

Year 6 Science Topic: Inheritance and Evolution

Lesson 2: Inheritance

Inheritance

Last lesson we learned that when living things reproduce, they pass on characteristics or traits to their offspring. This is known as **inheritance** and it occurs in animals and plants. Offspring are not identical copies of their parents because they inherit traits from **both** parents and so this leads to **variation** in a **species**.

Dogs

Dogs are a **species** of animal and within the species, there are many **breeds** of dogs – Poodle, Afghan Hound, Labrador, Dachshund etc... These breeds are different when you look at **physical characteristics** such as their height, body size, coat colour, coat texture, coat length, length of legs, jaw shape and different in their **behaviour and temperament** (personality).

Despite the differences between breeds, scientists believe that they all **evolved** from the 'grey wolf' about 15,000 years ago. This means that the grey wolf is their **common ancestor** if you go back 15,000 years.

Cross Breeding

Cross breeding occurs when two dogs of different **breeds** have offspring together. For example, the puppies of a Poodle and a Labrador are called Labradoodles. You can potentially breed any combination of dog breeds together, as dogs are all one species. The offspring will have a mixture of characteristics (or traits) from both parents.

Selective Breeding

Selective breeding is a process used by humans to develop new animals or plants with **desirable characteristics**. Breeders **select** parents that have desirable traits to reproduce and so have offspring with those desired traits. Humans have selectively bred plants and animals for thousands of years. For example – to grow plants with particular flower shapes and colours or to breed farm animals that produce better quality meat or wool. Labradors are friendly and intelligent. Poodles have fur that does not make people ill with allergies. The Labradoodle was originally bred in an attempt to create a dog with a Labrador temperament and a hypoallergenic poodle coat. The idea was to create guide dogs for people with allergies.

A video to watch:

<https://www.bbc.co.uk/teach/class-clips-video/science-ks1-ks2-what-is-selective-breeding/z6cs382>

Design your own Dog!

Look at the sheet of pictures of different dog breeds. Choose two dogs to cross breed to create a new breed of dog. When choosing a name for your breed, use a mixture of the name of its parents.

Dog breed of the mother

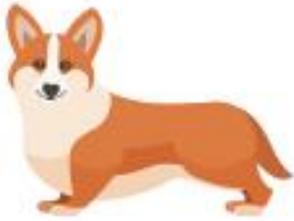
Dog breed of the father

Breed name: _____

Features the new breed has inherited from the mother:

Features the new breed has inherited from the father:

Dog breeds



Welsh Corgi



Siberian Husky



Dachshund



Beagle



Rottweiler



Pug



Akita Inu



Jack Russell Terrier



Pomeranian



Dalmatian



Chihuahua



Golden Retriever



Doberman Pinscher



Saint Bernard



Shih Tzu



Riesenschнауzer