**Unit Essential Question:** *How have natural processes and human activities created the ecosystems we see today?*

**Overall Unit – All Tasks**

* Unit 1, Task Cards Student Version, Lift-Off and Tasks 1 through 5
* Culminating Project Student Task Card
* Project Organizer
* Projector with Audio (for video or images, whenever needed)

**Lift-Off Task (2 days)**

Per Student

* Task Card Student Version: Lift-Off
* Post-Its (Optional)
* Task Card Student Version: Culminating Project
* Project Organizer

Per Group

* Poster paper and markers

Whole Class

* Poster paper and markers
* \*See Instructions in Lift-Off for other optional materials to use for the class concept map

**Task 1 (5.5 days)**

Per Student

* Task Card Student Version: Task 1
* Project Organizer

Per Group

* Continent Pieces: Two continent pieces per group (enlarge, print, cut, and laminate)
  + <https://pubs.usgs.gov/imap/2800/>
* Envelope of Evidence Cards: Look at the list below for the relevant evidence cards for each pair of continents. Cut them into continent pieces, label the backs with the type of evidence, laminate, and put into an envelope. *Note: Evidence cards must be in color for students to see evidence.*
  + South America and Africa: Mountain Ranges, Rock, Glacial Deposits, Fossils
  + South America and North America: Coal, Fossils
  + North America and Europe/Asia: Mountain Ranges, Coal, Rock, Fossils
  + North America and Africa: Mountain Ranges, Fossils
  + Europe/Asia and Africa: Mountain Ranges, Fossils
  + Antarctica and Australia: Glacial Deposits, Fossils
  + Antarctica and Africa: Glacial Deposits, Fossils

Whole Class

* Projector and Speakers (for video)

**Task 2 (4 days)**

Per Student

* Task Card Student Version: Task 2
* Project Organizer

Per Group or Pair

* Resource Cards in sheet protectors
* 4 Graham Crackers
* Cake Frosting
* Wax Paper
* Plastic Knife
* Cup of Water
* Computer

**Task 3 (4 days)**

Per Student

* Task Card Student Version: Task 3
* Project Organizer
* Optional: Post-Its

Per Group

* Poster Paper
* Ecosystem Cards (1 per group)
* Scissors (1 per group)
* Pencils
* Glue
* Markers

**Task 4 (4 days)**

Per Student

* Task Card Student Version: Task 4
* Project Organizer

Per Station

* Station Cards in sheet protectors (2-3 at each station)

Per Group

* Interaction Cards (laminated, cut, and put in an envelope per group)

**Task 5 (4-5 days)**

Per Student

* Task Card Student Version: Task 5
* Project Organizer

Per Group

* Computers for [computer simulation](http://www.learner.org/courses/envsci/interactives/ecology/ecology.html) (linked here)

Whole Class

* Projector and Speakers (for videos)

**Culminating Project (9 days)**

Poster-sized Map

* Poster Paper
* Color pencils/markers or computer graphics
* Computers with internet capabilities

Diorama (Optional)

* Shoebox
* Colored cardstock
* Sandpaper
* Glue
* Paint
* Brushes
* Scissors
* Pipe cleaners
* Etc.

Self-Guided Tour (Brochure or Flyer)

* Blank Paper or Computer Program
* Color pencils/markers or computer graphics

**Unit 1 Pop-Out (3 days)**

Per Student

* Student Version: Unit 1 Pop-Out
* Unit 1, Pop-Out Case Study – Wolves in Yellowstone
* Unit 1, Pop-Out Case Study – Zebra Mussels

Per Pair

* Computer or tablet