

ESA 21: Environmental Science Activities

Capstone Activity
Module 2

Name:

Professor:

Describe in detail the three proposed changes below, list the cost of each and the annual savings, and calculate the payback time in years. Attach all supporting documentation (prices, estimates, calculator runs) to this sheet.

Scenario 1:

Savings/year = \$_____

Cost = \$_____ Payback time = _____ years

Description of change:

Scenario 2:

Savings/year = \$_____

Cost = \$_____ Payback time = _____ years

Description of change:

Scenario 3:

Savings/year = \$_____

Cost = \$_____ Payback time = _____ years

Description of change:

Analysis:

Compare/contrast the three scenarios that you have listed. Do any of them make economic sense to perform? Why or why not? Which of them would be the most feasible, and why?

The previous question examines the feasibility of home improvements solely from an economic standpoint. There is, of course, another perspective. Whenever you heat or cool your home, you are likely using energy derived from the combustion of a fossil fuel, which produces pollutants and contributes greenhouse gases to the atmosphere. The lower your home's energy efficiency, the more energy you will consume, and the more pollution you will generate. With this in mind, would you consider making improvements in your home's efficiency to reduce your energy usage (and therefore release of pollution) even if you did not recoup all of the costs associated with the improvement? Fully explain why or why not.