

## Are banana, man made? History of Bananas

Banana is supposed to have originated in Malaysia around 2000 B.C. The original wild banana that existed during this time was **not** sweet and needed cooking before being consumed.

The banana as we know today was known to no one until the 1836 AD. It was during this year that a Jamaican, Jean Francois Poujot produced the mutant yellow sweet banana from the crossing of the green and red cooking bananas (modern day plantains). Once he tasted this sweet banana which could be eaten raw without cooking he quickly initiated cultivation of this new variety and owing to the new mutants sterility this was done by using offshoots from the base of the plants. Thus was born the sweet bananas of today.

the original wild banana

the banana we know today



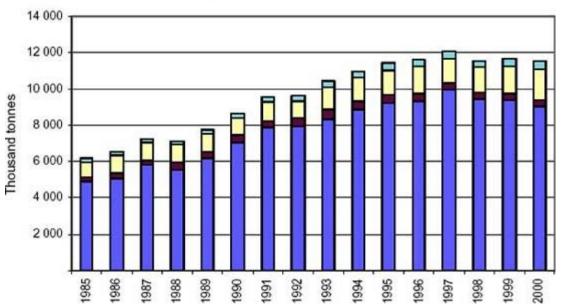


rawforbeauty.com



Latin America

Caribbean Far East Africa





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### Human Health Effects:

- 4 Known or Probable Carcinogens
- 7 Suspected Hormone Disruptors
- 2 Neurotoxins
- 5 Developmental or Reproductive Toxicants

### Pesticide Residues Found in Bananas:

What Pesticide?

Thiabendazole	63.7%
Imazalil	26.0%
5-Hydroxythiabendazole	7.4%
Azoxystrobin	4.2%
o-Phenylphenol	2.0%
Pyrimethanil	1.5%
Oxamyl oxime	1.1%
Chlorpyrifos	0.4%
Myclobutanil	0.3%
Bitertanol	0.2%
Carbendazim (MBC)	0.2%
Carbaryl	0.1%

### symptoms of chronic poisoning

#### CENTRAL NERVOUS & AUTONOMIC SYSTEMS

In-coordination; fits; unsteadiness; numbress; fingling; acute depression; symptoms that mimic recognized neurological diseases, neurobehavioral deficits in children; Parkinson's disease

#### HAEMATOLOGICAL & IMMUNE SYSTEM

Anaemias; clotting problems; white cell depression; leukaemia; non-Hodgkins lymphoma.

#### HEART & CARDIOVASCULAR SYSTEM

Chest pains; circulatory failure; heart musculature

#### ENDOCRINE SYSTEM

Suppression of adrenal cortex; hyporthyroidism; hyperglycaemia; suppression of endocrine function; breast cancer; testicular cancer; adrenal cortex

#### REPRODUCTIVE SYSTEM

Steniity, foetus maiformation; stillbirth ; spontaneous abortion

#### EYES, EARS, NOSE & THROAT

Conjunctivitis; minitis; sore throat; eye damage

#### RESPIRATORY SYSTEM

Asthma; burning and irritation; lung damage; Skin persistent dermatitis (especially of hands); eczoma

#### GASTRO-INTESTINAL SYSTEM

Odd taste in mouth; weight loss; internal bleeding

#### LIVER

Disruption of enzyme systems, low tolerance to chemicals and alcohol; chemical hepatitis; jaundice

> URINARY SYSTEM Kidney damage

#### MUSCULO SKELETAL STSTEM

Muscular fendemess; low muscle strength; muscle cramps







# How the banana relates to contemporary Issues

- "Artificially" produced food Chemically contaminated
- "staple" food
- "marketed" by the media
- "Monoculture" agriculture
- "Endangered species"biodiversity

- Corrupted governments
- Control by Multinational corporations
- Transportation-energy
- Teaches safe sex

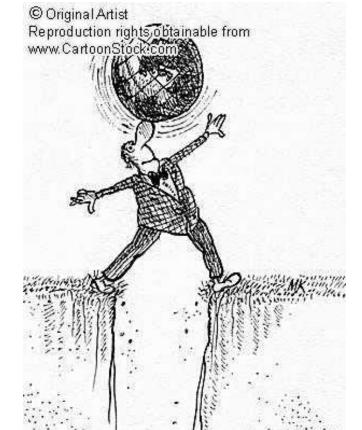




### TOPICS

- Media
- Population overshoot
- Ecological footprint / sustainability
- Peak oil/ energy
- Water resources
- Food
- Environment/ biodiversity
- Social Justice
- Biodiversity
- Conflict /terrorism
- The "good life"
- Systems thinking





# Contemporary Issues (or the "Doomsday class") Holyoke High School

# Assessment

- Daily class participation
  attitude
- results goals of measurable degree ubrics mission analysis outcomessystematic undertaken Assessment urvey degree analysis outcomessystematic undertaken becific urvey degree analysis outcomessystematic urdertaken becific urvey degree analysis outcomessystematic urdertaken becific urvey degree analysis outcomessystematic urvey degree analysis outcomessystematic urdertaken becific urvey degree objectives outcomessystematic objectives outcomessystematic outcomessystematic objectives outcomessystematic objectives outcomessystematic objectives outcomessystematic objectives outcomessystematic objectives outcomessistematic objectives outcomessistematic outcomessistematic outcomessistematic objectives outcomessistematic outcomessistematic outcomessistematic objectives outcomessistematic outcomessiste

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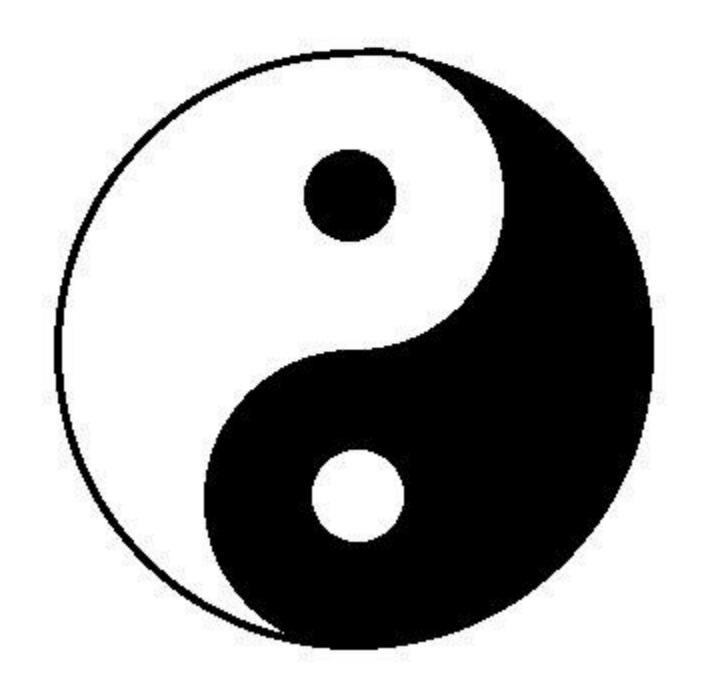
INTERPRE

- Maintaining a notebook portfolio\*
  - Complete, organized, creative
- Maintaining an agenda
  - Daily objectives
- Weekly current events homework\*
  - iceberg model format
- Weekly objectives quiz
  - Three daily objectives from week
- Midterm and final exam

## Each Unit consists of....

- Lecture notes
- Guided reading
- Activity
- Video

– Sometimes more than one of each....



# What are contemporary issues? A current events class and

## more...

- Global Issues
- System thinking
- Sustainability/Sustainable solutions
- Worldview with mind toward social justice

Psychology Physiology Anthropology Sociology Biology Meteorology Geology Demography History **Political science** Communication



# **People and the Planet**

...and what you bring to it.

- What are important issues to you?
- What's going on in our community?
- How are people confronting and solving problems here?



**Global Issues** 



- Effect wide area of planet; across political and social boundaries- transnational or transboundry
- Large number of people and environments
- Long lasting, persistent
- Interconnected



# Global Issues

### Thematic area

• Global economy

• Global Human Development

• Peace and security

### Issues

- International trade, financial stability, poverty and inequity, foreign aid, debt relief, international migration, food security, intellectual property rights
- Universal education, communicable disease, humanitarian emergencies, hunger and malnutrition, refugees
- Arms proliferation, armed conflict, terrorism, removal of land mines, drug trafficking, crime, disarmament, genocide

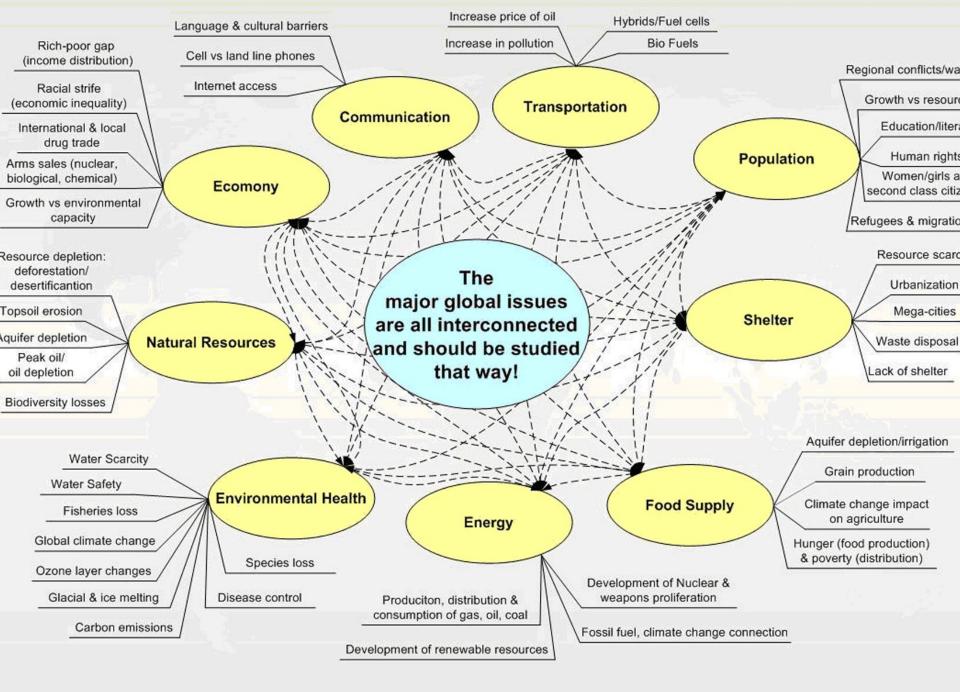
### Thematic area

### Issues

- Global environment and natural resources
- Climate change, deforestation, safe water, biodiversity, land degradation, sustainable energy, loss of fisheries

• Global Governance

• International law, multinational treaties, conflict prevention, human rights, U.N., global compacts

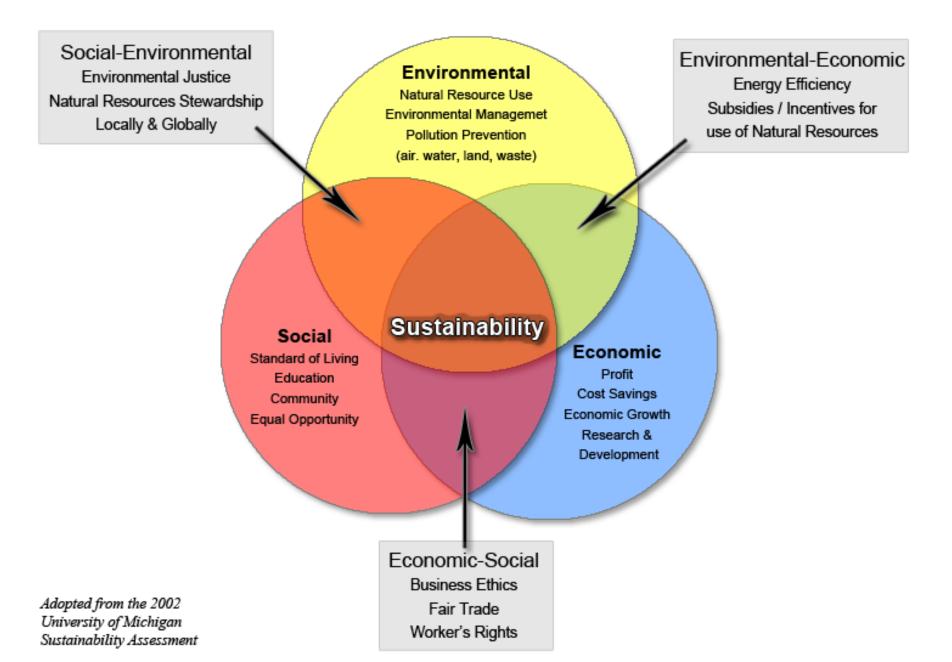




### SUSTAINABILITY

is to meet the needs of the present without compromising the ability of future generations to meet their own needs.

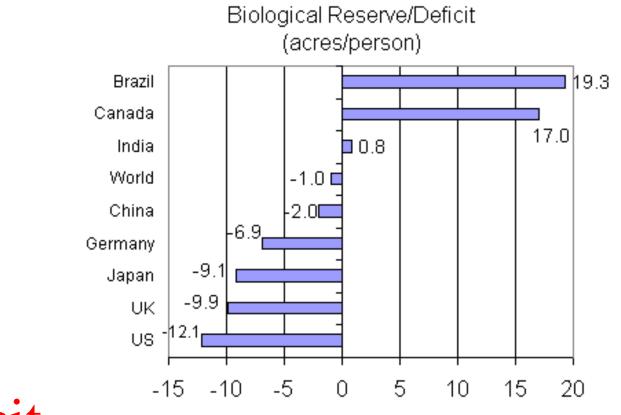
### The Three Spheres of Sustainability



Definition and components of an ecological footprint

- The area of the Earth's <u>productive surface</u> that it takes to produce the goods and services necessary to support a person's <u>lifestyle</u>.
  - Oxygen—green plants
  - Food- farm and pasture
  - Water-domestic, industrial, agricultural
  - Fiber-clothes, wood, upholstery
  - Energy- transportation, domestic, industry
  - Infrastructure- roads, hospitals, water facilities
  - Waste disposal- burn, bury, dump at sea
  - Recreation- FUN!





## Biodeficit

WWF International. Living Planet Report 2006 http://www.panda.org/news\_facts/publications/living\_planet\_report/index.cfm

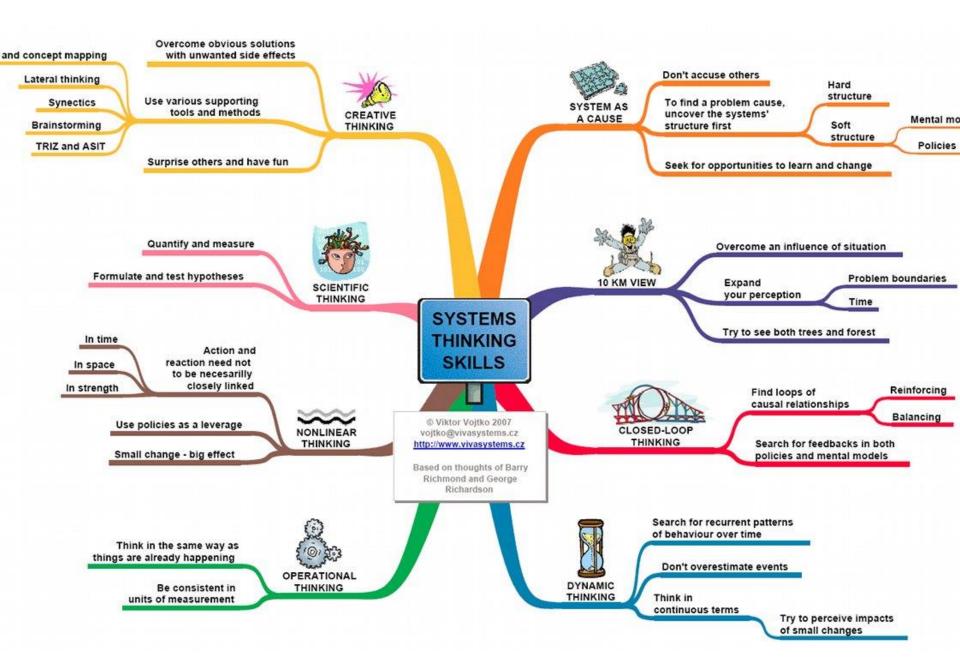
How much beyond the bioproductive capacity of the planet an organism or group of organisms uses to maintain its lifestyle

## terms

- Measure of sustainability- ecological footprint
- Predictor of sustainability- P x A x T = Impact (footprint) (population, Affluence, Technology) called IPAT
- Renewable resources- resource that replace themselves—ie; wood
- Nonrenewable resources- resource that are finite, will run out- ie; oil
- Environmental Scarcity limited amount of resource in a geographic area
- Structural Scarcity- unequal distribution of goods and services

# Systems thinking

- Linear- cause and effect
- Systems- causes and effects (seeing the "whole")
- Seeing the complex web of interconnectedness between issues
  - healthy competition, sharing of ideas
  - Critical thinking: evidence, credibility, multiple perspectives, scope, solution-oriented, sustainable
  - Intended and unintended consequences
- Leverage points- where we can intervene in systems to make most changes
- Examples of systems: economic, cultural, political, environmental, energy, human rights, health, food, conflict/peace





## **Systems Thinking** Your Ability To See Things As a Whole

Systems thinking is your ability to see things as a whole (or holistically) including the many different types of relationships between the many elements in a complex system.

### Complex System Rules of Thumb

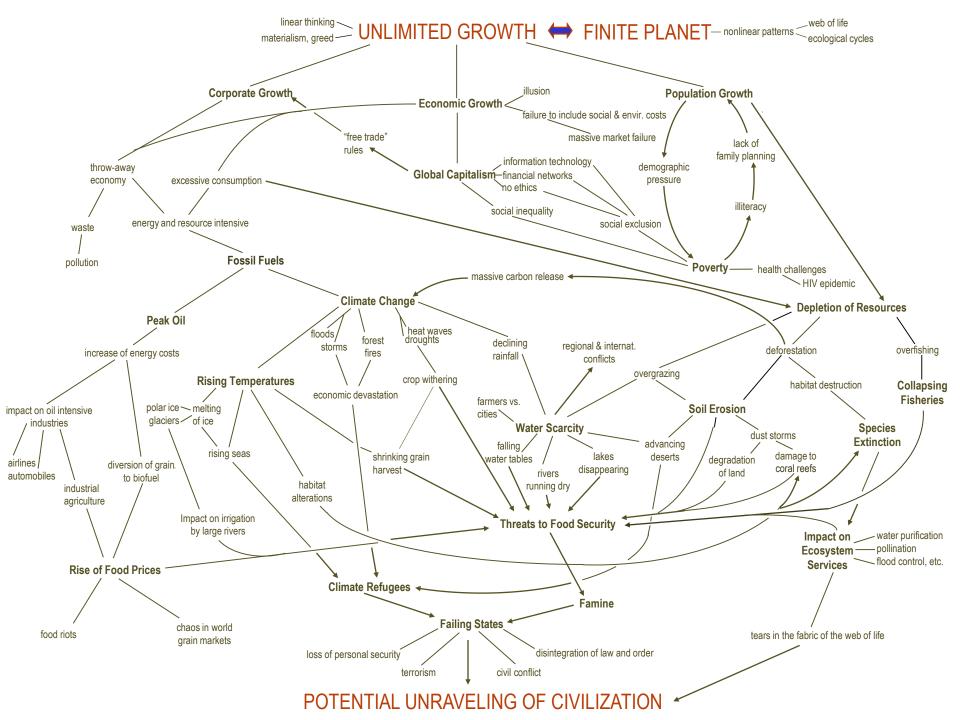
By Gene Bellinger

- Everything is connected to everything else
- 🗸 You can never do just one thing
- There are no simple solutions and final answers
- Every solution creates new problems
- 🗸 "Obvious solutions" do more harm than good
- 🗸 Loose systems are often better
- Look for high leverage points
- 🗸 Nature knows best



Systems Thinking	dealing with the whole system and thinking about how things interact with one another
Systematic Thinking	thinking methodically
Systemic Thinking	combining analytical and synthetical thinking

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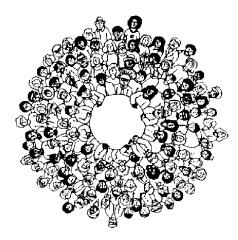
...each day brings further evidence that the ways we use energy strengthen our adversaries and threatens our planet.

> To the people of poor nations, we pledge to work alongside you to make your farms flourish and let clean waters flow; to nourish starved bodies and feed hungry minds. And to those nations like ours that enjoy relative plenty, we say we can no longer afford indifference to the suffering outside our borders; nor can we consume the world's resources without regard to effect. For the world has changed, and we must change with it.

> > Barack Obama January 20, 2009

## Social Justice

- Fairness
- "...all men are created equal"
- Universal Declaration of Human Rights
- Quality of life



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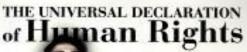
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## **Global Issues- vocabulary**

- Developed / Industrial /Rich / Western / Modern / First World- U.S., Canada, Western Europe, Australia
- Developing / Third World / Poor- rest of the world
- Poverty- poor; 60% of world's population lives on less than \$2 dollars a day
- Migration / Immigration / Emigration: migrant/ refugee-People moving influenced by "push and pull factors"

**Globalization-** Free movement of goods, people and ideas

- **Worldview**-your personal and cultural beliefs about other people and cultures of the world.
- **Personal solutions-** things individuals can do
- **Structural solutions-** things government, NGOs or corporations can do; usually address underlying problems
- **Subsidies-** tax money given to certain businesses to encourage something believed beneficial

- Gross Domestic Product (GPD) Value of all goods and services in a country
- Genuine Progress Indicator (GPI) Value of all goods+
- nonmaterial resources (volunteer work, housework, childcare,
- etc.) negative (crime, pollution, etc.)
- Purchasing Power Parity (PPP)- What you can buy in different places based on a certain amount of money