

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)

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)

GLOBE Carbon Cycle

- ☐ 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 shears/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

