Building Sustainability

Role-play Sustainability Activity

KNOWLEDGE

- Understand the importance of minimizing waste and energy usage
- Identify ways to minimize waste and energy usage
- Understand that waste and the use of energy have negative consequences on the environment
- Identify ways that waste and energy usage affect the oceans, and aquatic life

ACTIVE

- Research ways to reduce waste and energy usage
- Work as a team to come up with ways to effectively reduce waste and energy usage

TIME	GROUP SIZE	LOCATION	GRADE LEVEL	EQUIPMENT
As long or short as you'd like.	**3-4**	**Classroom**	**5-7**	• Paper • Tools the children can use for research (books/computer)

DEBRIEF/REFLECTIVE COMPONENT

- How does waste and the use of energy affect the oceans and aquatic life?
- What are some ways the way we/you can reduce our waste and energy usage?
- How do the changes in the ocean then affect the Earth? (changing currents and weather patterns, $C0^2$ intake)

HELPFUL TIPS

- You can suggest resources that the class can use to find their evidence (websites, books).
- After the activity, you can challenge the class to reduce waste by throwing recycling in the proper bin, or to have a litterless lunch (bring lunch to school in reusable containers.

OCEAN LITERACY PRINCIPLES
2 – The ocean and life in the ocean shape the features of the Earth. d. The ocean is the largest reservoir of rapidly cycling carbon on Earth. Many organisms use carbon dissolved in the ocean to form shells, other skeletal parts, and corals reefs. 3 – The ocean is a major influence on weather and climate. f. The ocean has had, and will continue to have, a significant influence on climate change by absorbing, storing, and moving heat, carbon, and water. Changes in the ocean's circulation have produced large, abrupt changes in climate during the last 50,000 years. g. Changes in the ocean-atmosphere system can result in changes to the climate that in turn, cause further changes to the ocean and atmosphere. These interactions have dramatic physical, chemical, biological, economic, and social consequences. 6 – The ocean and humans are inextricably interconnected. e. Changes in ocean temperature and pH due to human activities can affect the survival of some organisms and impact biological diversity (coral bleaching due to increased temperature and inhibition of shell formations due to ocean acidification). g. Everyone is responsible for caring for the ocean. The ocean sustains life on Earth and humans must live in ways that sustain the ocean. Individual and collective actions are needed to effectively manage ocean resources for all.

Setup

1. Scenario:
    a. You are getting ready to travel through space to meet with the government of Planet Sustainability.
    b. There are no garbage trucks in space, and your spaceship will have a limited energy source (there aren't any gas stations or power stations in space).
    c. What are some things that you and your team can do to minimize your waste production and energy use, so you can ensure that you arrive safely and happily at Planet Sustainability?
2. In your teams (groups of 3 or 4), come up with an essential agreement that outlines the things you will do during your flight to minimize waste production and energy use.
3. You can use multiple sources to find evidence
4. This can also be extended to identify ways that the school can reduce waste and energy usage
5. Students will use the evidence that they gathered to write a letter to the government of Planet Sustainability.
6. The letter should also summarize reasons why the school should not be destroyed because they are helping to save the world by being an eco-friendly building that uses sustainable practices.