# **Echo Field Trip Curricular Links**

# **Lowlands**

#### **Ducks/Tilapia**

- Economics/Business
  - -Monoculture vs. diversity in farm products

How would these models affect the small scale farmer? Monoculture brings higher risk for failure and starvation.

- -Fertilizer source/income source
- Biology -Food Chains

#### Pigs/Deep Litter System

- Microbiology –effective microbes
- Economics/Business
  - -Monoculture vs. diversity in farm products
  - -Fertilizer source/income source

#### **Vermiculture**

- Business/Biology
  - Fertilizer source /income source
  - -Monoculture vs. diversity in farm products

#### Rice - SRI

Experimental Design – hypothesis, variables, control

#### **Bamboo Field Hut**

Engineering/Physics –tensile strength

#### **Drip Irrigation**

Water cycle -Controlling Evaporation

## **Mountain**

- Geology Erosion
- Biology
  - -Legumes
  - Intercropping
  - Multipurpose plantings -erosion control/animal fodder

### **Goats**

#### **Zero Graze Unit**

- Biology
  - -Animal care

Protects animal – parasites, hoof rot, quality forage, fresh water

- Economics/Business
  - -Protects farm environment
  - -Cost Effective use of building materials vs. fencing
  - -Animal products for income; fertilizer source
  - -Microloans -Whole Foods Markets: Kiran's Story
  - -Monoculture vs. diversity in farm products

https://www.wholeplanetfoundation.org/get-involved/annual-prosperity-campaign/

# Neem

Village Pharmacy - Natural Medicines

# **Monsoon Farm**

#### **Elevated Water Storage**

- Physics
  - -Kinetic/Potential Energy
  - -Gravity -water pressure

### Kiran's Story

Your support helps us reach more women like Kiran in India, who used her loan capital from microfinance partner STEP to invest in two goats and one cow. With the investment in additional animals, she is able to increase her profits from the sales of their milk.

#### **House**

- Geology soil
- Math (clay, sand, cement) ratio

#### Chickens

- Economics/Business
  - -Monoculture vs. diversity in farm products
  - -Fertilizer source/income source

### **Community Garden**

<u>Intern Resource Consultant</u> – help plan and give technical support for garden for schools, churches, community organizations

# **Rainforest**

- Biology/Microbiology
  - -Biodiversity
  - -Mulch, don't burn
  - -Biochar -used to retain nutrients

## **Urban Garden**

#### **Containers**

Recycling/repurposing

#### Wick Gardens

Physics/Biology

#### **Bio-intensive Ag**

Biology

#### Rabbits

- Economics/Business/Biology -manure fertilizer, marketable income products
- Genetics –clean blood lines

