

# The Natural Step- Principles for a Sustainable Society

GSELS

Prof. Rachelson

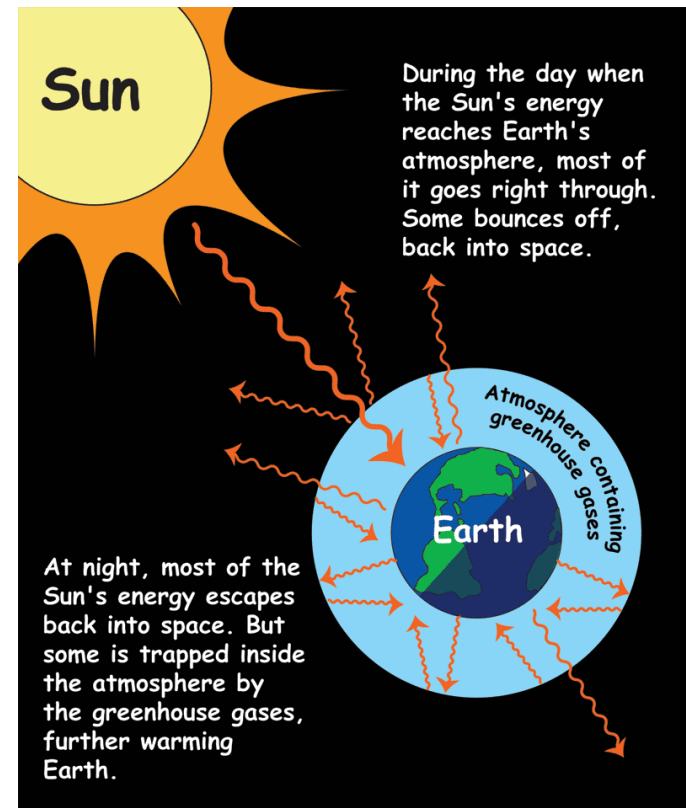
# The Rules of Nature

1. The Earth is a closed system – **There is no “away.”**



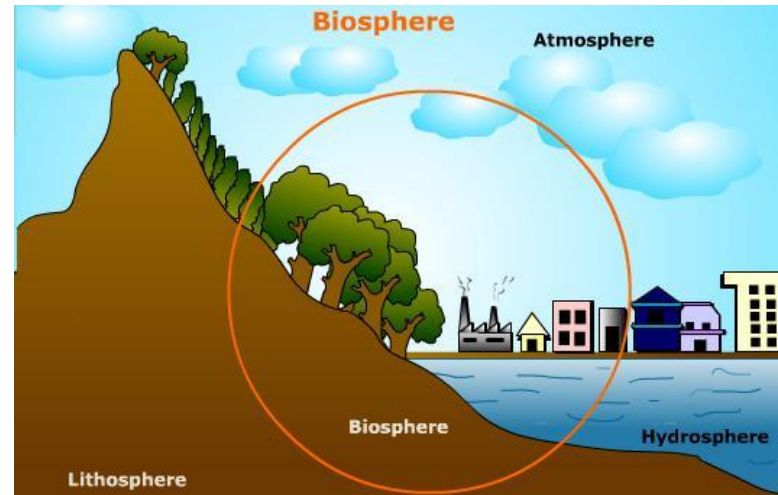
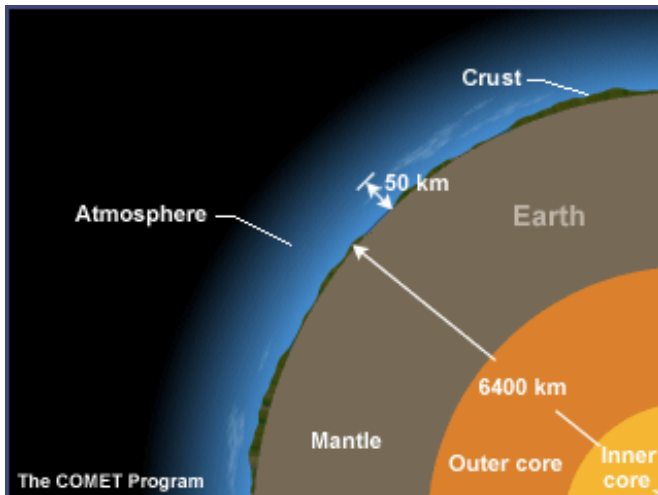
# The Rules of Nature

2. The Earth is an open system with respect to energy – **The sun's energy drives everything.**

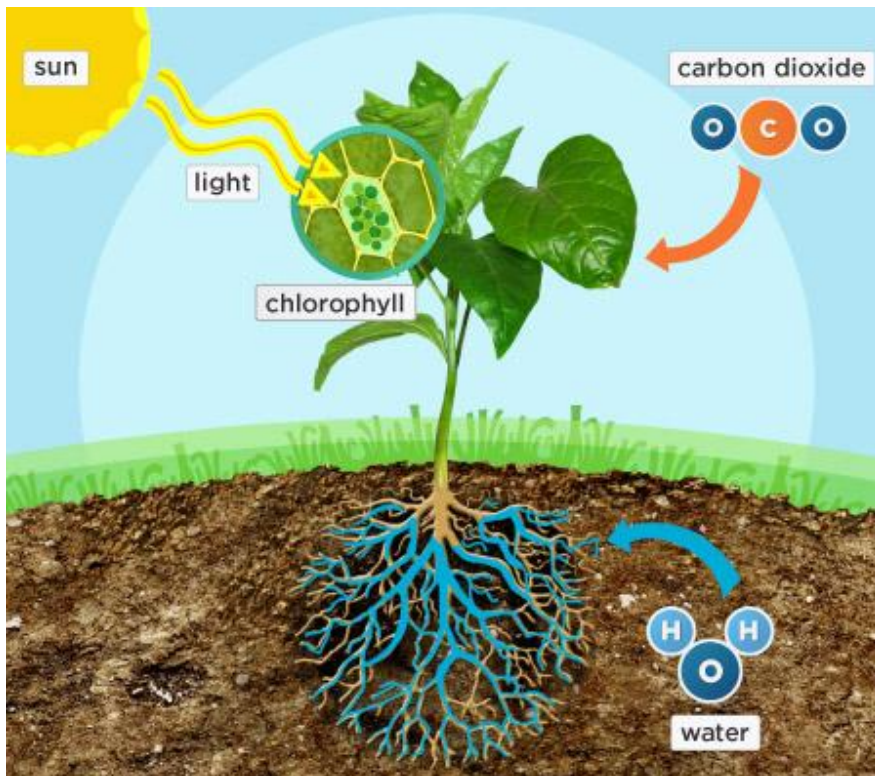


# The Rules of Nature

3. Life exists in the thin layer around the Earth – the biosphere – **The biosphere is very fragile.**



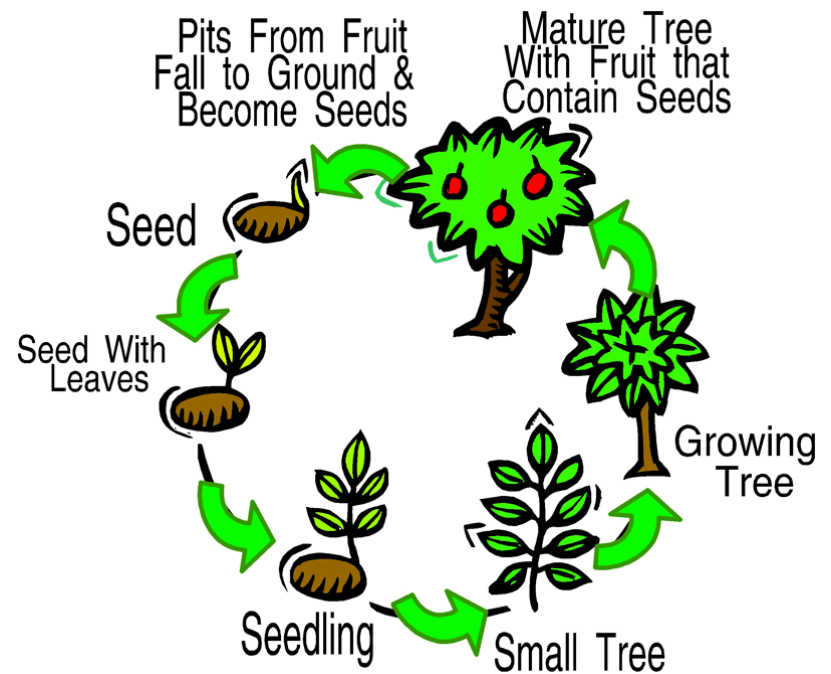
# The Rules of Nature



- \* 4. Photosynthetic organisms (plants) capture the sun's energy to power their growth – **Photosynthesis “pays the bills.”**

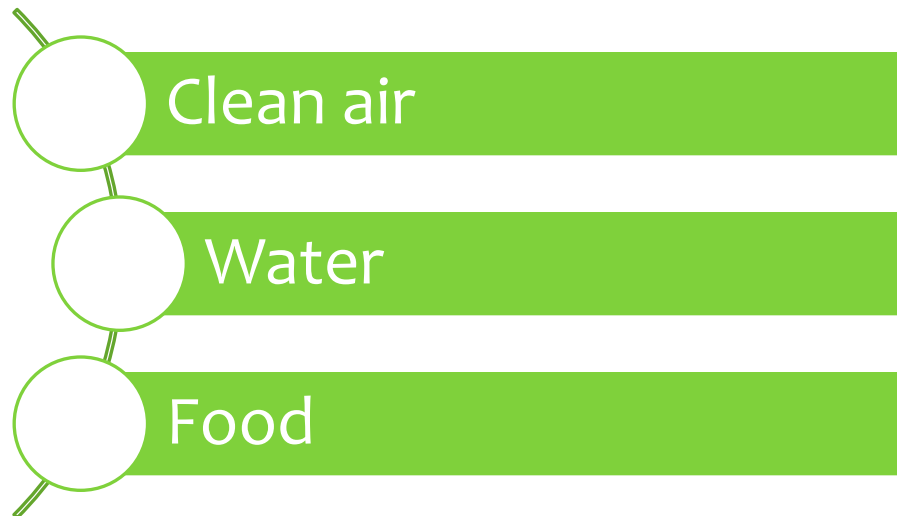
# The Rules of Nature

5. All life on Earth depends on self-regulating systems that circulate materials and energy – **Nature works in efficient cycles where NOTHING is wasted.**



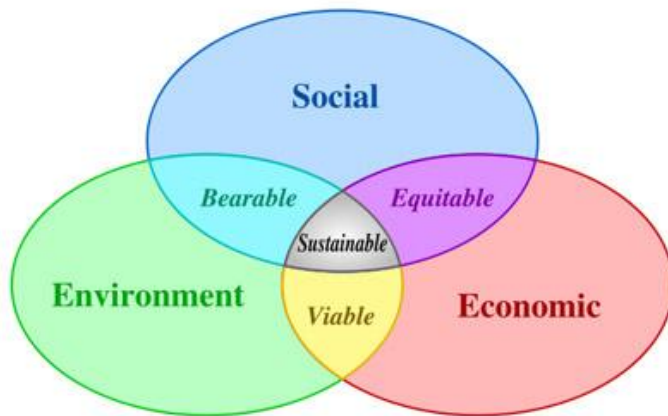
# What does this mean for us?

- \* We need to understand that ALL of our economic and industrial systems are nested within the larger system of nature. **We depend on ecosystem services:**



To be sustainable, human systems need to operate within in the laws of nature.

Old Sustainability Model



New Sustainability Model





# Principles for a Sustainable Society

1. Reduce – and eventually eliminate – the accumulation of materials from the Earth's crust.



# Principles for a Sustainable Society

2. Reduce – and eliminate – our contribution to the systemic accumulation of man-made substances.



The cup you use for

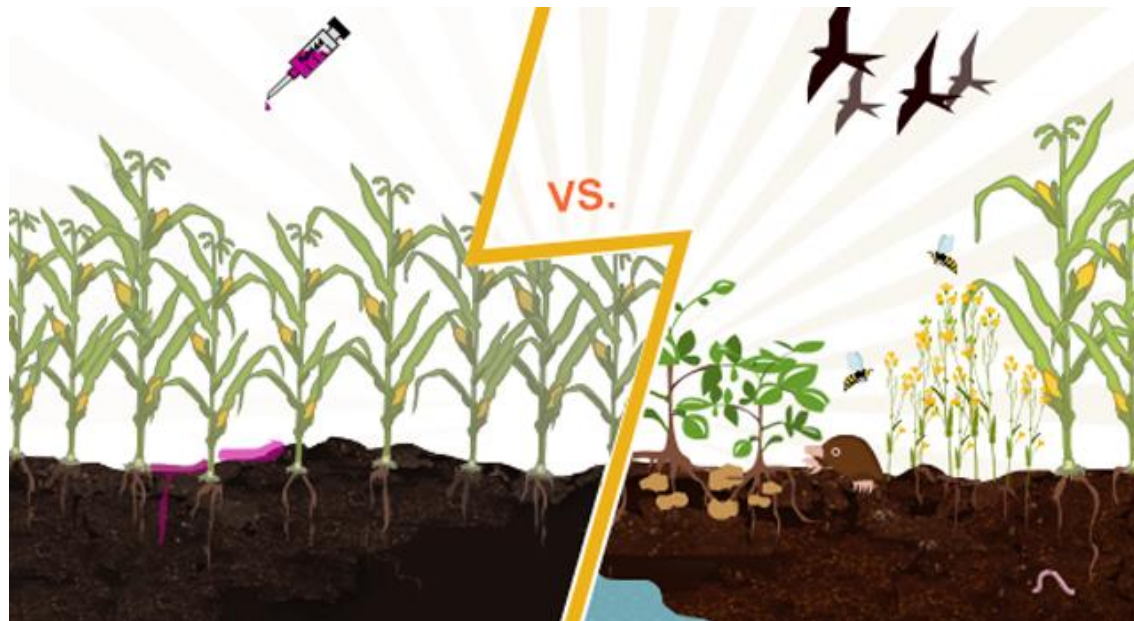
**10 Minutes**

could stay in a landfill for more than

**1,000,000 Years.**

# Principles for a Sustainable Society

3. Reduce – and eliminate – our contribution to the ongoing physical degradation of nature.



# Principles for a Sustainable Society

117 people died when factory collapsed in Bangladesh

- \* 4. Reduce and eliminate our contribution to conditions that systematically undermine people's ability to meet their basic needs.



# Your Next Steps

- \* Build awareness
- \* Collaborate
- \* Create a plan for your family or just yourself
- \* Research (FPL bill, water bill, home energy audit)
- \* Become more efficient (lights, water, A/C filters, car tires, reducing waste, composting, etc.)
- \* Get involved (volunteer, write letters, etc.)



# The Story of Solutions

\* <http://www.youtube.com/watch?v=cpkRvc-sOKk>