Note: This outline is organized by content- not chronologically. Its purpose is to compile and organize a body of possible material- that's all. For this reason actual "lesson plans" are not described at all. Some may seem very dry because of wording- they are actually way more fun than they may sound. ;-)

Garden Ecology and Art

1. Garden Ecology
2. Art

I. Garden Ecology

- activity: garden scavenger hunt

A. Plants- Botany

1. Plant Physiology
   -discussion: what plant parts do we eat? 10-15 min
   -activity: plant dissections
   -activity: your mutant fantasy plant (drawing) 20-45 min
2. Basic Plant I.D.
   -discussion: safety in the garden- ask before you eat
   -activity: the great radish hunt
   -activity: leaf rubbings
3. Plant Behavior
   -discussion: how plants prefer to be treated
   -activity: seed starting in ziploc bags
   -activity: growing avocado and mango pits
   -activity: making clones- sprouting spuds, pineapple tops, carrot tops, onion pieces
   -activity: graphing plant growth in the garden
   -activity: rooting cuttings from willow hormone (2 days)
   -activity: trying different substrates
4. Plant Ecology
   a.) Plant uses in the Garden (Permaculture and Biodynamics)
      -discussion: what do plants need to survive and where does it come from?
      -activity: Guild Build Game (needs development)
      -activity: chop and drop
5. Ethno-Botany: Cultural Use of Plants
   a.) Plants as food
      -activity: garden tasting tour
      -activity: herbal sachets
   b.) Plants from other cultures
      -activity: native vs. immigrant
      -activity: mapping movement of people and plants
   c.) Functional Plants
      -activity: mini willow construction and living fences
      -activity: dye bath from garden plants/grocery store vegetables

B. Animals- Biology

1. Worms and Vermiculture- using my 5 tiered "worm factory 360"
   -discussion: how worms prefer to be treated 3-7 min
   -activity: daily worm observation and maintenance 3-10 min
   -activity: adopt a worm
   -discussion/activity: worm physiology- build an earthworm 2 days
   -activity: designing and building a bigger and better worm bin from unconventional materials. design: 20-30 min. implementation: 1-2 days
   -activity: harvesting the castings! identification of organisms, worm count, weighing the harvest, etc 15-30 min
   -activity: making worm tea
2. Insects and other bugs

a.) Pollinators and Flowers
-activity: the great bug search
-discussion: insect physiology
-activity: make and hide your own camouflaged paper bugs
-activity: invent your own specialized flower/pollinator relationship (drawing-comic strip) 15-45 min
-activity: carpenter bee house

3.Microorganisms- see compost and soil science

4. "Pests"
-discussion: who are we to call anyone a pest? (adaptive system design)
-ongoing discussion: beneficial roles of "pests"
-activity: debate- humans vs. pests
-activity: pest/predator observation and documentation
-activity: pest control experiment (homemade slug traps)

5. Humans as Educated Stewards- rethinking our role as animals

6. Vertebrates in the Garden

a.) Amphibians
-activity: toad houses
-activity: the great toad release

b.) Mammals
-discussion: what mammals are found in the garden?
-activity: nocturnal animal tracking
-activity: not your average bat house

c.) Birds
-discussion: how can birds work for us?
-activity: not your average scarecrow

C. Mushrooms- Mycology

1. Mushroom Safety
-discussion: mushroom ID and safety protocol
-activity: deadly mushroom game

2. Fungi Physiology and Ecology- through cultivation

a.) Mushroom Kit
-activity: daily observation and maintenance

b.) Mushroom Bed
-activity: design and prep
-activity: inoculation with spent kits
-activity: daily observation and possible maintenance

c.) Wild/Native Fungi
-activity: cultivation from wild samples

D. Compost and Soil Science

1. Playing in the Dirt
-activity: miniature ponds
-discussion: what is soil made of?
-activity: soil sampling and analysis
-activity: mulch experiments via path maintenance and observation

2. Vermiculture- see #1 under "Animals" above

3. Bokashi, LAB, BIM, EM, and IMOs
-discussion: microorganisms in our lives (ongoing)
-activity: LAB cultivation and observation (ongoing)
-activity: Sourcing native Beneficial Indigenous Microorganisms (30 min)
-activity: looking at microorganisms (and drawing them) (30-40 min)
-activity: bokashi inoculation or newspaper bokashi (15-30 min)
-activity: ongoing IMO vs. worm vs. regular compost systems

II Art

A. Observational/Imaginative Art

1. Field Illustrations
   -discussion: field illustrations throughout the ages
   -activity: drawing in the field (30-60 min)
   -activity: "Drawing from Nature" exercises/meditations (5-15 min)
2. Still Life Drawing/painting
   -discussion: setting up a still life
   -activity: micro/macro charcoal drawings (1-2 days)
   -activity: bouquet still life paintings (1-2 days)
3. Art for the Garden (also see habitat building activities under "Animals")
   -discussion: the role of art/artists in the sustainability movement
   -activity: constructing informational signs and markers
   -activity: functional garden decor for bird repel (1-2 days)
   -activity: edible mandalas
   -activity: stone creatures
   -activity: not your average scarecrow (also under "Animals")
   -discussion: gardening as art
   -activity: upcycled garden containers
   -activity: vertical growing systems
4. Art from the Garden
   -discussion: fine art from organic materials
   -activity: leaf print textile art (after traditional Indian tapestry design) (1-2 days)
   -activity: pressed specimen portraits
   -activity: making paint from scratch