



Instructor: Constance S. Somers (2002 Science Teacher Workshop participant)

School District: Hamilton Township, NJ

Lesson Title: Plants & Seed Production

Subtitle: Irradiated Seeds: the Answer to Famine?

Grade: 5

Subjects: Science, Social Studies, Reading, Math

Overview: Students will be able to determine if irradiated, non-irradiated, or genetically engineered seeds can help repudiate hunger worldwide.

Objectives:

1. Students will be able to identify life cycle of plants
2. Students will be able to identify third world countries and food production
3. Students discuss irradiated seed growth
4. Students determine if irradiated seed production is the only factor in changing famine conditions.

Exercise:

1. Students will study the life cycle of plants.
2. Students then compare irradiated seeds, non-irradiated, genetically altered seeds. Then students will perform an extended lab to measure and compare growth patterns, rate of growth, seed production and harvesting.
 - 2a. Students will build bottle growing system
 - 2b. Students will build a plant light house.
3. Students discuss drought and famine conditions and factors.
 - 3a. Students will be able to graph topographic features associated with drought and famine.
 - 3b. Students determine areas where mass food production could develop
4. Students then determine if irradiated seeds could be used to alleviate famine conditions in third world countries.

Resources:

- The Cycle of Life:
<http://www.carolina.com/fastplants/pdfs/Growth%20and%20Development/cycleoflife.pdf>
- Fast Plant Life Cycle:
<http://www.carolina.com/fastplants/pdfs/Growth%20and%20Development/Fast%20Plants%20Life%20Cycle.pdf>
- Farming Fast Plants:
<http://www.carolina.com/fastplants/pdfs/Growth%20and%20Development/Farming%20Fast%20Plants.pdf>
- Search for "irradiated seeds at: <http://seedrack.com/>
- Map of Africa: <http://www.africaguide.com/afmap.htm>
- Crop Seeds for Teaching: <http://www.arabidopsis.com/main/cat/seeds/teaching/Crop/lcps.html>
- Irradiation Questionnaire: <http://ccr.ucdavis.edu/irr/response.shtml>