Global and Local Solutions to Climate Change

Climate Change Solutions Class Chart

Work in a small group to brainstorm:

- What are some **global** solutions to that you have heard about?
- Based on what you have learned about climate change, what do ***you*** think would be a possible global solution?

Be ready to share your global solutions with the whole group and record on the Class Chart.

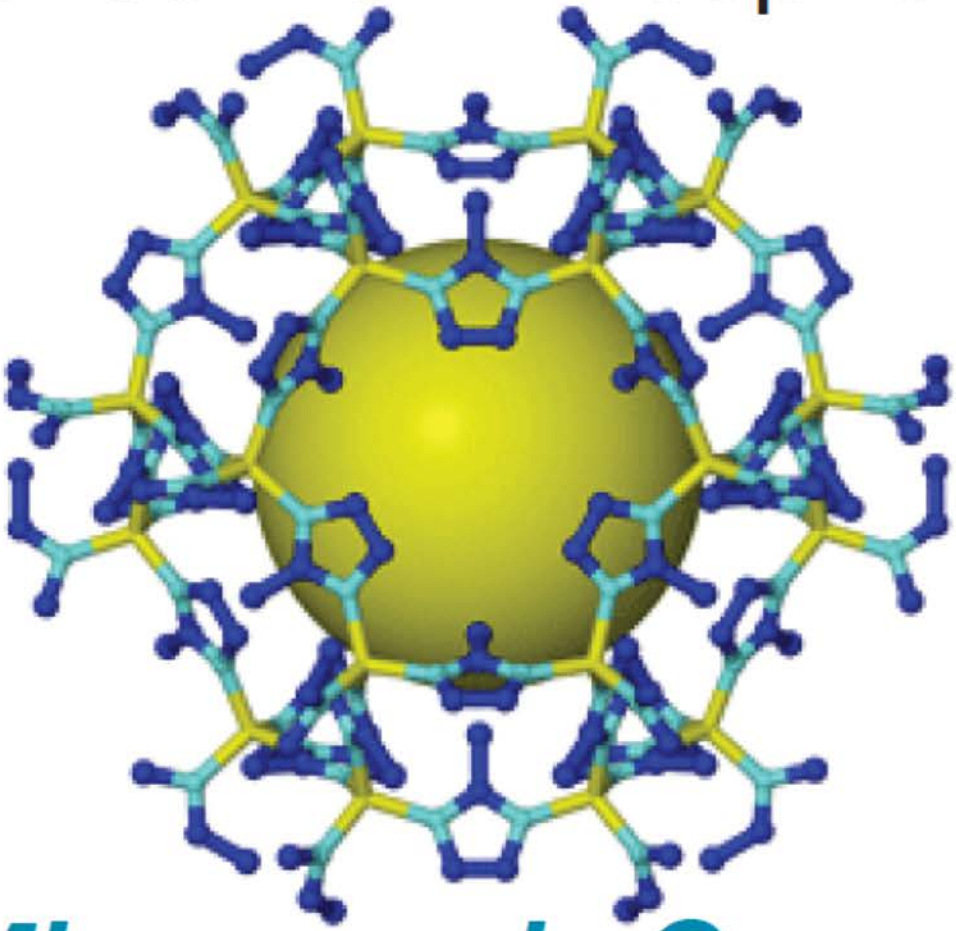
Categorizing solutions to climate change

Solutions to climate change generally fall into one of three categories:

1) put less carbon into the atmosphere [less use of fossil fuel]
2) take back some of the carbon that is already in the atmosphere [scrubbing or trapping devices or processes]
3) lessen the effects of climate change on human activities or infrastructure [e.g., houseboats, dikes]

Solutions to Climate Change

Capture CO_2 from Factories BEFORE It Reaches the Atmosphere…



in Microscopic Cages!

Reduce Cow Gas

Clover (*far left*) and bales of alfalfa.

Paint Roofs White

Build Houseboats

Categorizing solutions to climate change

Mitigation – deals with the **causes** of climate change

- change in behavior that lowers CO_2 emissions
- increase a carbon sink (capturing more carbon)
- decrease an anthropogenic carbon source.

Adaptation – deals with the consequences of climate change

- change in behavior to prepare for an inevitable change
- prepare communities for the consequences of global warming.

24 Solutions

1. Preserve Forests
2. Recycle and Use Less Paper
3. Turn Lights Off
4. Adjust Your Themostat
5. Plant a Tree or Garden
6. Walk or Roll to School
7. Recycle Plastic
8. Buy in Bulk (or less packaging)
9. Bring a Shopping Bag
10. Use Rechargeable Batteries
11. Eat Less Meat
12. Buy Used Instead Of New
13. Eat Locally Grown Food
14. Recycle E-Waste
15. Unplug Electronics You're Not Using
16. Replace Incandescent Lightbulbs
17. Use Wind and Solar Power
18. Use Trash to Produce Energy
19. Turn Off Your Vehicle
20. Make an Action Plan For Sea Level Rise
21. Improve Fuel Efficiency
22. Improve Public Transportation Options
23. Reduce the Release of Heat-Trapping Gases
24. Support NPS's Climate-Friendly Parks Program

25 Contribute to Compost

If table scraps or plant waste go into the trash, they are taken to landfills or dumps. All the decomposing waste there releases a lot of methane and CO_2. If food and plant waste get composted, little to no methane and less CO_2 is released, and the compost can be used in beneficial ways.

Composting turns food scraps or plant waste into rich soil that fertilizes plants. Using compost is better than fertilizing with chemicals. Plants grown in compost-rich soil store more carbon than plants grown with chemical fertilizers.

Compost-rich soil also stores more carbon than chemically fertilized soil, so less carbon escapes into the atmosphere. Using compost saves water because less water evaporates from the soil.

Compost table scraps and yard waste in a compost bin and use the compost to fertilize your yard! Many cities and towns have compost centers or pickup bins for composting food scraps and yard waste. Ask local government officials if your town composts.

Climate Change Solutions

Name _____ Date _____

A. Solution (title)	B. How this helps lessen climate change	C. Action YOU could take and/or how you could encourage others to act	D. Questions you have about this solution
example: Contribute to Compost	When you compost food scraps, less CO_2 and CH_4 go into the atmosphere than when food goes to the dump.	I could put food scraps in the compost bin at home and talk to my teacher about starting a compost bin at school	Can you compost all food? What about meat?

Discussing Solutions – Whole Class

- How does this solution reduce the carbon footprint?
- How does this solution deal with a cause (mitigation) or consequence (adaptation) of climate change?
- Is this solution individual or community/state level? How could you move it up to a larger level?
- Do you think you could do this?

Key Concepts about Solutions to Climate Change

Scientists and engineers are working to slow or stop climate change and to lessen the effects of climate change.

People, businesses, communities, and governments can make choices that reduce their carbon footprints.

Possible solutions to climate change can involve chains of possible causes and effects.

Local Solutions Brainstorm

Be ready to explain

- whether your ideas reflect adaptation or mitigation strategies
- Your rationale for putting forth that local solution

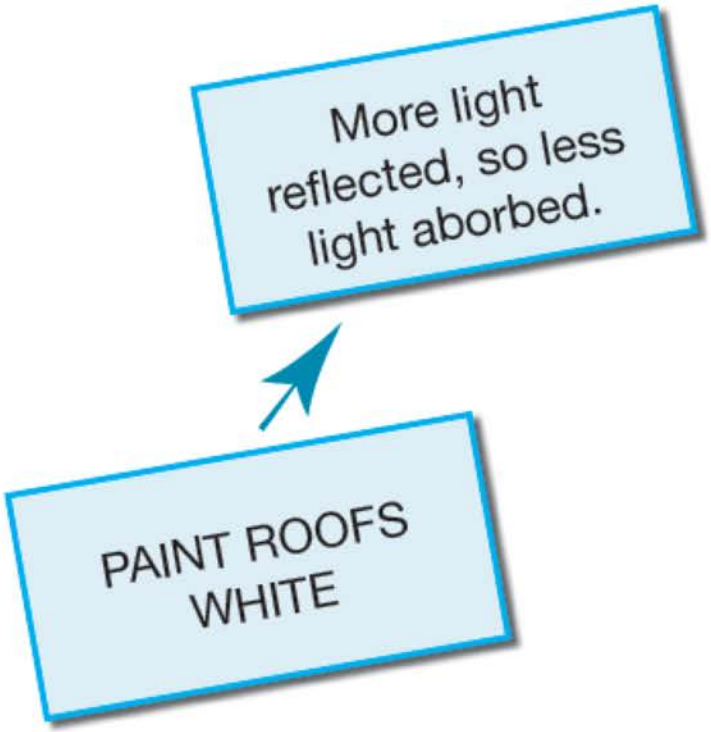
Example:

Solution Cause and Effect Flow Chart

Step 1: State action.

Example:

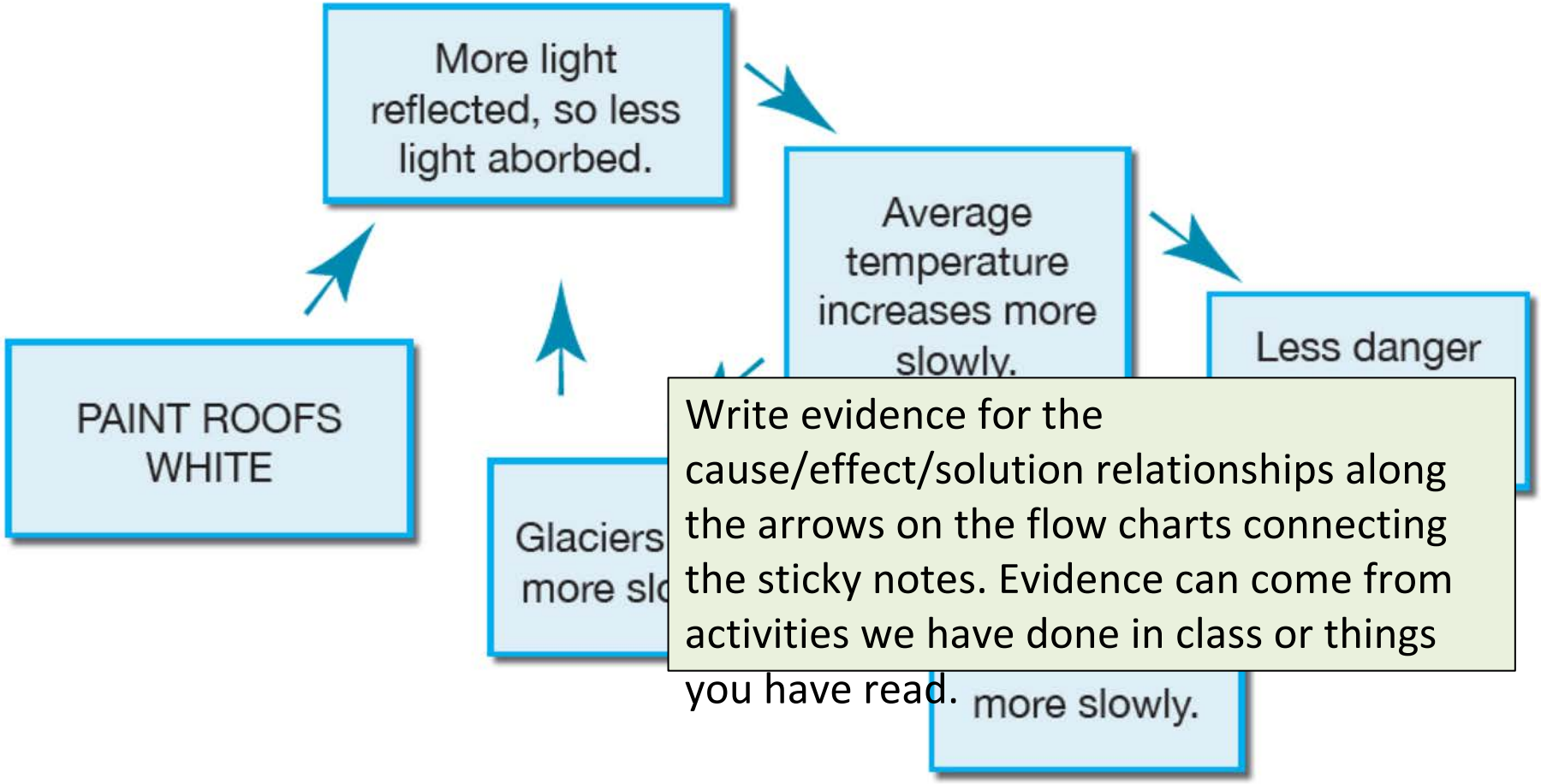
Solution Cause and Effect Flow Chart



Step 2:
Add results or effects.

Example:
Solution Cause and Effect Flow Chart

Step 3: Complete flow chart.



Write evidence for the cause/effect/solution relationships along the arrows on the flow charts connecting the sticky notes. Evidence can come from activities we have done in class or things you have read.

Discussing Solution Flow Charts

Question Starters for Discussions:

- What is your evidence that____will cause____?
- Will _____ really be a big enough change to cause____?
- Will_____also cause_____?