

This week's issue:

ARE GREEN TECHNOLOGIES WORTH THE INVESTMENT?



As Amanda walked through the park, she noticed a big new trash can called a BigBelly. When she looked it up on the web, it turned out to cost \$6,000! The BigBelly has a solar-powered compactor inside, so it **maximizes** the amount of trash contained while minimizing the number of times it needs to be emptied. The BigBelly is one of many “green technologies” now available. But does it make sense to **invest** so much money in them? City managers and mayors say that each BigBelly will pay for itself in three years, because they only need to be emptied once a week. Traditional trash cans get emptied once or twice a day, at a cost of about \$2,000 a year each, and the trucks that travel around to empty them use gasoline and pollute the air. Nonetheless, buying a lot of BigBelly cans could punch a big hole in any city’s budget!

The BigBelly uses a **renewable** energy source, the sun. Many other renewable technologies are under development. Some people are putting solar panels on their roofs, and switching from electricity produced with coal or gas to solar-powered electricity. Solar-powered cars and planes are under development. Solar-powered light strips have been installed on some rural highways; once in place, the strips run for free and rarely require maintenance. Investors are developing solar panels that can replace the asphalt on highways; these panels use solar power to generate heat (so that ice and snow melt immediately), light (so that streetlamps are unnecessary), and extra electricity for nearby towns and cities.

Investment in these solar technologies is expensive. The Department of Transportation gave \$100,000 to the solar pavement project, but several million more will be needed just to finish the development. Is it worth investing in such expensive technologies? Should we **proceed** to invest in technologies that may never be practical on a large scale? Shouldn’t we **conserve** public funds for more immediate needs, like improving schools and fixing potholes? What if we develop green technologies but lack the funds to proceed with using them? How high a price should we pay for green technology?

Questions for Classroom Discussion:

- What is green technology?
- What are some examples of green technology?
- If a technology is termed “green,” is it automatically a good thing?
- Do you think green technology is worth the expense?
- Would you recommend getting a BigBelly trash compactor for your own town or city?



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conserve | renewable | invest | proceed | maximize

USE THE FOCUS WORDS

conserve (*verb*) to protect from loss

➞ **Sample Sentence:** Jose and Rachel carefully **conserved** their water as they hiked through the desert.

🗣️ **Turn and Talk:** What are three things you can do to **conserve** water at home?

renewable (*adjective*) able to be replaced

➞ **Sample Sentence:** Nations around the world are investing in **renewable** energy.

🗣️ **Turn and Talk:** Describe what is meant when people talk about “**renewable** resources.” What are some examples?

invest (*verb*) to put money or resources toward something, expecting a future benefit

➞ **Sample Sentence:** Research institutions **invest** a lot of money into programs for recycling, water purification, and renewable energy.

🗣️ **Turn and Talk:** What can young people do to **invest** in their futures?

proceed (*verb*) to move forward

➞ **Sample Sentence:** Since the road was under construction, many signs alerted drivers to “**proceed** with caution.”

🗣️ **Turn and Talk:** Has the school year **proceeded** according to your expectations? Explain.

maximize (*verb*) to increase to the greatest possible amount

➞ **Sample Sentence:** Green technology can help conserve the natural environment and **maximize** resources.

🗣️ **Turn and Talk:** How do you **maximize** the amount of sleep you get on school nights?



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DEBATE THE ISSUE

Pick one of these positions (or create your own).

A

We should **invest** heavily in green technologies.

OR

B

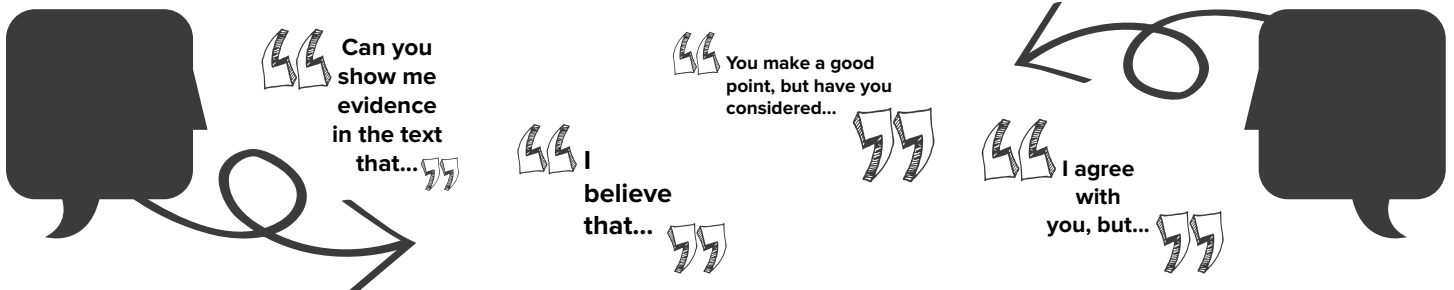
We should **proceed** cautiously with green technologies.

OR

CREATE YOUR OWN

jot down a few notes on how to support your position during a discussion or debate.

Be a strong participant by using phrases like these:



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TAKE A STAND



Support your position with clear reasons and specific examples. Try to use relevant words from the Word Generation list in your response.

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Shahan, Z. (2010, February 28). Europe will exceed 2020 renewable energy target.
<http://cleantecnica.com/2010/02/28/europe-will-exceed-2020-renewable-energy-target/>

Annual Energy Review 2011:
<http://www.eia.gov/totalenergy/data/annual/pdf/sec10.pdf>