



# GLOBE

# Soil Temperature

# Data Sheets

## Print the Soil Temperature Data Sheet:

- [Soil Temperature Data Sheet](#)

## Or select an alternative option below:

- [Soil Temperature: New Site](#)
  - Use this the first time you visit a sampling site to record site definition data
- [Soil Temperature: Diurnal Cycle](#)
  - This data sheet has space to record soil temperature over a diurnal cycle (>5 measurements in one day).
- [Soil Temperature with field guide \(2 pages\)](#)
  - This data sheet has the field guide incorporated.
- [Soil Temperature: Simplified](#)
  - Use this data sheet when working with those new to GLOBE and collecting data.

# GLOBE Soil Temperature Data Sheet

Name: \_\_\_\_\_ Site Name: \_\_\_\_\_

Date: \_\_\_\_\_

Type of Soil Thermometer:  Dial  Digital  Other \_\_\_\_\_

Has there been precipitation within the last 24 hours?  Yes  No

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## Soil Temperature Measurements

Sample Number	Time (local)	Soil Temperature at 5 cm (°C)	Soil Temperature at 10 cm (°C)	Air Temperature (°C)
1				
2				
3				

**Stop and Check:**

Were all measurements taken within a 20-minute period?

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Comments:

# GLOBE Soil Temperature Data Sheet: New Site

Name: \_\_\_\_\_ Site Name: \_\_\_\_\_

Date: \_\_\_\_\_ Time (local): \_\_\_\_\_

## New Site Definition

Latitude: \_\_\_\_\_ Longitude: \_\_\_\_\_

Elevation: \_\_\_\_\_ m

Surface State:  Natural  Plowed  Graded  Backfill  Compacted  Other

Surface Cover:  Bare Ground  Short Grass (under 10 cm)  Long Grass (over 10 cm)

Canopy Cover:  Open  Some Trees (within 20 m)  Canopy Overhead

Type of Soil Thermometer:  Dial  Digital  Other \_\_\_\_\_

Has there been precipitation within the last 24 hours?  Yes  No

## Soil Temperature Measurements

Sample Number	Time	Soil Temperature at 5 cm (°C)	Soil Temperature at 10 cm (°C)	Air Temperature (°C)
1				
2				
3				

Comments:

### Stop and Check:

Were all measurements taken within a 20-minute period?

# GLOBE Soil Temperature Data Sheet: Diurnal Cycle

Name: \_\_\_\_\_ Site Name: \_\_\_\_\_

Date: \_\_\_\_\_

Type of Soil Thermometer:  Dial  Digital  Other \_\_\_\_\_

Has there been precipitation within the last 24 hours?  Yes  No

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## Soil Temperature Measurements

Sample Number	Time (local)	Soil Temperature at 5 cm (°C)	Soil Temperature at 10 cm (°C)	Air Temperature (°C)
1				
2				
3				
4				
5				
6				
7				

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Comments:

# GLOBE Soil Temperature Data Sheet and Field Guide (page 1)

Name: \_\_\_\_\_ Site Name: \_\_\_\_\_

Date: \_\_\_\_\_

Type of Soil Thermometer:  Dial  Digital  Other \_\_\_\_\_

Has there been precipitation within the last 24 hours?  Yes  No

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## Soil Temperature Measurements

1. Locate your sampling point.
2. Use a nail to make a 5 cm deep pilot hole for the thermometer. Pull the nail out carefully. If the soil cracks, move 25 cm and start again.
3. Insert the thermometer through the longer spacer.
4. Gently push the thermometer into the soil and wait 2 minutes.
5. Note the temperature here: \_\_\_\_\_ °C
6. Wait 1 minute. Is the temperature within 1.0°C of what you noted on step 5? If yes, record the temperature below. If not, continue taking temperature readings every 1 minute until readings are within 1.0°C.

**Sample #1, 5 cm.** Time (local): \_\_\_\_\_ Temperature: \_\_\_\_\_ °C

7. Remove the thermometer and use the nail to deepen the hole to 10 cm.
8. Replace the long spacer with the shorter spacer.
9. Insert the thermometer into the same hole and wait 2 minutes.
10. Note the temperature here: \_\_\_\_\_ °C
11. Wait 1 minute. Is the temperature within 1.0°C of what you noted on step 5? If yes, record the temperature. If not, continue taking temperature readings every 1 minute until readings are within 1.0°C.

**Sample #1, 10 cm.** Time (local): \_\_\_\_\_ Temperature: \_\_\_\_\_ °C

## Soil Temperature Measurements, continued

12. Remove the thermometer and move to a location at least 25 cm away from your first hole.

13. Repeat steps 2 – 11 for this hole.

**Sample #2.** Time (local): \_\_\_\_\_ Temperature at 5 cm: \_\_\_\_\_ °C

Time (local): \_\_\_\_\_ Temperature at 10 cm: \_\_\_\_\_ °C

12. Remove the thermometer and move to a location at least 25 cm away from your second hole.

13. Repeat steps 2 – 11 for this hole.

**Sample #3.** Time (local): \_\_\_\_\_ Temperature at 5 cm: \_\_\_\_\_ °C

Time (local): \_\_\_\_\_ Temperature at 10 cm: \_\_\_\_\_ °C

12. If possible, record the current air temperature.

Air Temperature: \_\_\_\_\_ °C

### Stop and Check:

Were all measurements taken within a 20-minute period?

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Comments:

# GLOBE Soil Temperature Data Sheet: Simplified

Name: \_\_\_\_\_

Site Name: \_\_\_\_\_

Date: \_\_\_\_\_ Time (local): \_\_\_\_\_

Type of Soil Thermometer:  Dial  Digital  Other \_\_\_\_\_

Has there been precipitation (rain or snow) in the last 24 hours?  Yes  No

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## Soil Temperature Measurements

### Sample #1.

Temperature at 5 cm: \_\_\_\_\_ °C

Temperature at 10 cm: \_\_\_\_\_ °C

### Sample #2.

Temperature at 5 cm: \_\_\_\_\_ °C

Temperature at 10 cm: \_\_\_\_\_ °C

### Sample #3.

Temperature at 5 cm: \_\_\_\_\_ °C

Temperature at 10 cm: \_\_\_\_\_ °C

### Stop and Check:

Were all measurements taken within a 20-minute period?

Notes: