

Mutation station

Location

Ground floor, All About Us exhibition

In a nutshell

Mutations in a sequence of DNA can result in physical changes to the organism.

What to do

Using the touch screen changes can be made the gene sequence within the DNS of different organisms. You can discover that sometimes a small change can make a big difference.

Time Required

KS3 & KS4 4-5 minutes per student.

What's happening?

Mutations are changes in the DNA sequence; the change can be anything from the substitution of a single base to the duplication of an entire chromosome.

Tiny changes in the DNA sequence can be helpful, harmful or do nothing at all. Some small changes can lead to some rather dramatic physical changes.

This exhibit looks at worms who roll rather than wriggle, humans with dry or sticky ear wax, mice with temperature dependant colouring and fish with stumpy fins. All of these are caused by a single base change in the DNA!



Curriculum links

KS3	<p>Science - Genetics and evolution</p> <ul style="list-style-type: none"> - the variation between species and between individuals of the same species means some organisms compete more successfully, which can drive natural selection - changes in the environment may leave individuals within a species, and some entire species, less well adapted to compete successfully and reproduce, which in turn may lead to extinction <p>English - Reading</p> <ul style="list-style-type: none"> - learning new vocabulary, relating it explicitly to known vocabulary and understanding it with the help of context and dictionaries
KS4	<p>Science - Variation and evolution</p> <ul style="list-style-type: none"> - state that there is usually extensive genetic variation within a population of a species - recall that all variants arise from mutations, and that most have no effect on the phenotype, some influence phenotype and a very few determine phenotype

Relates to:

Workshops & Theme Days	Shows	Trails	Other exhibits
<ul style="list-style-type: none"> • DNA Codebreakers (KS3 lower) • DNA detectives (KS3 & KS4) 	<ul style="list-style-type: none"> • How my body works (KS3) 		<ul style="list-style-type: none"> • Healthy futures • Building proteins • How to build a human • Constructing DNA • How much DNA • Where is DNA?

