GLOBE
Water pH Data Sheets

Print the Water pH Data Sheet:

- Water pH Data Sheet

Or select an alternative option below: :

- Water pH: New Site (2 pages)
  - Use this the first time you visit a sampling site to record site definition data.
- Water pH: Weekly Measurements (2 pages)
  - This data sheet has space to record weekly water pH measurements.
- Water pH data sheet with the field guide incorporated
  - pH paper, electrical conductivity > 200 µS/cm
  - pH paper, electrical conductivity < 200 µS/cm
  - pH meter, electrical conductivity > 200 µS/cm
  - pH meter, electrical conductivity < 200 µS/cm
- Water pH for youth
  - Use this data sheet when working with young researchers.

GLOBE Water pH Data Sheet

Name: _____ Site Name: _____

Date: _____ Time (local): _____

Water State: ☐ Normal ☐ Flooded ☐ Dry ☐ Frozen ☐ Unreachable

If anything except Normal is selected, stop here!

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pH measured with: ☐ pH paper ☐ pH meter

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pH Measurements

Sample #1. If salt added, conductivity (µS/cm): _____ pH: _____

Sample #2. If salt added, conductivity (µS/cm): _____ pH: _____

Sample #3. If salt added, conductivity (µS/cm): _____ pH: _____

Average pH of the three samples: _____

Value of buffers used (check all that apply): ☐ pH 4 ☐ pH 7 ☐ pH 10

Stop and Check:

Are all measurements within 1.0 pH unit (pH paper) or 0.2 pH units (meter) of the average?

If not, repeat your measurements!

Comments:

GLOBE Water pH Data Sheet: New Site (page 1)

Name: _____ Site Name: _____

Date: _____ Time (local): _____

New Site Definition

Latitude: _____ Longitude: _____

Elevation: _____ m

Name of Water Body: _____

Water Body Type: ☐ Unknown ☐ Saltwater ☐ Freshwater ☐ Brackish

Water State: ☐ Normal ☐ Flooded ☐ Dry ☐ Frozen ☐ Unreachable

If anything except Normal is selected, stop here!

pH measured with: ☐ pH paper ☐ pH meter

pH Measurements

Sample #1. If salt added, conductivity (µS/cm): _____ pH: _____

Sample #2. If salt added, conductivity (µS/cm): _____ pH: _____

Sample #3. If salt added, conductivity (µS/cm): _____ pH: _____

Average pH of the three samples: _____

Value of buffers used (check all that apply): ☐ pH 4 ☐ pH 7 ☐ pH 10

Comments:

Stop and Check: Are all measurements within 1.0 pH unit (pH paper) or 0.2 pH units (meter) of the average? If not, repeat your measurements!

GLOBE Water Temperature Data Sheet: New Site (page 2)
Optional Site Definition Information

Water Body Source: _____

Can you see the bottom? ☐ Yes ☐ No

Water Sampling location:

☐ Outlet ☐ Bank ☐ Bridge ☐ Boat ☐ Inlet ☐ Pier

Channel/Bank Material:

☐ Soil ☐ Rock ☐ Concrete ☐ Vegetated Bank

Bedrock:

☐ Granite ☐ Limestone ☐ Volcanics ☐ Mixed Sediments ☐ Unknown

Freshwater Habitats Present:

☐ Rocky Substrate ☐ Vegetated Bank ☐ Mud Substrate ☐ Sand Substrate
☐ Submersed Vegetation ☐ Logs

Saltwater Habitats Present:

☐ Rocky Shore ☐ Sandy Shore ☐ Mud Flats/Estuary

If the water body source is a **river** or **stream**:

Width of moving water: _____ meters

If the water body source is a **pond, lake, reservoir, bay, ditch** or **estuary**:

Area of standing water: _____ km^2

Average depth of standing water _____ meters

GLOBE Water pH Data Sheet: Weekly (page 1)

Name: _____ Site Name: _____

pH measured with: ☐ pH paper ☐ pH meter

pH Measurements

If on any day salt was added, please record conductivity on the back of this data sheet.

Date	Time (local)	Water State*	Sample 1 pH	Sample 2 pH	Sample 3 pH	Average pH

*Water State Options: N = Normal, Fl = Flooded, D = Dry, Fr = Frozen, U = Unreachable.
If anything except Normal is selected, do not collect measurements.

Comments:

Stop and Check: Are all measurements within 1.0 pH unit (pH paper) or 0.2 pH units (meter) of the average? If not, repeat your measurements!

GLOBE Water pH Data Sheet: Weekly (page 2)

Conductivity Measurements

If on any day salt was added, please record conductivity below.

Date	**Time (local)**	**Sample 1 Conductivity** (µS/cm)	**Sample 2 Conductivity** (µS/cm)	**Sample 3 Conductivity** (µS/cm)

Comments:

GLOBE Water pH Data Sheet and Field Guide: Using pH paper, electrical conductivity GREATER than 200 µS/cm

Name: _____ Site Name: _____

Date: _____ Time (local): _____

Water State: ☐ Normal ☐ Flooded ☐ Dry ☐ Frozen ☐ Unreachable

If anything except Normal is selected, stop here!

pH Measurements

1. Put on protective gloves and goggles.
2. Rinse the beaker with sample water three times.
3. Fill the beaker halfway with sample water.
4. Follow the instructions that come with your paper for testing the pH of the sample. Record the value.

Sample #1. pH: _____

5. Repeat steps 2-4 two more times using new water samples and new pieces of pH paper and record the data.

Sample #2. pH: _____

Sample #3. pH: _____

6. Find the average of the three samples.

Average pH: _____

Comments:

Stop and Check: Are all measurements within 1.0 pH unit of the average?

If not, repeat your measurements!

GLOBE Water pH Data Sheet and Field Guide: Using pH paper, electrical conductivity LESS than 200 µS/cm

Name: _____ Site Name: _____

Date: _____ Time (local): _____

Water State: ☐ Normal ☐ Flooded ☐ Dry ☐ Frozen ☐ Unreachable

If anything except Normal is selected, stop here!

pH Measurements

1. Put on protective gloves and goggles.
2. Rinse tweezers in sample water and dry with a paper towel.
3. Rinse a beaker with sample water three times.
4. Fill one beaker or cup with about 50 mL of sample water.
5. Using the tweezers, place one crystal of salt, or several grains of table salt, in the sample water. Stir thoroughly with a stirring rod or spoon.
6. Measure the electrical conductivity of the sample water with the added salt using the Electrical Conductivity Protocol.
   1. If the electrical conductivity is at least 200 µS/cm, record the value below.
   2. If the electrical conductivity is less than 200 µS/cm, repeat step 5 until you get a value that is at least 200 µS/cm. Record the conductivity value.
7. Follow the instructions that come with your paper for testing the pH of the sample. Record the pH value.

Sample #1. Conductivity:_____ µS/cm pH: _____

8. Repeat steps 2-7 two more times using new water samples and new pieces of pH paper and record the data.

Sample #2. Conductivity:_____ µS/cm pH: _____

Sample #3. Conductivity:_____ µS/cm pH: _____

9. Find the average of the three pH samples.

Average pH: _____

Stop and Check:
Are all pH measurements within 1.0 pH unit of the average? If not, repeat your measurements!

Comments:

GLOBE Water pH Data Sheet and Field Guide: Using pH meter, electrical conductivity GREATER than 200 µS/cm

Name: _____ Site Name: _____

Date: _____ Time (local): _____

Water State: ☐ Normal ☐ Flooded ☐ Dry ☐ Frozen ☐ Unreachable

If anything except Normal is selected, stop here!

pH Measurements

1. Put on protective gloves and remove the cap from the meter that covers the electrode.
2. Rinse the electrode on the meter with distilled water from the wash bottle. Blot the meter dry with a clean paper towel or tissue. Repeat.
   Note: Do not rub the electrode or touch it with your fingers.
3. Calibrate the pH meter according to the manufacturer's directions using the three buffer solutions.
4. Rinse a 100-mL beaker three times with sample water.
5. Pour 50 mL of sample water into the beaker.
6. Put the electrode part of the meter into the water.
7. Stir once with the meter. Do not let the meter touch the bottom or sides of the beaker. Wait for one minute. If the pH meter continues to display changing numbers, wait another minute. Record the value.

Sample #1. pH: _____

8. Repeat steps 2-7 twice using new water samples. You do not need to re-calibrate.

Sample #2. pH: _____

Sample #3. pH: _____

9. Find the average of the three samples.

Average pH: _____

Comments:

Stop and Check: Are all measurements within 0.2 pH units of the average? If not, repeat your measurements!

GLOBE Water pH Data Sheet and Field Guide: Using pH meter, electrical conductivity LESS than 200 µS/cm

Name: _____ Site Name: _____

Date: _____ Time (local): _____

Water State: ☐ Normal ☐ Flooded ☐ Dry ☐ Frozen ☐ Unreachable

If anything except Normal is selected, stop here!

pH Measurements

1. Put on protective gloves and goggles.
2. Rinse tweezers in sample water and dry with a paper towel.
3. Rinse a beaker with sample water three times.
4. Fill one beaker or cup with about 100 mL of sample water.
5. Using the tweezers, place one crystal of salt, or several grains of table salt, in the sample water. Stir thoroughly with a stirring rod or spoon.
6. Measure the electrical conductivity of the sample water with the added salt using the Electrical Conductivity Protocol.
    1. If the electrical conductivity is at least 200 µS/cm, record the value below.
    2. If the electrical conductivity is less than 200 µS/cm, repeat step 5 until you get a value that is at least 200 µS/cm. Record the conductivity value.
7. Rinse the electrode on the meter with distilled water. Blot the meter dry with a clean paper towel or tissue. Repeat. **Note: Do not rub the electrode or touch it with your fingers.**
8. Calibrate the pH meter according to the manufacturer's directions using the three buffer solutions.
9. Put the electrode part of the meter into the water.
10. Stir once with the meter. Do not let the meter touch the bottom or sides of the beaker. Wait for one minute. If the pH meter continues to display changing numbers, wait another minute. Record the value.

Sample #1. Conductivity:_____ µS/cm pH: _____

11. Repeat steps 2-10 twice more with new water samples and record the data. You do not need to re-calibrate.

Sample #2. Conductivity:_____ µS/cm pH: _____

Sample #3. Conductivity:_____ µS/cm pH: _____

12. Find the average of the three pH samples.

Average pH: _____

Stop and Check: Are all measurements within 0.2 pH units of the average? If not, repeat your measurements!

GLOBE Water pH Data Sheet: Youth

Name: _____

Site Name: _____

Date: _____ Time (local): _____

Water State: ☐ Normal ☐ Flooded ☐ Dry ☐ Frozen ☐ Unreachable

If anything except Normal is selected, stop here!

pH measured with: ☐ pH paper ☐ pH meter

Water pH Measurements

Sample #1 pH: _____

Sample #2 pH: _____

Sample #3 pH: _____

Average of the three pH samples:

_____

Stop and Check:

Are all measurements within 1.0 pH unit (if using pH paper) or 0.2 pH units (if using a meter) of the average?

If not, repeat your measurements!

Notes: