14-BY7 Intentionality and evolution

The definition of evolution, it's like a series of events that one … a whole species of organisms goes through. And it's basically just organisms changing to be able to live in their natural habitat.

It's like, if there are climate changes then the cells realise that they can't really live in that, so they have to adapt to it, and they have to help, have to try and survive and adapt to their new climate or surroundings. Something changes in their habitat and then they realise that change and they have to adapt to that change. If they lived in a hot place and the place became cold, they would react to that change as well and they would feel that as well.

Claim(s) **Evolution is organisms changing so as to be able to live in their natural habitat.**

Cells in the body realise they must adapt to change.

Any challenges to the expressed claim?

Anything to disagree with?

Any clarification needed?

Question(s). **Do cells 'realise' they have to change?**

What is the difference between acquired and inherited characteristics?

Note: It is easy to slip into the language of evolution being the result of an individual's need or *intention* to change. 'Lamarckian inheritance' is the idea that an organism can pass on to its offspring characteristics that it has acquired during its lifetime. So the blacksmith passes on strongly developed muscles, and so on. This is also known as 'heritability of acquired characteristics'. The suggestion that the cells in the body of a living thing 'realise that they have to adapt' has some similarities with Lamarckism in suggesting that an individual in its lifetime changes to meet environmental conditions. In fact, acquired characteristics cannot be passed on because they have no genetic basis. Acquired changes are developed in the course of the life of an individual in the somatic or body cells. This change may be a response to changing environmental conditions and the use or disuse of a body part. Only mutations that are present in the germ cells, the egg and the sperm that come together in sexual reproduction, can be passed on to the offspring.