

Fact Sheet - Speciation

| Question | Answer | |
|--|---|---|
| Define the term fossil | The remains of an organism from many years ago | |
| Describe four ways fossils can be made | <ul style="list-style-type: none"> • Hard parts which don't decay e.g. bones and shells • Preserved parts from lack of decay e.g. frozen • Imprints such as footprints • When parts of organism turn to stone (petrification) | |
| List five things that can cause extinction | <ul style="list-style-type: none"> • Environmental change • New predators • New disease • More successful competitors • Catastrophic event e.g. volcanoes, asteroids | |
| Why can't scientists be certain about how life began on Earth? (2) | There is a lack of... <ul style="list-style-type: none"> • Valid and • Reliable <p style="text-align: right;">...evidence</p> | |
| Why are there few traces of early life on Earth? (2) | <ul style="list-style-type: none"> • Many early life forms were soft bodied and so few traces remain • Any traces there were have mainly been destroyed by geological activity | |
| What can we learn from fossils? | How much or how little different organisms have changed as life developed on Earth | |
| List the four stages of speciation | Isolation Genetic variation Natural selection Speciation | |
| Describe the four stages of speciation | Stage | Description |
| | Isolation | When one population is separated into two different areas |
| | Genetic variation | Each population has a wide range of characteristics / alleles |
| | Natural selection | The useful characteristics / alleles which enable survival are selected within each population. |
| | Speciation | Populations becomes so different to each other they become separate species |