YEAR 07

Physics Homework 01

Section 7Ia **Energy from food**

p. 138 Questions: 1, 2, 3 and 5

1. Why does your body need food?
2. a) How much energy does 100g of hot dog sausage contain?

b) Mark eats two hot dogs (each hot dog is one sausage in a bun). How much energy is in the food he eats?

3. a) Suggest why a teenager needs more energy than a 5-year-old child.

 b) Why do you think a pregnant woman needs more energy from food than a woman who is not pregnant?

5. a) A 5 year old only eats buns. How much would he have to eat each day to get the energy he needs?

 b) If he only ate sausages, hoe much would he have to eat each day?

 c) Why shouldn’t you always one type of food?

1. The body needs food to use its energy **to grow and repair itself and to move and keep warm**.
2. a) By watching the red Table containing information for hot dog sausage, we see that 100 g of hot dog sausage contain **1256 kJ** or **300 kcal** of energy.

b) One hot dog sandwich contains 628 kJ (sausage) + 544 kJ (bun) = 1172 kj for each hot dog. So having two hot dogs, Mark gets the energy of 2 x 1172 kJ = **2344 kJ**.

3. a) **Teenagers need** lots of **energy** and nutrients because they're still growing. ... Young people might **need more** or **less energy** depending on a number of factors, including how physically active they are. % year olds also spent more time on sleeping.

 b) Because the pregnant needs to eat for herself and for the child she bears. In general, the **greater** a person's **mass** , the **more energy** they need.

5. a) According to Figure C, a 5-year old needs energy of about 6000 kJ. If we say that a bun is roughly 500 kJ, then a kid of that age should eat **12 buns**(!) per day to get the energy it needs.

 b)