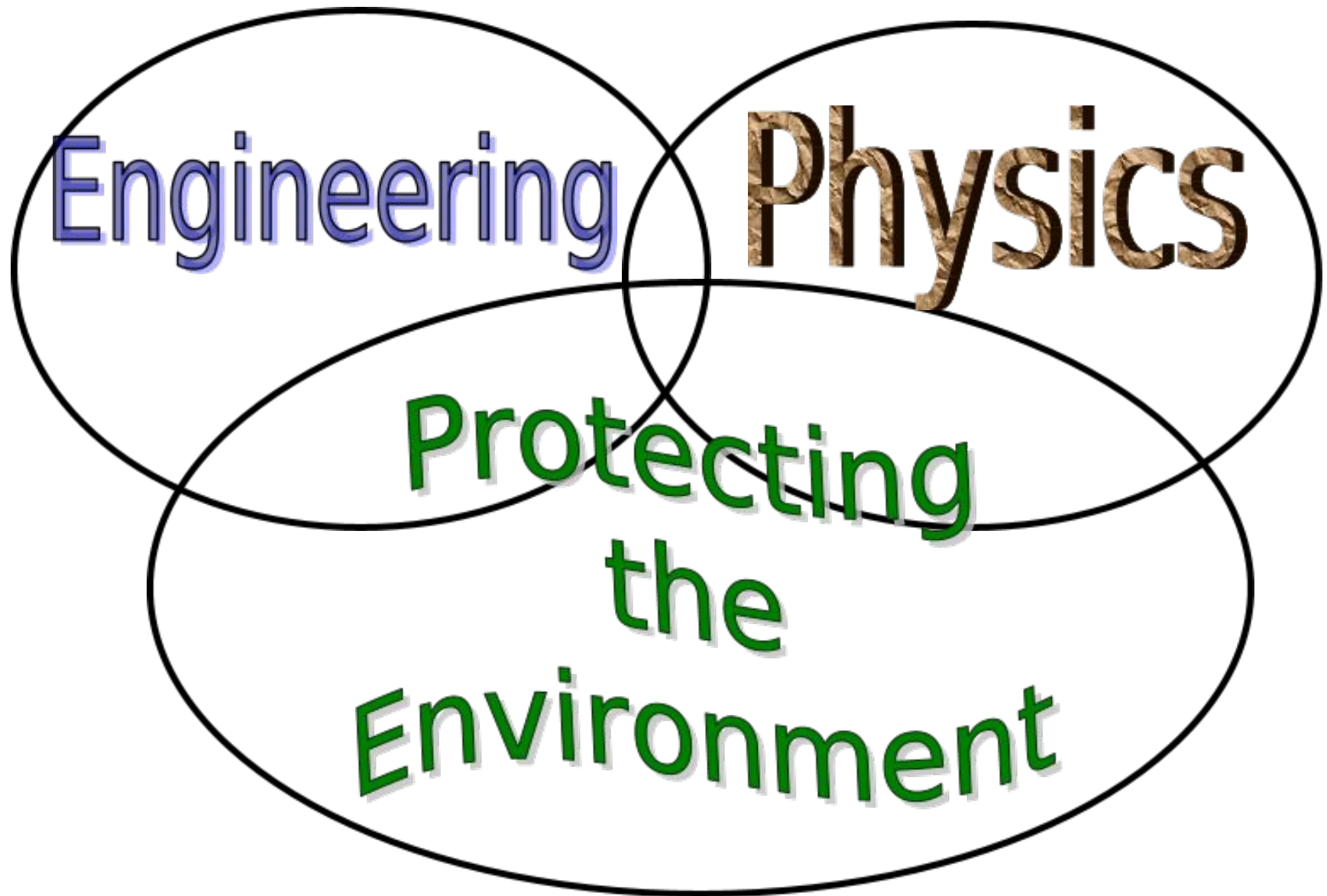


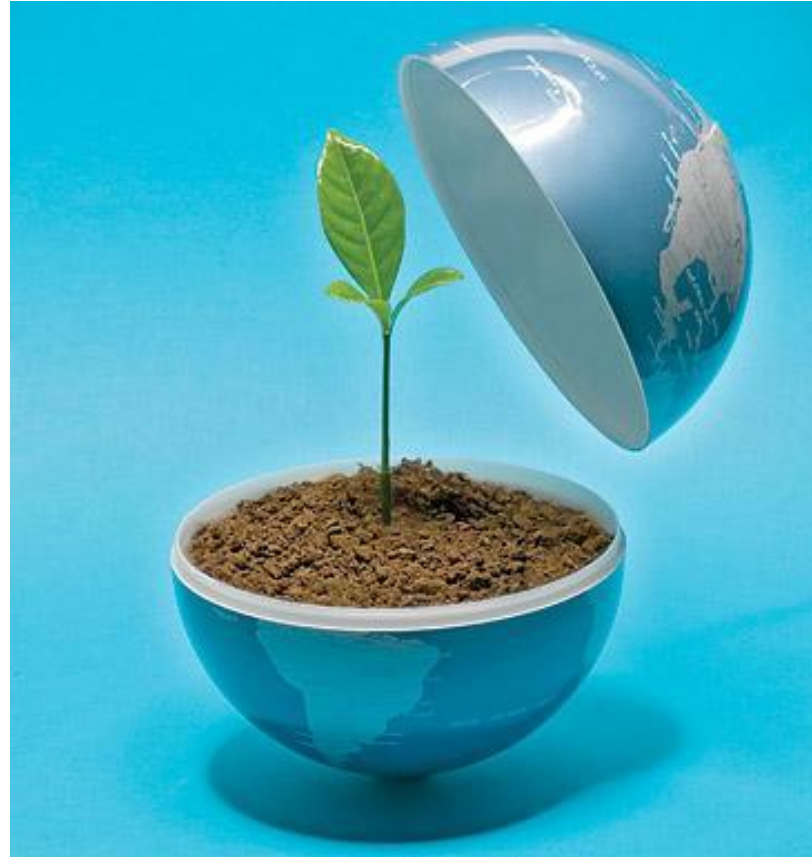
How do you save the penguins in the desert?
Rethink cool.



Save the Penguins



Protecting the Environment



Penguins are Melting

<http://www.youtube.com:80/watch?v=rqUvf9Rxxj4&NR=1>



Innocent Victims: The Penguins

<http://www.youtube.com/watch?v=wCwPHioC660>



Penguin in a Pickle

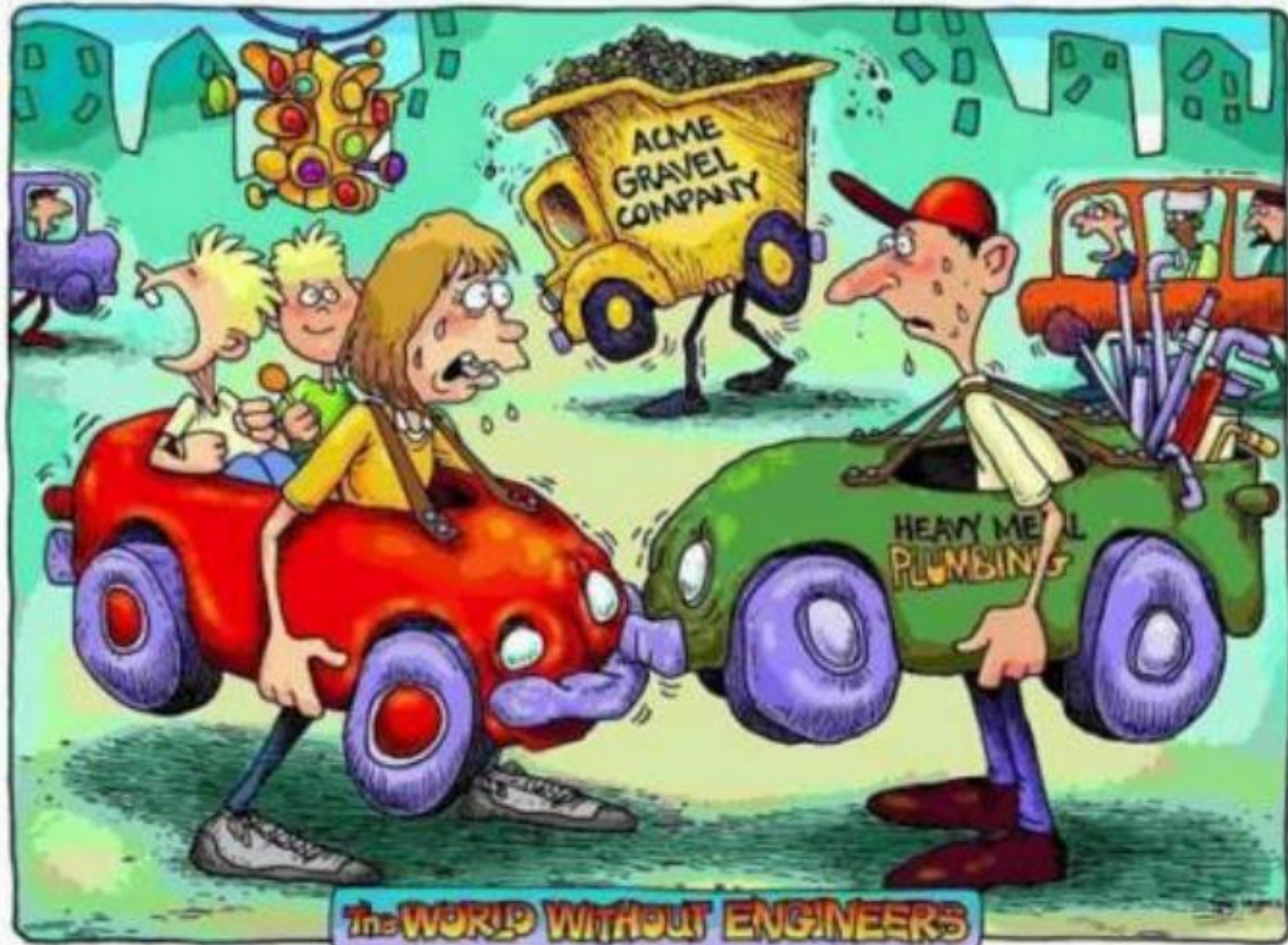
<http://www.youtube.com/watch?v=HO4UBvxE56M>



Engineering



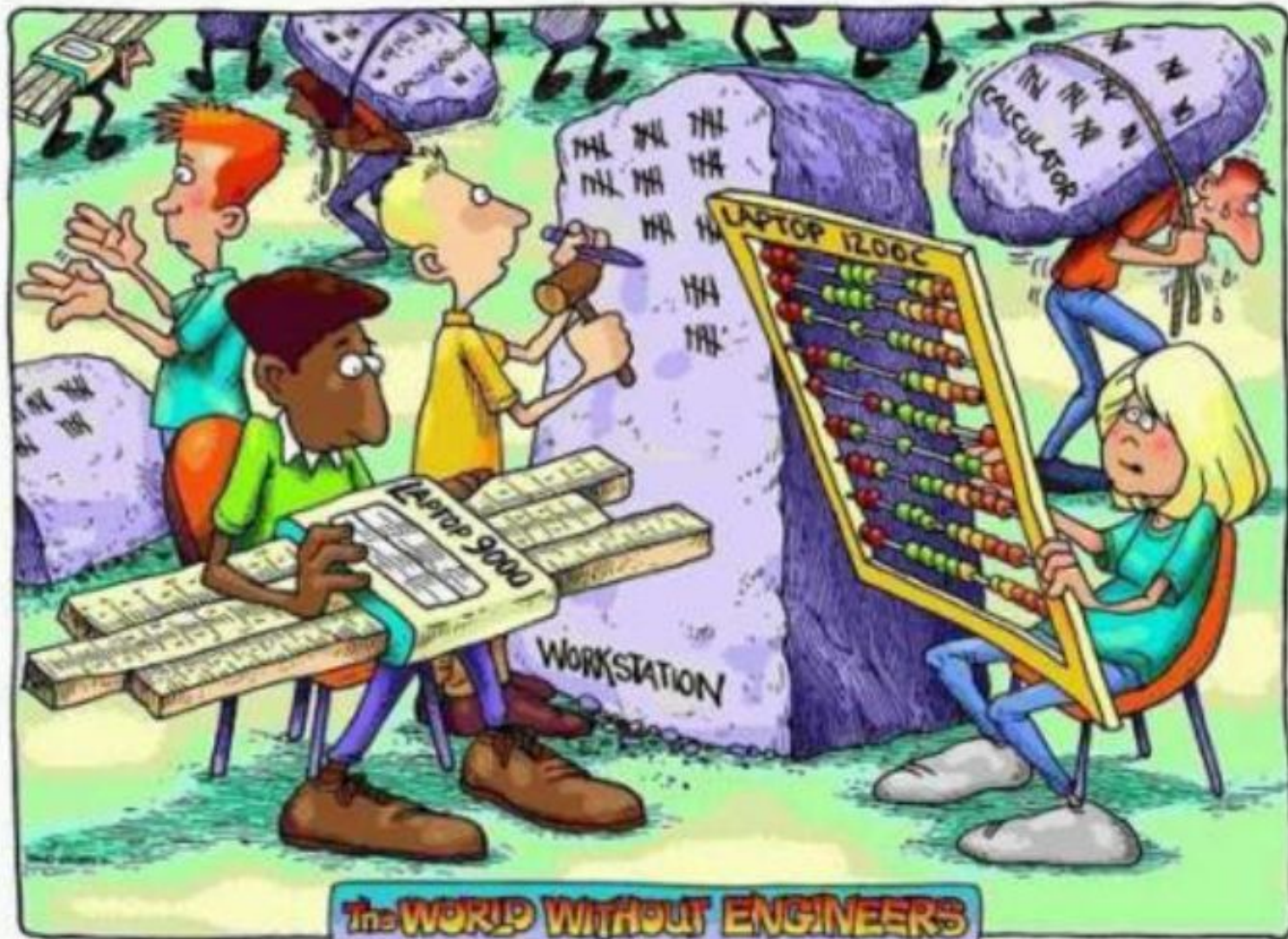
The World Without Engineers



The World Without Engineers



The World Without Engineers



What is Engineering?



The Engineering Design Process

- **Identify the Need**
- **Define the Problem**
- **Brainstorm Ideas**
- **Conduct Research**
- **Develop Design**

Revise Design

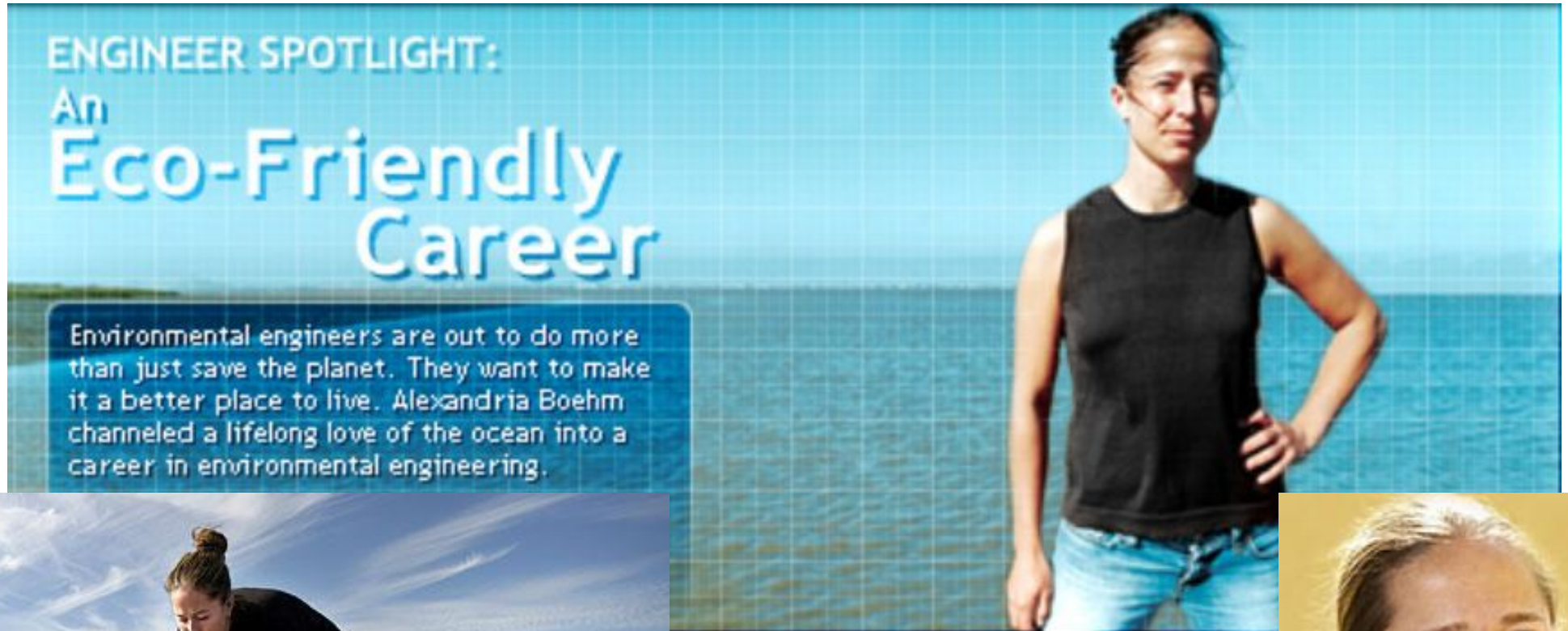
- **Test Design**



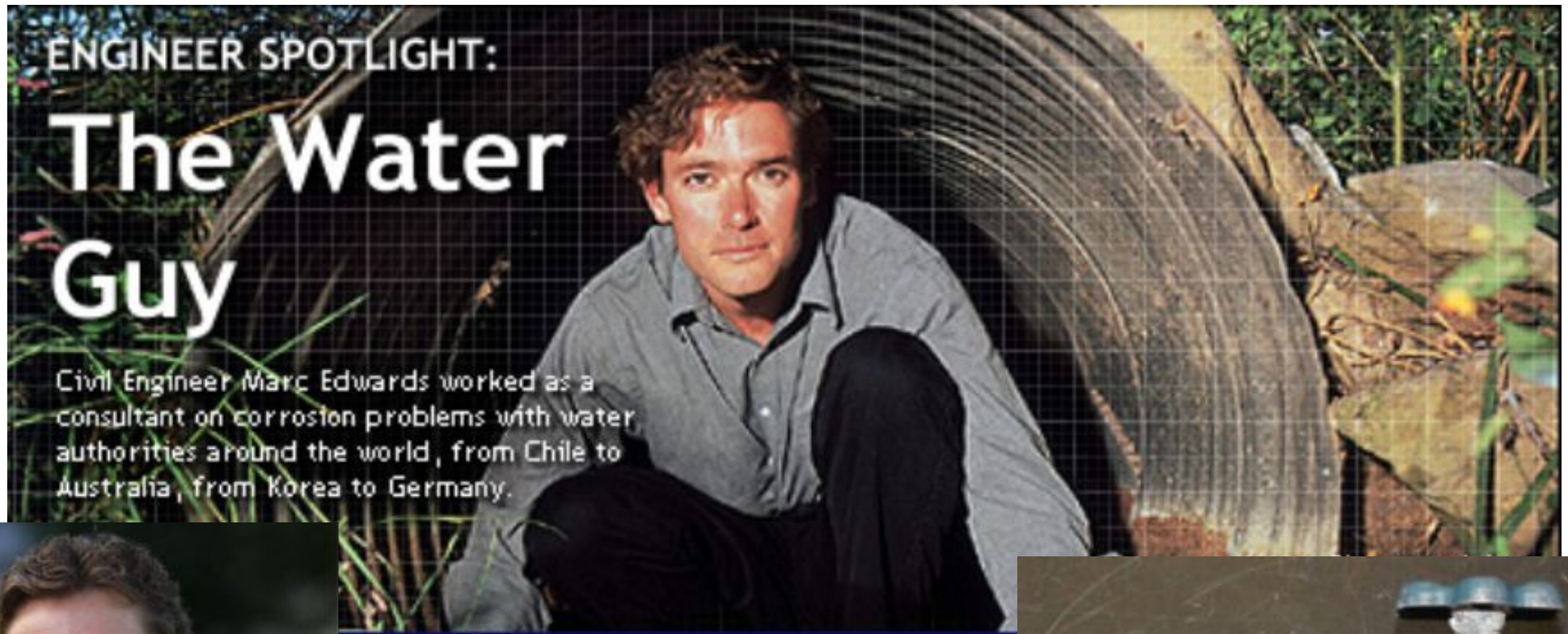
Designing Better Cars



Cleaning Up the Ocean



Plumbing for Safer Drinking Water

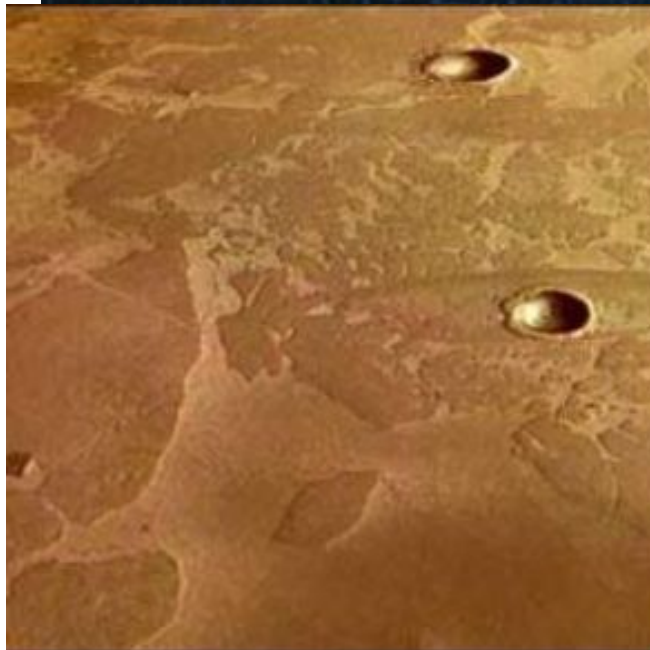


Designing Space Colonies

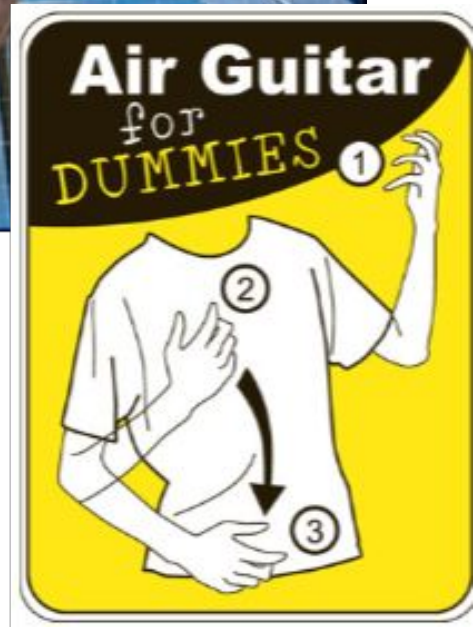
ENGINEER SPOTLIGHT:

**Kimberly
Jones**

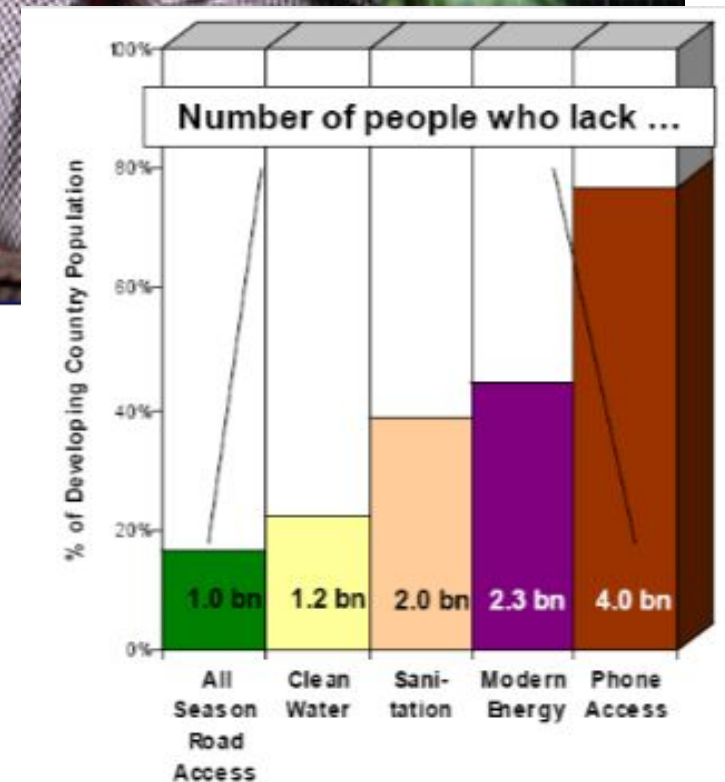
Civil Engineer Kimberly Jones hopes her research may some day help to make living on Mars possible.



A Musical Shirt?



Improving Developing Countries



Control a Computer with Your Mind

ENGINEER SPOTLIGHT:

Mind Games

Washington University's Daniel Moran, middle, hopes his technology will someday lead to smart prosthetics that can be controlled using only the mind.



The image is a composite. The top portion shows three people in a laboratory setting. A man in the center, Daniel Moran, is holding a small white dish and looking at it with a microscope in the background. Two other people, a man and a woman, are looking on. The bottom-left portion is a portrait of Daniel Moran, a man with glasses and a blue shirt. The bottom-right portion is a screenshot of the Space Invaders game, showing a grid of alien invaders at the top and a player's ship at the bottom. The game interface includes a score of 0 and four lives.

Listening for Cancer

ENGINEER SPOTLIGHT:

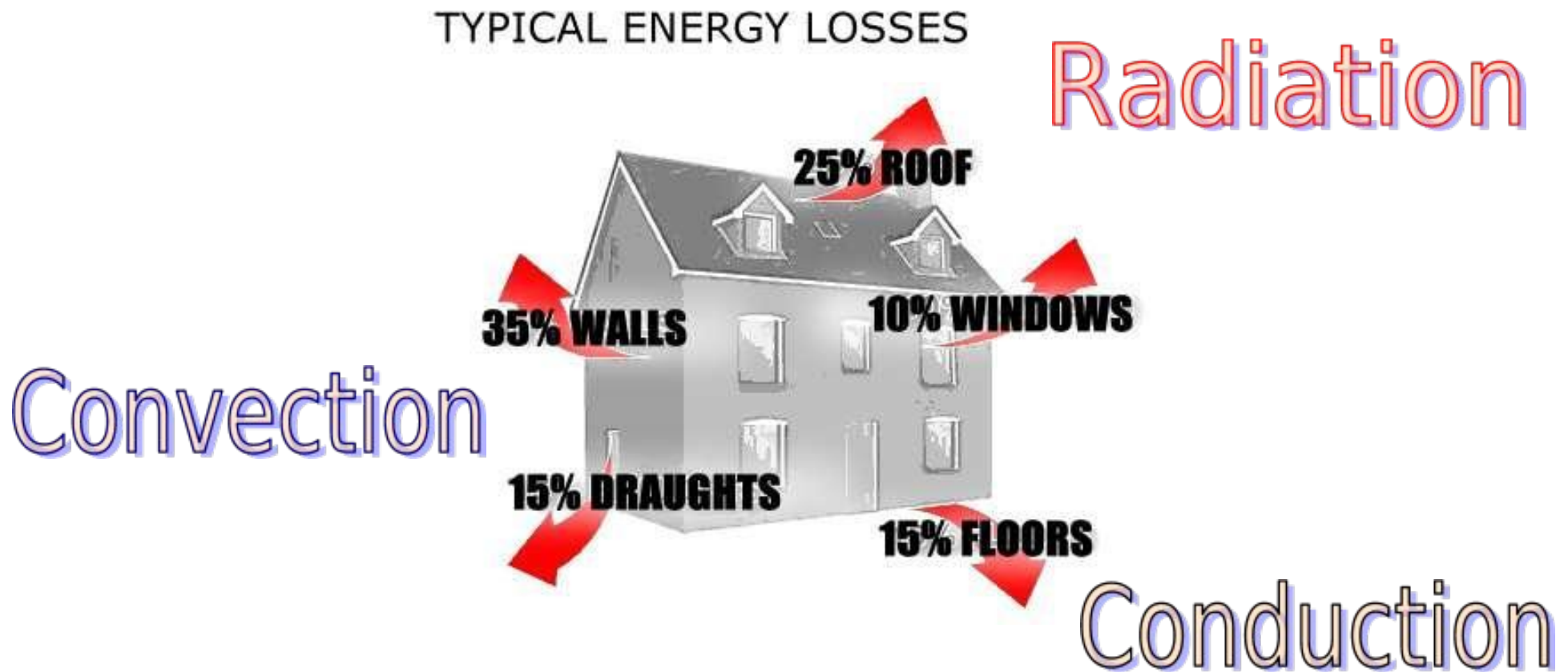
Listening for Cancer's Early Warning

University of Missouri's John Viator works on his photoacoustic detection system—a listening device he's designed to help doctors catch deadly melanoma cells early on.



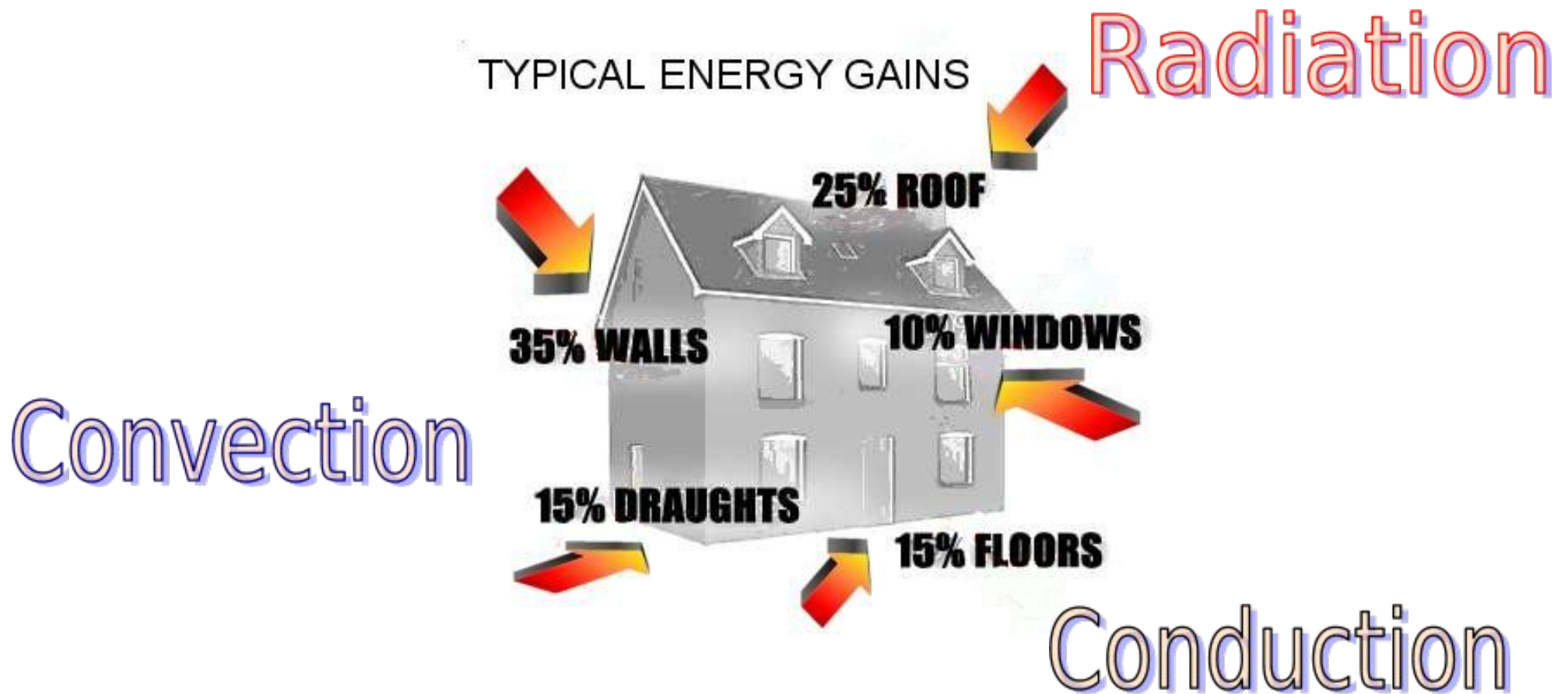
Physics

- In the winter...



Physics

- In the summer...



The more energy used to heat and cool buildings,

- ...the more electricity or fuel (like oil) used.
- Burned fuels (like oil) create carbon dioxide.
- Power plants usually burn coal- which produces carbon dioxide too
- Carbon dioxide is implicated in global warming
- Global warming is not our friend.

So, How Can
We Save the
Penguins?

