

Join the GLOBE Cup Challenge



June 11 to July 19, 2026

During this year's World Cup, from June 11 to July 19, join the GLOBE Program in collecting environmental data where the world plays soccer (known as football outside the U.S.)!

What's the game plan

Visit your local soccer field, park, schoolyard, or anywhere people play, and do one or more of the following GLOBE protocols:

1. Measure air temperature.
2. Measure surface temperature.
3. Download the GLOBE Observer app and follow the steps to measure land cover.

Go for a "hat trick" by completing all 3 protocols!

Join the GLOBE Team for your region. Details on how to participate: tinyurl.com/globe-cup-challenge.

Use the data sheets on the following pages to help keep your data organized!

Gather your gear

To successfully complete the GLOBE protocols, you will need the right equipment:

- **Air temperature:** A liquid or digital thermometer
- **Surface temperature:** An infrared thermometer (IRT)
- **Land cover:** A smartphone or device with the GLOBE Observer app

Find links to equipment that meets GLOBE specifications at tinyurl.com/GLOBE-equipment (best viewed on a computer browser). Use the "Kit" dropdown menu and select "GLOBE Cup Challenge" to view the equipment related to this challenge.

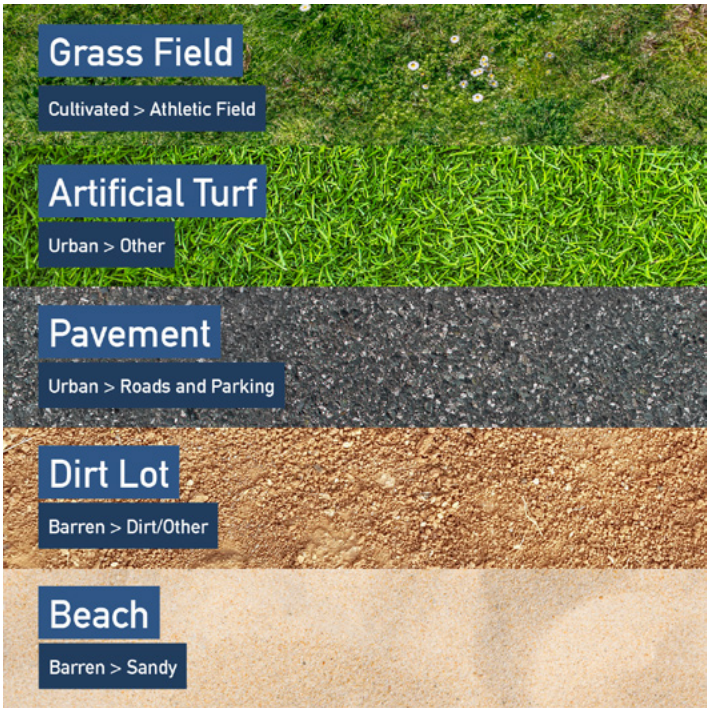
"Tap in" your measurements to GLOBE's database

Remember to enter your data on globe.gov or through the GLOBE Observer app!

Tips and Resources

Land cover

- Watch this GLOBE Observer Land Cover video (2:44) to help you get started: tinyurl.com/GOlandcover
- Using the Land Cover tool in the GLOBE Observer app, photograph the land cover in your surroundings, focusing on the area within the nearest 50 meters or about the size of half a soccer field.
- When using the GLOBE Observer app, identify the correct **land cover classification** using the visual key to the right. For instance, if you are on a grass field, choose "Cultivated" and "Athletic Field." Or, if you are on a dirt lot, choose "Barren" and "Dirt/Other."



Air temperature

- When using an alcohol-filled or meat thermometer, make sure it is calibrated! Learn how to calibrate using **GLOBE's thermometer calibration lab guide**: tinyurl.com/thermometer-calibration
- Take the measurement in the shade including the shadow that your body may cast.
- Wait a minute to see if the temperature changes; keep checking until the temperature does not change.

Are you new to GLOBE? You will need to create an account to share your data or use the GLOBE Observer app: tinyurl.com/GLOBE-account

You can also get familiar with the GLOBE air temperature and surface temperature protocols by reviewing the Atmosphere eTraining page: tinyurl.com/eTraining-Atmosphere

Surface temperature

- Use an infrared thermometer.
- Leave the infrared thermometer outside for 1 hour if the outdoor temperature is very different from the indoor temperature.
- Do NOT take the temperature in shaded areas (including the shadow that your body may cast).
- Extend your arm in front of you to take the observations. (You don't want to measure the temperature of your feet.)
- Be sure to take 3–9 random surface temperature readings within a homogeneous area.
- Be careful to not mix cover types (grass, sand, pavement) in one study area.

GLOBE Air Temperature Data Sheet and Field Guide

Name: _____ Site Name: _____

Date: _____ Time (local): _____

Air Temperature Measurement

1. Secure your thermometer:
    a. Tie one end of a piece of string securely to the end of the thermometer and the other end to a rubber band.
    b. Slip the rubber band around your wrist.
2. Hold the thermometer at chest height, in the shade, and away from your body for three minutes.
3. Record the temperature here: _____ °C
4. Hold the thermometer the same way for another minute.
5. Record the temperature here: _____ °C
6. Are the two temperatures within 0.5°C? If so, write the second temperature in the grey box below labeled "Current Temperature."
7. If not, repeat steps 4–6.
8. If two consecutive temperature readings are not within 0.5°C after 7 minutes, record the last measurement in the grey box below, and report the other four measurements in the comments section, along with a note that your reading was not stable after 7 minutes.

Current Temperature: _____ °C

Record temperature to the nearest 0.5°C (liquid) or 0.1°C (digital).

Don't forget to enter your data through globe.gov or the GLOBE Observer app!

Comments :

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GLOBE Surface Temperature Data Sheet and Field Guide

Name: _____ Site Name: _____

Date: _____ Time: _____

Is the ground wet or dry?: ☐ Wet ☐ Dry

Surface Temperature Measurements

1. If the air temperature varies by more than 5°C from the temperature where the infrared thermometer (IRT) is stored, wrap the IRT in a Thermal Glove, or place outside for at least 60 minutes.
2. Select nine observation spots at least 5 meters apart on your field.
5. Stand so you do not cast a shadow on your first sampling spot and hold the IRT with your arm extended straight out. Point the IRT directly at the ground.
6. Hold the IRT as still as possible. Press and release the recording button. Record the temperature measurement to the nearest tenth degree.
7. Repeat steps 4–7 for each of the remaining observation spots.

Observation	Surface Temperature (°C)
1	_____ . _____ °C
2	_____ . _____ °C
3	_____ . _____ °C
4	_____ . _____ °C
5	_____ . _____ °C
6	_____ . _____ °C
7	_____ . _____ °C
8	_____ . _____ °C
9	_____ . _____ °C

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