Soil Degradation

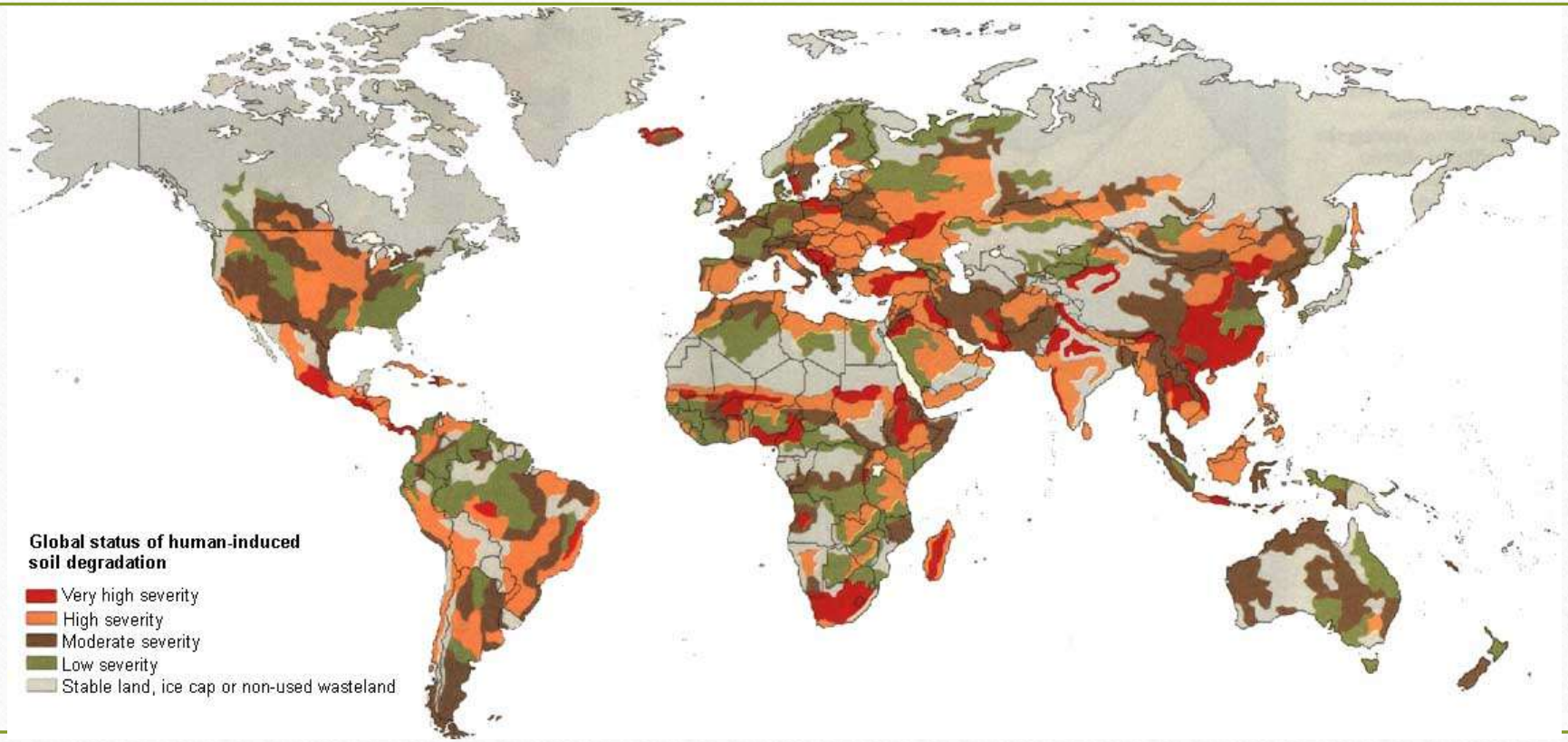
F2F2 Week 2

1/25 Soil Degradation

Obj. TSW learn about how healthy soil supports life and itself needs to be properly cared for. P. 14 NB

1. What is soil degradation?
2. Monocropping, Soil compaction, Salinization, Amount of Organic matter, Too Basic, Too Acidic are some examples of how soil can be degraded. Choose one and explain what you think it is.
3. How could you test to see if the soil is bad?

Soil Degradation World Wide



World Map


WORLD
ARCTIC OCEAN
Greenland (Denmark)
Baffin Bay
Alaska (USA)
Arctic Circle
Canada
Hudson Bay
Iceland
Norway
Sweden
Finland
Estonia
Latvia
Russian Federation
United Kingdom
Rep. of Ireland
Denmark
Turkmenistan
Netherlands
Germany
Czech Rep.
Poland
Belarus
Switzerland
France
Austria
Ukraine
Kazakhstan
Mongolia
Hungary
Romania
Uzbekistan
NORTH ATLANTIC OCEAN
United States of America
NORTH PACIFIC OCEAN
Croatia
Italy
Bulgaria
Georgia
Kyrgyzstan
Portugal
Spain
Greece
Turkey
Tajikistan
North Korea
Morocco
Tunisia
Cyprus
Syria
Iran
Afghanistan
China
South Korea
Japan
NORTH ATLANTIC OCEAN
Israel
Iraq
Kuwait
Nepal
Tropic of Cancer
Mexico
Algeria
Libya
Jordan
Egypt
Pakistan
Bhutan
India
Myanmar
The Bahamas
Western Sahara
Saudi Arabia
UAE
Jamaica
Cuba
Dominican Rep.
Mauritania
Mali
Chad
Oman
Bangladesh
Laos
Taiwan
Puerto Rico
Cape Verde
Niger
Thailand
Vietnam
Guatemala
Belize
Honduras
Senegal
Sudan
Yemen
El Salvador
Nicaragua
Trinidad & Tobago
Guinea
Nigeria
Central African Republic
Ethiopia
Djibouti
Cambodia
Phillipines
Costa Rica
Venezuela
Panama
Guyana
Liberia
South Sudan
Somalia
Srilanka
Malaysia
Equator
Colombia
French Guiana
Ivory Coast
Cameroon
Uganda
Maldives
Ecuador
Suriname
Gabon
Rwanda
Kenya
Seychelles
Indonesia
Dem. Rep. of The Congo
Burundi
Papua Newguinea
Peru
Brazil
Tanzania
INDIAN OCEAN
East Timor
Bolivia
Angola
Zambia
Moz.
Fiji
Tropic of Capricorn
Paraguay
Namibia
Zimbabwe
Mauritius
Botswana
Madagascar
Australia
Swaziland
South Africa
Lesotho
Chile
Uruguay
SOUTH ATLANTIC OCEAN
Argentina
SOUTH PACIFIC OCEAN
Newzealand
Tasmania
Falkland Island
SOUTHERN OCEAN
Antarctic Circle
Antarctica
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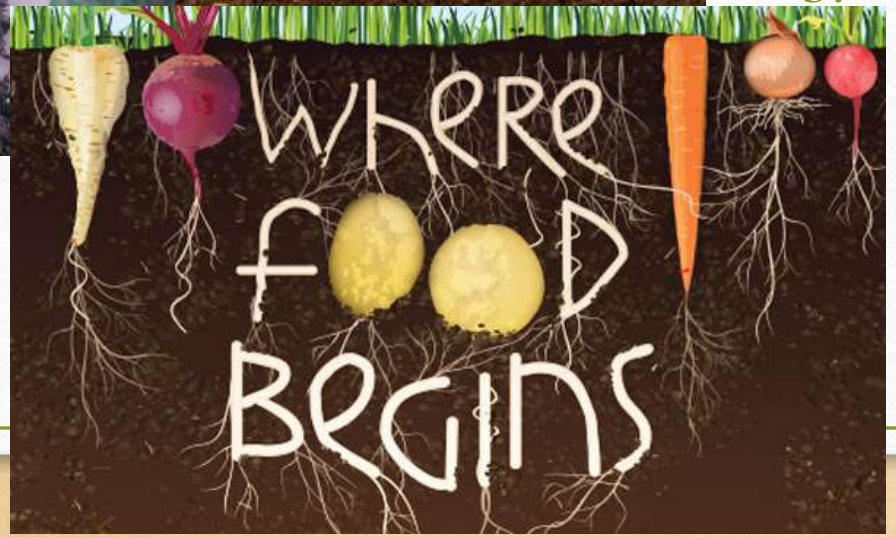
(Updated on 1st October, 2012)
0 600 1800 3000 4200 Kms.
INTERNATIONAL DATE LINE

1/25 Agenda – Computer Lab

- Finish vocabulary Page 11
- Continue to build your Trifold
- Show the F2F website
- Todays Activity: Research any of the Soil Degradation conditions: Depletion of nutrient by monocropping, acid soil, alkaline soil, soil compaction, lack of organic matter, salinization. What is it? How does it happen? How can it be corrected? Page 17 NB

1/26 It can't be all that bad.

Obj. TSW learn about healthy characteristics of soil to help grow healthy food. P. 16 NB



1. What is soil?
2. What does soil have that plants need to grow?
3. What does it mean when a seed germinates?

Get Books from the Library

Best Management Practices P. 19 NB

- Tape your WS to page 19 NB
- Answer the questions from watching the video.
- We will discuss the answers after the video.

1/26
Activity: It can't be that bad.

- Choose to work by yourself or a partner or in a group of three.
- Get one planting container.
- Fill the 1st row with healthy compost/ soil from the garden about ¾ full. (Control)
- Fill the 2nd row with Clay soil, or add salt to it or compact the soil really tight when planting the seeds, or add lemon juice, or ammonia. Take note of the quantity that you use. Fill the pot ¾ full. When making the soil degraded, only add 1 -2 pipettes of solution.
- Plant 4 Mung seeds in each pot. Read the directions on the packet to plant them at the proper depth.
- Record data daily for germination, and growth rate of your seeds/ plant.

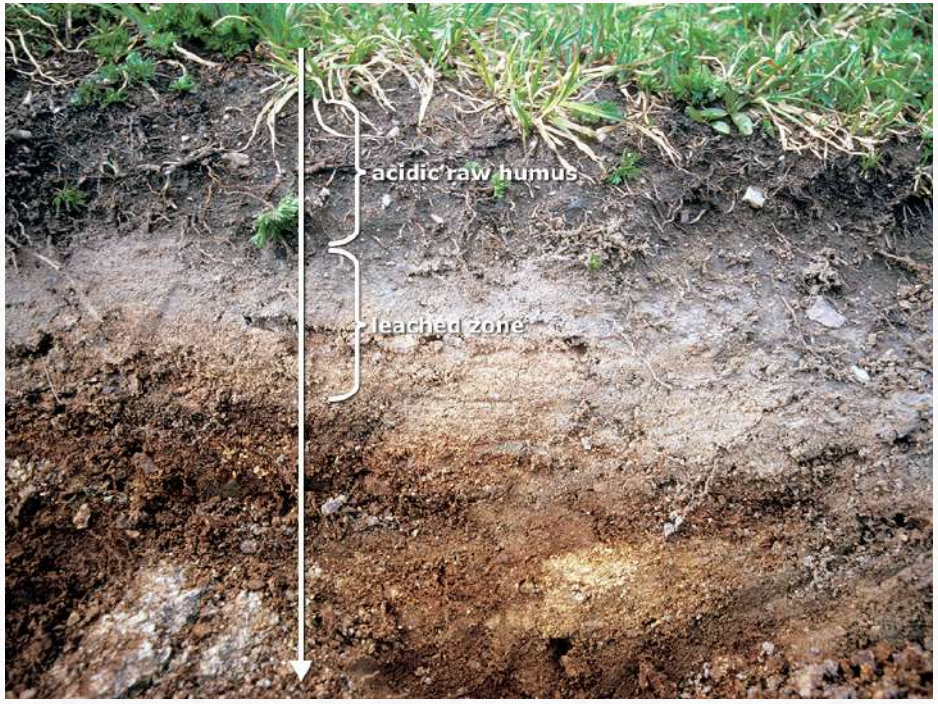
Activity: It can't be all that bad.
Data Table Page 19 NB

Days/ Dates	Germination/ Growth in the Control group	Germination / Growth in the Experimental Group
Day 1 1/26	0	0
Day 2 1/27		
Day 3 1/28		
Day 4 1/29		
Day 5 2/1		
Day 6 2/2		
Day 7 2/3		
Day 8 2/4		
Day 9 2/5		

What is the impact of degraded soil on plant growth? Conclusion of Lab 2/5

1/27 At a Loss? Let's find Nutrients?

Obj. TSW watch some best management practices from a Journey 2050 video. P. 18 NB



1. What is the difference between biotic and abiotic factors in an environment?
2. What are the three main nutrients plants need to grow?
3. Name 3 -5 abiotic factors plants need to grow.

1/28 Sustainability

Obj. TSW apply sustainability practices with experience out in the garden. P. 20 NB

1. What does sustainability mean?
2. What three factors are considered in a sustainable system?
3. What is a limiting factor?

Abiotic factors in the Garden

- pH
- Temperature of soil
- Soil Moisture
- Rocks
- Sand
- Compost

1/28

Measuring Abiotic factors in the garden

P. 21 NB

Garden Bed #	pH of Soil 0-14	Soil Moisture (mV)	Surface Temperature	5 cm deep Temperature	10 cm deep Temperature
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					

Ground Rules for the Garden

- Walk out **together** (so I can see everyone).
- **GO to the bathroom** before we walk out to the garden
- **NO Cell phones** on in garden.
- *Everyone* takes part in cleaning up.
- **NO one leaves the garden area** until McAllister says it's clean and everyone can go.
- **Everyone waits** at the gate with PE.
- **Safety!** No unsafe behavior.

1/29 Test those nutrients!

Obj. TSW learn how to test the Nitrate, Phosphate, and Potassium of the soil in the garden. P. 22 NB

1. How does Nitrogen help plants?
2. How does Phosphate help plants?
3. How does Potassium help plants?

Monday – Garden Testing Nutrients

- 1/29 Computer lab
  - UNIT 1 Lesson 2 Vocabulary
  - Grade Notebooks
  - Work on Trifold for Farm to Fork

Farm to Fork Tri Fold

- Show pictures of you in the garden working.
- Show pictures of what Farm to Fork is.
- Explain What Farm to Fork is About
- Explain what we plan to do
- Explain what we had been accomplished in the Garden.
- Why is Farm to Fork Important? List 3 – 4 reasons