

Primary/Elementary Activity: Energy in Food

Background

Food energy is the amount of energy in food that is available for the body to use through digestion. The values for food energy are measured in Calories. One food Calorie is the amount of food energy (heat) that will raise the temperature of one kilogram of water on degree Celsius. The average 4-8 year old child needs 1200-1800 Calories per day and the average 9-12 year old needs 1600-2200 Calories per day, depending on the child's weight and activity level.

Purpose

To explore the amount of energy in different kinds of food.

Procedure

For each group, rank the foods by the amount of energy you think they contain (1-least, 4-most).

____ Cheeseburger ____ Plain Hot Dog on Bun ____ 6 Chicken Nuggets ____ Small Taco	____ Milk ____ Soda ____ Orange Juice ____ Water	____ Banana ____ Large Carrot ____ Cup of Broccoli ____ Slice of Cheese
____ Slice of Pepperoni Pizza ____ Nachos with Cheese ____ PBJ Sandwich ____ Medium French Fries	____ Bowl of Cheerios & Milk ____ Granola Bar ____ Bagel & Butter ____ Sausage Egg & Biscuit	____ 2 Peanut Butter Cups ____ Cup of Ice Cream ____ Bag of Potato Chips ____ Cup of Sunflower Seeds

Conclusions

Answer the following questions in your science journal:

1. Into what forms of energy does your body convert food energy?
2. What happens if your body takes in more food energy than it needs?
3. What happens if your body does not get the food energy it needs?
4. What other things besides energy content do you need to consider when choosing food to eat?

Extensions

- Examine the packages of several foods to determine the amount of food energy they contain.
- Make a list of the plants that can be used for food and for other types of fuel.

260	Sunflower Seeds	580	Sausage/Egg Biscuit	460	Medium French Fries	90	Pepperoni Pizza	105	Banana	135	Milk	360	Cheeseburger
290	Cup of Ice Cream	530	Granola Bar	350	Nachos with Cheese	25	Nachos with Cheese	25	Large Carrot	155	Soda	240	Plain Hot Dog Bun
490	Bag of Potato Chips	280	Bagel & Butter	430	PBJ Sandwich	30	PBJ Sandwich	30	Cup of Broccoli	130	Orange Juice	350	6 Chicken Nuggets
260	Sunflower Seeds	580	Sausage/Egg Biscuit	460	Medium French Fries	90	Pepperoni Pizza	105	Slice of Cheese	0	Water	370	Small Taco