

National 5 Biology

Respiration

1. What units do we use to measure the amount of energy in food? (1)
2. What does ATP stand for? (1)
3. What is the difference between aerobic and anaerobic respiration? (1)
4. What are the 2 main stages of respiration? (2)
5. Outline the first stage in respiration. (3)
6. Outline the second stage of respiration. (3)
7. Where does each of these stages occur within a cell? (2)
8. What is produced by anaerobic respiration in
 - (a) Animals?
 - (b) Plants?(2)
9. How many molecules of ATP are produced by:
 - (a) Aerobic respiration?
 - (b) Anaerobic respiration in animals?
 - (c) Anaerobic respiration in plants?(3)

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10. The following table shows how much energy is used for a range of activities.

Activity	Energy burned (kJ/min)
Walking	25.0
Jogging	48.3
Sprinting	63.4
Cycling	53.9
Swimming	71.2
Dancing	37.5

- (a) Show the above results on a bar graph. (3)
- (b) If baked beans contain 12 kJ per gram, how many grams would a person need to eat to fuel an hour of cycling? (2)
- (c) If you were to carry out 5 minutes of each of these activities, how much energy would you burn? (2)

Total - 25