Climate Change Interventions: Solutions to Climate Change?

Humans are creative. They try to solve problems in original ways. Many humans are concerned about the planet getting warmer because of the increasing amount of greenhouse gases in the air. Some scientists have come up with very clever ways to deal with this issue. Like most ideas, there are some advantages (good things) and disadvantages (bad things) about each idea.

You are going to research one of the climate change interventions below. An intervention is an action people take to try and make something better. Sometimes these climate change interventions are called geoengineering solutions. They are all ideas about artificial (man-made) actions that are meant to deliberately change or affect our Earth's climate.

TASK: Choose a solution to research. Choose one of the solutions below and to research. You will then present your learning by creating your own poster, slide show, news article, comic strip, etc. Your project must include the following:

- 1. what is the solution (explain it)
- 2. whose idea it is,
- 3. how far along in development is it,
- 4. whether it has been working as a solution to reduce climate change and /or global warming.
- 5. Be sure to include an image, drawing or graphic.

A. SOLUTION IDEAS FOR BLOCKING SUNLIGHT

Space Mirrors:

- Popular Mechanics: Shoot Mirrors into Space
- Scroll down to the bottom of this article to see the part about space mirrors.

Artificial Volcanoes

- This link shows 7 possible interventions. Make sure to click on the picture of the volcano!
- Testing an Artificial Volcano

Cloud-Making Ships

- This link shows 7 possible interventions. Make sure to click through until you reach the cloud-making ship!
- Cloud Making Ships

White Roofs

- This link shows 7 possible interventions. Make sure to click through until you reach white roofs!
- This EPA page will show you how parts of a building can help to save energy... like a white roof! How does it relate to climate change if you are saving energy?

Painting Mountains White

- CNN- Painting Mountains White
- Painting a Mountain White to Save a Glacier

More solutions continued on Next page...

B. SOLUTION IDEAS FOR REMOVING LARGE AMOUNTS OF GREENHOUSE GASES FROM THE AIR

Artificial Trees

- NBC News- Artificial Trees
- Physics World- Artificial Trees

Seaweed Farms

- This link has 7 interventions. Make sure to click through until you reach seaweed farms!

Greening the Desert

- This link has 7 interventions. Make sure to click through until you reach greening the desert!

Storing Carbon Dioxide Underground

- Capture and Underground Storage of Carbon Dioxide
- Carbon Dioxide Storage

Methane Capture and Use

- Methane Capture and Use

Blocking sunlight:

- Orbiting spacecrafts to cast shadows, diffusion lens, releasing small particles into the air

<u>Choice Assignment</u>: Choose one of the four tasks below to show your understanding of a current news event highlighting Climate Change Solutions. Hand your final product into the bin by the door.

Mastery	Understanding Learning	Interpersonal	Expressive
Learning Style	Style	Learning Style	Learning Style
Create a timeline showing how your solution was developed over time. Be sure to include Who developed it What it is How it works Times when it was developed, when it was prototyped, when it was tested What the next steps are images	Compare and contrast the two solutions either in a chart or a double bubble graphic organizer. Be sure to include • what is the solution (explain it) • whose idea it is, • how far along in development is it, • whether it us a success • image	What is your solution to climate change? Why do you think your solution is better than the one you researched. Draw a picture (model) of your solution and include what you would do to make it, test it and promote it.	Create a poster, or slideshow explaining the solution you researched be sure to include • what is the solution (explain it) • whose idea it is, • how far along in development is it, • whether it is a success • image