



Notes to Presenters & Reviewers

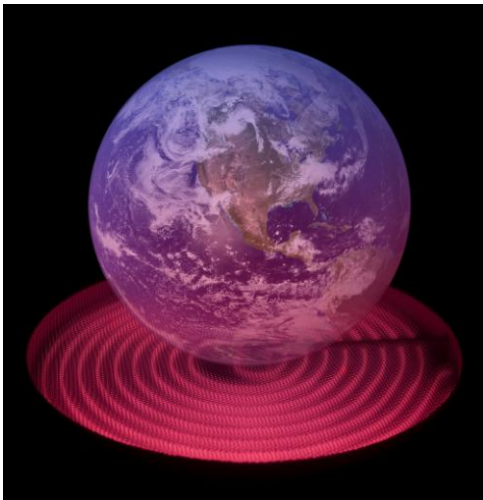
- The content in this presentation is intended to be **age-neutral and up-beat**, and therefore **uses pictures to illustrate points**.
- **The goal is climate science literacy**. The U.S. Global Change Research Program/ Climate Change Science Program is the primary content source. For updates, see: www.climatescience.gov
- **The content information**, especially for slides 7-13, is in the notes. Adjust language level and content as appropriate for different age groups as well as interest and learning levels.
- **Projected global climate changes** (selective) are on slide 14.
- **Carbon footprint** as a phrase is introduced on slide 15.
- **Personal habit actions**, organized by season, are on slides 18-25. Use as appropriate. Add others as needed. Many more abound!
- **Meat Free Monday**, the Carbon Master™ (2009) project and initial focus of this presentation, is on slide 24. Again, much more information can be discussed with this particular slide.
- **Internet resource and reference sites** are on slide 26.
- **WSU Carbon Masters Logo** is on slide 28.



Climate Science Literacy

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Climate Science Literacy is an understanding of the climate's influence on you and society, and your influence on climate.²





Climate science literacy matters – **why?**²

- Fact: The Earth is warmer than in 1900 A.D.
- Current changes are measurable & visible.
- Future changes will affect every aspect of human society: economic prosperity, health, national security, daily life.
- Understanding the science will help us evaluate the news, conversations, recommendations.



Seven Essential Principles²

1. The sun is the primary source of energy for the Earth's climate system.
2. Climate is regulated by complex interactions among the parts of the Earth system.
3. Life on Earth depends on, is shaped by, and affects climate.
4. Climate varies over time through both natural and man-made processes.



Essential Principles (cont.)

5. Our understanding is improved through observations, studies, and building models.
6. Human activities are impacting the climate system.
7. Climate change will affect the Earth system and human lives.

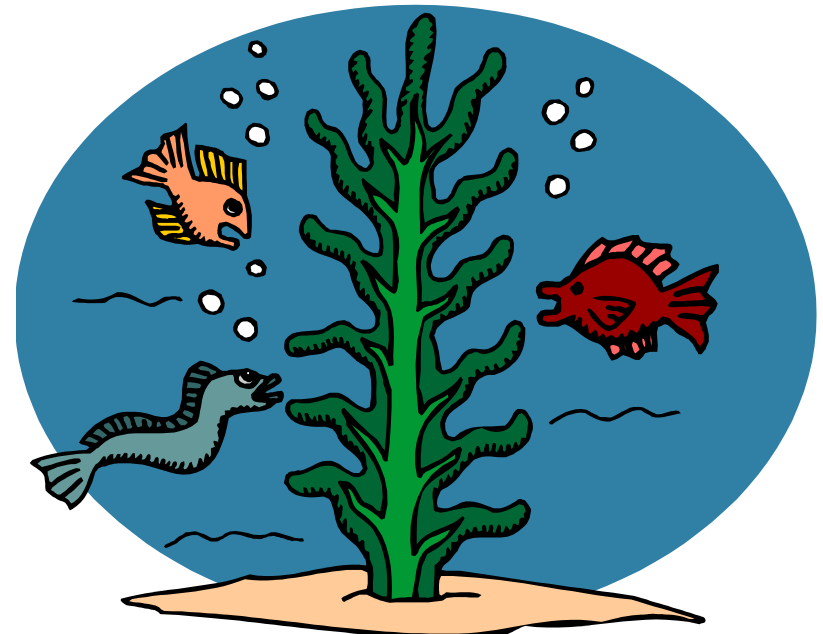
1. Sun = primary source of energy



2. Climate is complex.



3. Life on Earth depends on, is shaped by, & is affected by climate



4. Climate changes over time



5. Our understanding is improved by:

- Observations
- Theoretical
- Studies
- Modeling



6. Human Activities Impact Climate



7. Climate Change Will Have Consequences





Summary of Projected Global Climate Changes³

- Floods, water stress, droughts: more frequent and more intense.
- Heat waves and wild fires: more frequent and intense.
- Insect and pest infestations: increase.
- Rising sea-salt water levels will contaminate fresh water supplies to people and crops.
- Various species, bacteria, and viruses will migrate to locations more favorable “to them”.
- Severe cold periods likely to decrease.
- Severe storms: decrease in number, increase in severity.



Climate Science Literacy: an ongoing, educational process

- Climate science literacy curriculum reflects current-level-of-information science.
- Science changes with new information.
- Carbon Footprint reflects personal, business, community, national, & international activities.
- Ongoing process: personal and group attitudes.
- Ongoing: informed decisions by individuals, groups, communities, nations.



What is “Carbon Footprint” ?

- Carbon footprint: the amount of Earth’s energy used to maintain a life style, business, activity, including ‘hidden’ amounts like production and transportation of food, etc.
- Total equals a Carbon Footprint.
- International goal: 2 ton footprint/person/year
- Average American: 20 ton/person/year
- Carbon calculators available online.



Guiding Principle for Informed Climate Decisions:

**Humans
can take actions
to reduce climate change
and its impacts.²**



Carbon Footprint Reduction Personal Habits^{1,4,5}

Summer:

- Grow your own vegetables or buy local ones.
- Close the curtains on hot summer days.
- Turn off the lights!
- Open the windows in the evening.
- Change to CFL light bulbs.
- Use SSC's Food Plus Yardwaste service, and compost everything possible.
- Use a clothes line or rack to dry clothes



More Summer Actions

- Take shorter showers.
- Wash only full loads of laundry.
- Use a fan instead of an air conditioner.
- Use refillable bottles or containers for water, coffee, tea
- Check your tire pressure monthly.
- Put TV, stereo, computer on power strips – then turn off them all off completely!



Carbon Footprint Reduction

Personal Habits: Autumn

- Install a programmable thermostat.
- Set your hot water heater at 120° F.
- Plant a tree or two or three.
- Do laundry in cold water.
- Fix leaky faucets.
- Reduce idling of your car – 30 second rule.
- Caulk around windows to prevent heat leakage.



Carbon Footprint Reduction

Personal Habits: Winter

- Air dry your clothes. Save energy, gain humidity.
- Give your water heater a blanket.
- Use re-usable wrappings, like nice fabrics.
- Replace and/or add weather stripping.
- Recycle your gift/product packaging – all of it!
- Use compostable paper plates, gift wrappings.
- Compost/recycle wrappings you receive.



Carbon Footprint Reduction Spring

- Fill your rain barrel – use for summer garden or container watering.
- Check all faucets for leaks - inside/outside.
- Replace your furnace filters.
- Start a food and yard waste composting program.
- Use eco-friendly cleaning products.
- Plant another tree!



Reduce Your Carbon Footprint All Year

- Carpool instead of driving alone.
- Ride the bus, walk or ride a bike.
- Eat local food; reduce truck/train footprint.
- Recycle everything.
- Reduce your consumption: need or want?
- Use Goodwill instead of Landfill.
- Ask “Where did this come from?”

One really easy CO₂ reduction


Meat Free Monday⁵

- One meat free day per week for a month keeps 33 lbs. CO₂ out of the atmosphere.
- Less meat = less heat
- Good health decision
- Great financial decision!
- www.supportmfm.org/index.php (England)
- www.Bellinghameatfreemonday.com (US)



Carbon Reduction: Community

- Talk and write to government officials.
- Stay climate science literate.
- Get more educated: carbon and climate change.
- Talk to people about FoodPlus, composting, methane, carbon dioxide.
- Talk to your friends, family, & organizations about Earth care.
- **What you do really does matter!**



References, Sources, Information, Updates and Energy Tips

1. www.nwcleanair.org
2. www.climatescience.gov
3. www.globalchange.gov
4. www.greennexus.com
5. www.whatcom.wsu.edu/carbonmasters
6. www.ssc-inc.com
7. www.greenearthtechnology.com



