



The science of sport



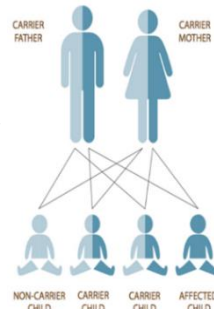
Assessment Question: How does the science behind sport affect athletes' performance?

What you should already know...

-Some of a parent's characteristics are passed down to the offspring – this is called inheritance.

-This is why we often share similar features with our parents, and some conditions are shared (see image).

-Inheritance is genetic, not environmental. E.g. If two blonde-haired parents dye their hair black, this does not mean they will have a black-haired



normal gene
mutated gene



Exercise

-As we exercise, our muscles need more oxygen. So, we breathe quicker, helping our lungs to take in more oxygen.

-Our heart needs to pump blood more quickly to get all of the oxygen around the body. In order to do this, our heart rate increases.

Nature vs Nurture

Environmental factors that affect sporting performance:

- Diet/nutrition
- Training
- Injury
- Age



Inherited factors that affect sporting performance:

- Blood pressure
- Fast/slow twitch muscles affect if you can be better at long distance or short distance sports



Key vocabulary

- Sports science
- Athlete
- Sport psychology
- Factors
- Training
- Injury
- Environmental
- inheritance



Sports psychology

The scientific study of human social behaviour in sport and exercise. It studies how people behave while undertaking sporting activity. There are many things that can affect someone's sporting performance such as below.

