

GLOBE Carbon Cycle Training Workshop Materials

General

- Computers: At least 1 for each group of 2 participants
- LCD projector
- Internet: To access Google Earth, Google Spreadsheets, NetSim models, and to view the GLOBE Carbon Cycle website
- Flip chart & markers and/or whiteboard & dry-erase markers and/or chalkboard & chalk
- Post-it notes (at least 5 for each participant)
- Calculators (1 per table/group)
- Unit question poster
- Extra large post-its
- 3-ring binder & dividing tabs to hold all participant materials (teacher guides, student worksheets, templates, guiding documents)

In-class Activities

Paperclip Simulation materials

- Paperclip Simulation Story*
- Roles*
- bell
- paperclips

Carbon Cycle Adventure Story

- Adventure Story Book (1 per participant)

Carbon Travels Game

- Pool Station Signs*
- Station Instructions*
- Dice (1 per participant or per station)

Getting to Know Global Carbon

- Double sided laminated - Global C Cycle Diagram & Getting to Know Global Carbon Instructions (1 set per pair)

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Plant-a-Plant

- Sample sprouts or plants for participants to view
- 1 copy of each Plant-a-Plant experiment

Biomass Units

- Double sided laminated - Global Biome Map, Global Biome Table (1 set per pair)
- Meter tape (1)
- MUC Field Guides (1 per table)

Percent Cover

- Percent cover quadrat frames (1 per table/group)
- Several bags of pennies or other tokens (each bag should have a different number of pennies) (1 per table/group)

How To Measure Trees

- Double sided laminated - Badly Behaving Trees: Circumference Guide & Predicted Biomass Graph (1 set per pair)
- Small metric measuring tapes (1 per group of 3)
- Tree cookies (1 per group of 3)
- DBH tape (1)

Allometry: Not A Llama Tree

- Small metric measuring tapes (1 per group of 3)
- Wood blocks of the same size but different species (1 set of 3 species)
- Species Groups List (1 per table)

Scaling: Sample Site to Schoolyard

- Aerial images of schoolyards (1 per pair)
- Transparency grid – 1cm x 1cm squares (1 per pair)
- Wet-erase fine point markers (1 per pair)

Field Activities

Sample Site Set-Up

- Sample Site Set-Up Student Instructions (1 set)
- Clipboards (1 per quadrant)
- Pencils (at least 4)
- Flags or flagging tape (9)
- Compasses (1 per participant/pair/group)



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- Meter tape (1 per quadrant)
- GPS (1)
- Digital camera (1)
- MUC Guides (2 - optional)

Tree Mapping

- Tree Mapping Student Instructions (1 per quadrant)
- Trees Datasheet (1 per quadrant)
- Compasses (1 per participant/pair/group)
- Meter tape (1 per quadrant)
- Local species ID guides (1 per quadrant)

Tree Circumference

- Tree Circumference Student Instructions (1 per quadrant)
- Small metric measuring tapes (2 per quadrant)
- Paint markers/Tree crayons (1 per quadrant)

Shrub/Sapling Measurement

- Shrub/Sapling Student Instructions & Datasheet (1 per transect)
- Meter stick (1 per quadrant)
- Clinometer (1 per quadrant - optional)

Herbaceous Vegetation Measurement

- Herbaceous Vegetation Student Instructions (4)
- Meter stick (1 per quadrant)
- Garden sheers/knife
- Large paper bags for herbaceous vegetation (at least 4)

Optional

- Available GLOBE Carbon Cycle: excel templates, presentations, screencasts, and videos
- Carbon Cycle, Climate, and/or Modeling Scientist

