

Conservation

Classroom Resources

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“ Unlike conventional R&D, prizes pay for performance, not just the effort. They call attention to important issues. And they open up problems to anyone with a good idea, getting beyond insiders or accredited professionals. ”

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The Best Ideas Money Can Buy

BY MARC GUNTHER

The prize pool for environmental innovation challenges increased twelvefold in the past ten years—and shows no sign of easing up. But does crowd-sourcing solutions pay off for the world as well as for the winners?

SUMMARY QUESTIONS

[worksheet available online](#)

1. The company Edison2 won a \$5 million grand prize for “The Very Light Car.” What was the competition, who organized it, and where did the money come from? (answer: Progressive Automotive X Prize, run by the X Prize Foundation, funded by Progressive Insurance, \$10 million in prize money)
2. Give three historical examples of prizes for scientific innovation. Give three examples of modern environmental innovations resulting from prizes.
3. What is the major obstacle facing the winners of challenges? (answer: scaling up) How have certain challenges overcome this obstacle? (answer: GE backs licensing and startup of winning entries, Smart Gear competition entries are small-scale enough to get funding, and there's an existing market in government agencies.)



“ A 2009 McKinsey and Company report identified 219 prizes worth at least \$100,000, more than 60 of which had debuted since 2000. McKinsey said 80 major prizes are devoted to energy and the environment. ”

DISCUSSION QUESTIONS

[worksheet available online](#)

1. What are the positive aspects of “prizes” for innovation rather than “conventional research and development”? What are the drawbacks?
2. What is your opinion on the big question of the article, “Once the buzz dies down, can prizes generate solutions that scale up to deliver lasting environmental change?” How has G.E. dealt with this issue in their Ecomagination Challenge? How do organizations such as X Prize avoid turning into “the equivalent of a high-school science fair for well-to-do entrepreneurs”? Give two examples from the article to back up your opinion. Do you know of any other examples not from the article to back your opinion?
3. Do you think that prizes are a good idea for some sectors and not others? How do the results from these competitions benefit humanity? Is it necessarily a bad thing if the results from these competitions don’t make it into a market, or is the process valuable in and of its self?
4. What do you think about the author’s assertion that “well-entrenched industries such as the auto industry may resist breakthrough ideas because they’re tied to old ways of doing things”? Do you think that is the same or a different argument than the next sentence, “The automakers, after all, know how to build small, fuel-efficient cars; they haven’t done so to this point except when forced to by the government, because they don’t think consumers will buy them.”
5. What is your reaction to Peter Diamandis’s view of prizes: “Can they change rules and regulation? Can they change a marketplace? Can they change human behavior? We’re going to experiment. We’re going to find out.” What would be your predictions for each question and why?
6. Check out *The Rise of the Prize* short article (follow the link from within the article online). Visit the prize sites to find out their current status.

BUILD YOUR OWN GLOSSARY

- ▶ crowdsourcing
- ▶ smart grid

ADVANCED ACTIVITIES

- 1. The Business of Prizes:** Read the literature cited in the article (1). Visit challenge.gov. Where does this money come from? Does the money flow one way, or does it come back to investors eventually in the form of profit? Compare this model with funding for scientific research projects or industrial R&D.
- 2. Getting from Prize Competitions to Reality:** Research the number of prizes that have been developed into a marketable product, the number that have actually reached the market, and the number that have turned a profit in the market. You can tailor your research to a specific sector or a specific competition series (e.g. Investigate competitions for technology to clean up oil spills – did the technology developed by Elastec Marine go into production? Has it become the industry standard? Or investigate further into the Smart Gear competition. Check out innocentive.com for more ideas). Compare findings across the class – which competitions have lead to profitable products? What characteristics of the competition result in these marketable products? Should market success be an implicit goal of prize competitions, or are conceptual/theoretical advances a good outcome? Are benefits to humanity more important than a profit generating business?
- 3. Society's Resistance to Change:** Who is truly responsible for resisting change in fields such as automobile manufacturing? Is it that the engineers and machinists don't WANT to change (are there psychological underpinnings of this reaction?), is it that upper-level corporate leaders are financially encouraged by other industries to stay the way they are, is it simply market driven and consumer attitudes are what need to change? (Side Activity: watch documentary *Who Killed the Electric Car?* and research the facts behind it on both sides.)



Peter Diamandis, X Prize Chairman and CEO
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