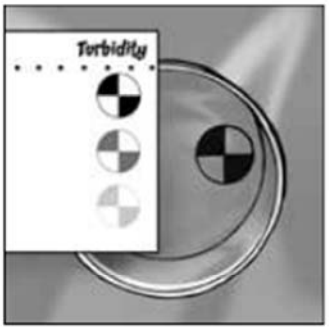
2. Remove the thermometer from the water and read the temperature (the number with the green background on the high-range thermometer). Record the number in degrees Celsius.

14 16 18 20 22 24 26 28 30 32 34 36 38 40

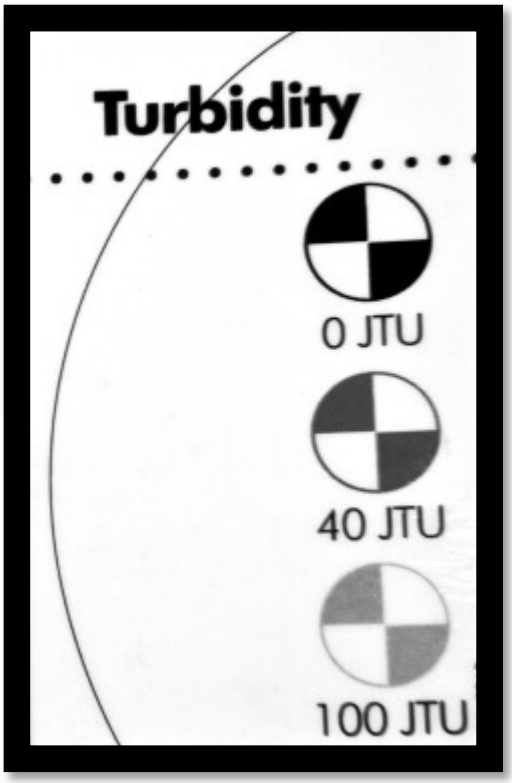
STEP 3

TURBIDITY PROCEDURE

1. Pour out water sample until the white sample jar is filled to the fill line located on the label.



2. Hold the color comparison chart on the top edge of the sample jar. Looking down into the jar, compare the appearance of the Secchi disk sticker in the sample jar to the chart. Record the result as turbidity in JTU.

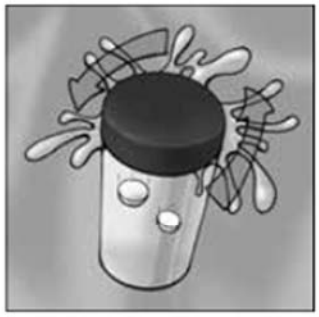


STEP 4

DISSOLVED OXYGEN PROCEDURE

1. Submerge the small glass vial into the water sample. Carefully remove the vial from the water sample, keeping the vial full to the top.

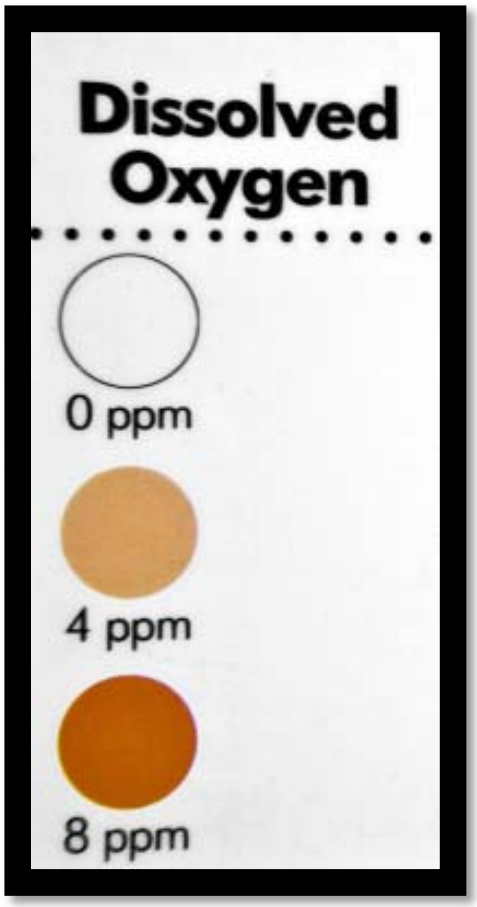
2. Drop two Dissolved Oxygen TesTabs® into the vial. Water will overflow when the tablets are added.



3. Screw the cap on the vial. More water will overflow as the cap is tightened. Make sure no bubbles are present in the sample.

4. Mix by inverting the vial over and over until the tablets have dissolved. This will take about four minutes.

5. Wait five more minutes for the color to develop.



STEP 5

% SATURATION OF DISSOLVED OXYGEN CALCULATION

Find where the temperature and the dissolved oxygen level intersect on the chart below. Record the result on your data chart.

DISSOLVED OXYGEN, PPM

TEMPERATURE, °C	0 ppm	4 ppm	8 ppm
2	0	29	58
4	0	31	61
6	0	32	64
8	0	34	68
10	0	35	71
12	0	37	74
14	0	39	78
16	0	41	81
18	0	42	84
20	0	44	88
22	0	46	92
24	0	48	95
26	0	49	99
28	0	51	102
30	0	53	106

STEP 6

pH PROCEDURE

1. Fill the plastic test tube to the 10 mL line with the water sample.

2. Add one pH Wide Range TesTab®

3. Cap and mix by inverting until the tablet has completely dissolved. Bits of material may remain in the sample.