

Eating your Energy's Worth (Teacher Notes)

(Exploring energy consumption through food)

General Lesson Notes

- **Group interaction.** This activity is designed so that group members discuss predictions and explanations. Encourage this interaction and move around the room to monitor student progress.

Part 1 Notes

- **Original ranking.** Students may have trouble predicting the amount of energy in each food item. Use questioning patterns to assist students with the thought process. Resist giving them the correct answers. Help students think about the factors that influence calorie content.
- **Section #8:** In this section, students are asked to devise a way to determine whether their original ranking is correct. Help students think about using the same exercise to compare each of the foods. This way, students can compare the lengths of time and easily figure out which foods have the most calories.

Part 2 Notes

- **Original ranking.** Again, students are asked to rank objects. This time students are asked to rank appliances based on the rate in which they use energy. Again, resist giving them the correct answers. Help students think about the factors that influence energy use.
- **Section #16:** In this section, students are asked to devise a way to determine whether their original ranking is correct. Help students think about using the same amount of time to compare each of the appliances. This way, students can compare the amount of energy (Whoppers, oranges, etc) and easily figure out which appliance uses energy the fastest.

Additional References

Websites:

- <http://www.exploratorium.edu/theworld/energy/joules.html>

Journal Articles:

- Farenga, Stephen J & Ness, Daniel (2006) Calories, energy, and the food you eat, *Science Scope*, 29, 5, p 50.

Modifying the Energy Calculator:

- The Energy Calculator was created using macros that run using Visual Basic Editor within a Microsoft Excel spreadsheet. You will notice that columns M through S are hidden on the Excel sheet the data and drop-down menu choices are currently stored there. You can view and edit the choices after “unhiding” the columns.
- The calculator can be modified to suit the food preferences and needs of your students by adjusting the data and macros to suit your needs. Please see the following website for a basic explanation of a macro: <http://office.microsoft.com/en->

<http://office.microsoft.com/en-us/assistance/HP052012011033.aspx>. For information on macro editing, please see: <http://office.microsoft.com/en-us/assistance/HP051999451033.aspx> and follow the instructions for accessing the “Microsoft Visual Basic Editor” Help menu.

