

Environmental Impact- Using Digital Media to Focus Student Learning

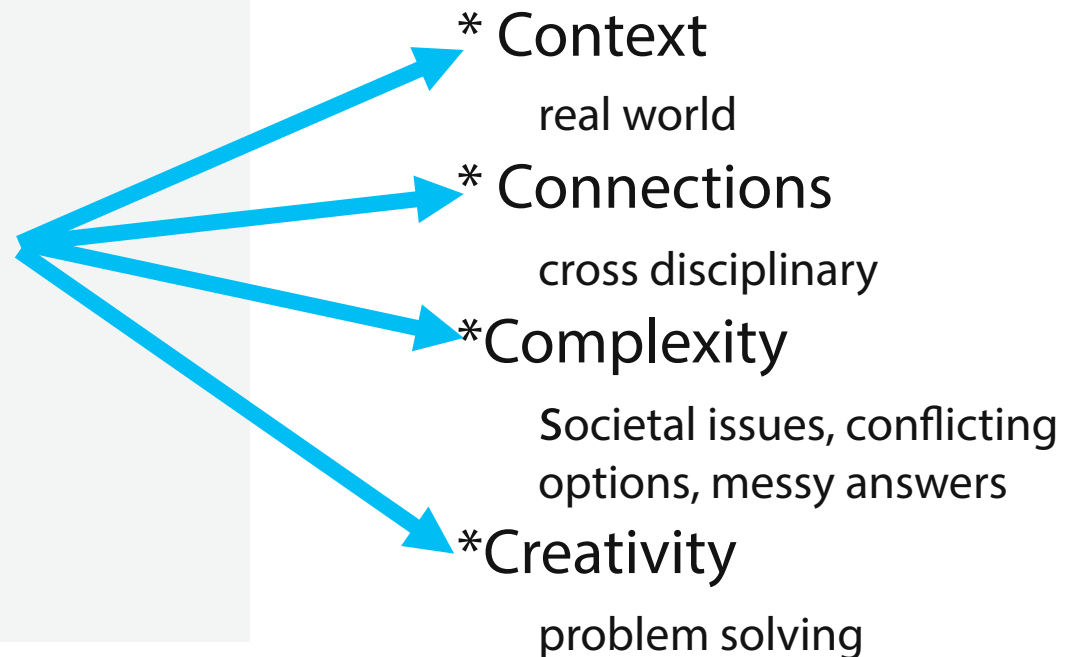
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Environmental impact pedagogy



UN Sustainable Development Goals



UNSDGs guiding this project



1 NO POVERTY



2 ZERO HUNGER



3 GOOD HEALTH AND WELL-BEING



4 QUALITY EDUCATION



5 GENDER EQUALITY



6 CLEAN WATER AND SANITATION



7 AFFORDABLE AND CLEAN ENERGY



8 DECENT WORK AND ECONOMIC GROWTH



9 INDUSTRY, INNOVATION AND INFRASTRUCTURE



10 REDUCED INEQUALITIES



11 SUSTAINABLE CITIES AND COMMUNITIES



12 RESPONSIBLE CONSUMPTION AND PRODUCTION



13 CLIMATE ACTION



14 LIFE BELOW WATER



15 LIFE ON LAND



16 PEACE, JUSTICE AND STRONG INSTITUTIONS

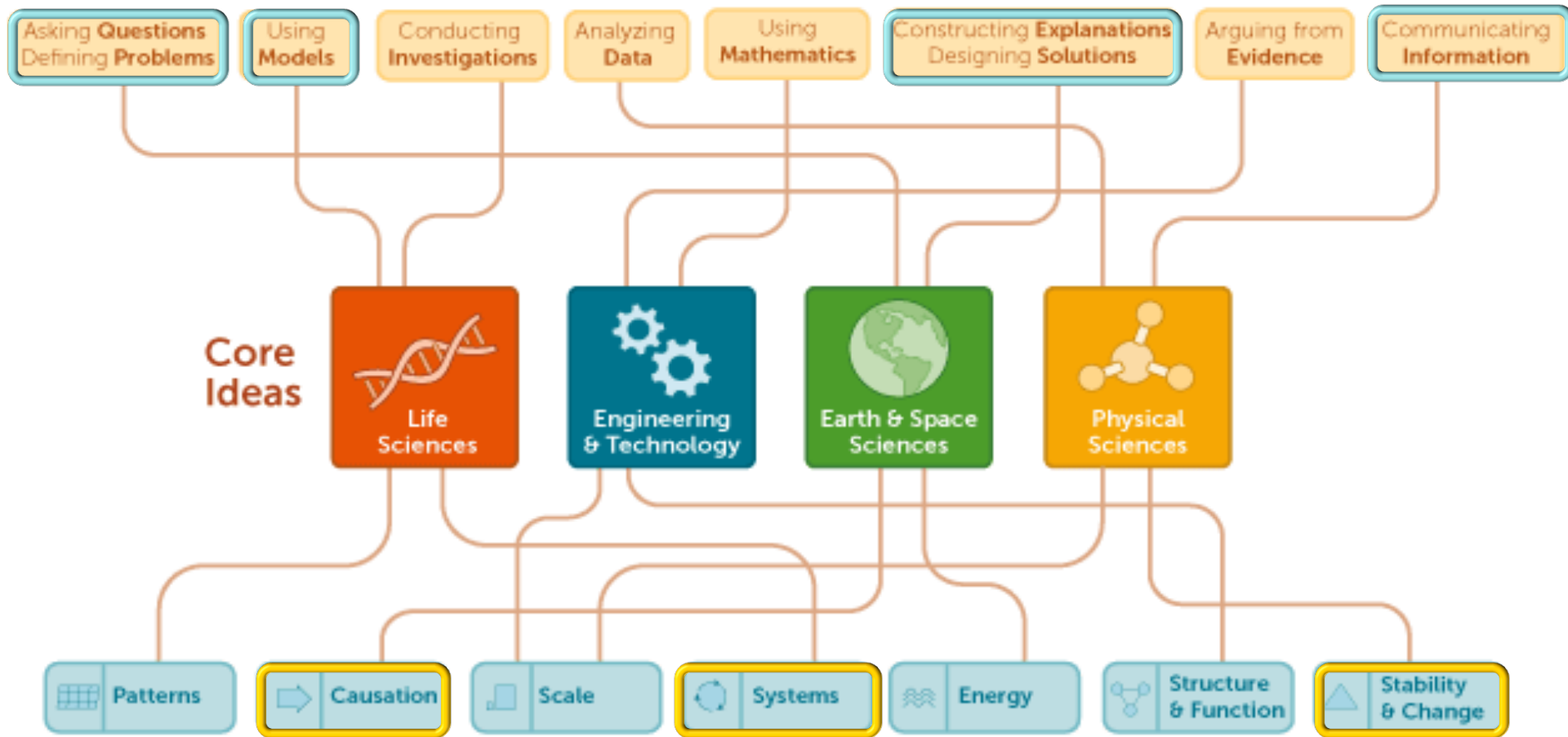


17 PARTNERSHIPS FOR THE GOALS



Next Generation Science Standards

Practices



Crosscutting Concepts

Unit outcomes

- Ecosystem dynamics and viability
- Effects of human activities
- Bringing solutions to the forefront

<https://tinyurl.com/SIBfolder>

An early example <https://tinyurl.com/SIBposterprompt>

Causes: *The Truth Stings*

Pesticides

- Neonicotinoids

Fewer Plants

Climate Change

Weakened Immune Systems

- Mite

Transportation

Loss of Habitat

Honeybee Colony Collapse

Colony Collapse Disorder (CCD): when the majority of the worker bees disappear from the hive, leaving behind the queen bee, young bees, and a few nurse bees.

“If the bee disappeared off the surface of the globe then man would only have four years of life left. No more bees, no more pollination, no more plants, no more animals, no more man.”

Ethical/Societal Issue:

How can farmers protect their crops while making sure bees are not harmed?



Disruption:

Decline in plants

- Without pollinators, plants cannot produce offspring
- Plants are bottom of food chain
- Every animal relies on plants, so entire ecosystem affected
- Places more stress on birds

Impact:

Human Society:

- 1/3 of food comes from bees
- \$15 billion of crop value
- Produce prices increase
- Humans won't survive?

Prevention

European Pesticide Ban

Prevention of Mite infestation

Improve overall bee health

*Genetically modifying bees to be resistant to pesticides and insecticides

Sources

<http://sos-bees.org/causes/>

<https://www.nrdc.org/stories/buzz-about-colony-collapse-disorder>

<http://quoteinvestigator.com/2013/08/27/einstein-bees/>

<https://www.epa.gov/pollinator-protection/colony-collapse-disorder>

<http://natveplants.msu.edu/pollination>

Video Project

<https://tinyurl.com/SIBvideoprompt>

Scientific Inquiries in Biology

- **A description of the non-impacted environment, and how do we know**
- **The scope of human impact, providing two different examples**
- **Detail each example with source or cause of impact and consequences that follow.**
- **Plans/efforts underway intending for remediation.**
- **Your potential solutions**

<https://www.youtube.com/watch?v=NhVI5HcMsmU&feature=youtu.be>

Infographic

Scientific Inquiries in Biology

https://digitalcommons.imsa.edu/unsdg_infographics/

