

### Task 1

Fill in definitions:

Evolution: changes in heritable traits at the population level

Survival of the fittest: individuals who best adapt and "fit" their environment will survive.

Natural Selection: factors in an environment that "select" which individuals (and their genes) survive or don't.

Variation: differences both genetically and in traits that cause differences in one species form and function

### Task 2

Use the words below to fill in the blanks

## Evolution by Natural selection

In any population there is always variation. These variations are caused by random mutations in the DNA of organisms.

Some of these mutations will help the organism survive better in their habitat long enough to breed and pass on their genes.

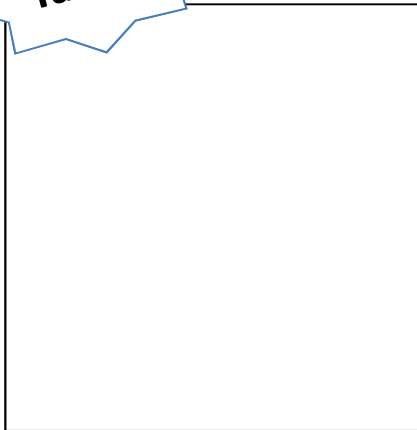
If something happens like a natural disaster some of the population will die and some will survive. The ones that survive will pass on their genes and their traits should survive longer.

### Genes, disease, offspring, mutations, survive, variation

Some of these words can be used twice

### Task 3

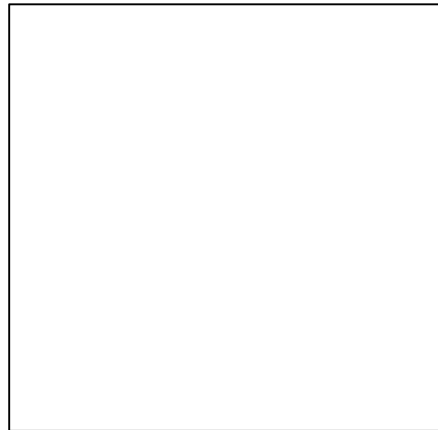
Draw cartoons to show what is happening with this population of giraffes



There is variation amongst the giraffes. Some are very short, some medium sized and some are tall. The trees have branches that can be reached by all giraffes.

What happens to the giraffes?

They eat and generally all survive



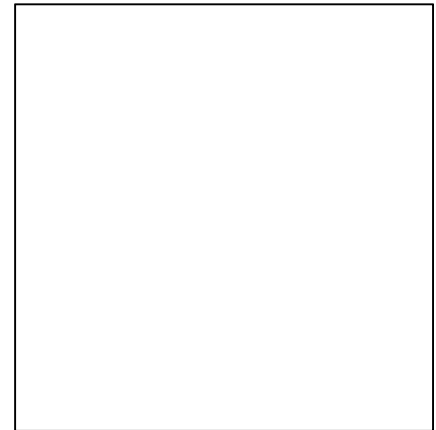
There is a drought and the lower branches of the trees die off and the short giraffes cannot reach the branches higher up?

What will happen to the short giraffes?

They slowly starve to death

What will happen to the tall giraffes?

They continue to eat and live



There are only tall and medium sized giraffes left and they breed together.

What size would their offspring be?

Medium to Tall almost exclusively.

What will happen to the short genes in the population?

Become less and less common

### Task 4

What will happen to the population of giraffes when the water comes back and the trees grow branches all over again?

The population will remain taller than at the beginning but small amounts of shorter giraffes will be born and survive.

### Task 5

At the watering hole lions prey on the tall giraffes they are slower to run away. How will this affect the population of the giraffes?

The taller giraffes will decrease in number resulting in the largest amount being medium in height and small amounts of tall and short giraffes.