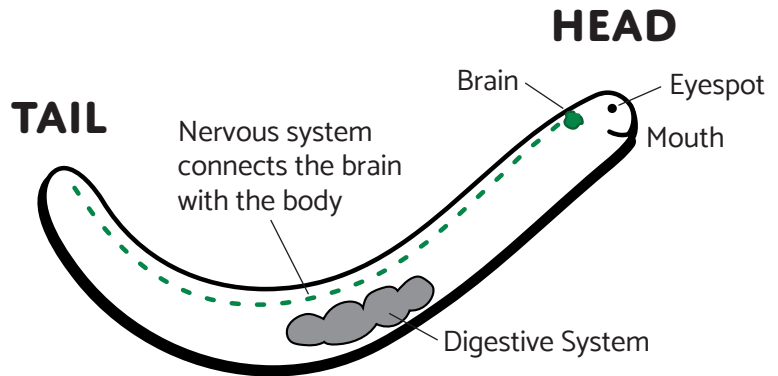


GIFTS FROM WORMS

Worms were our first ancestors to evolve a brain that was wired to the body. These early worms also had the beginnings of a face! They had two eyespots that could detect light, and a mouth that could catch food. These first worms lived in the ocean. The brain evolved together with the face, the nervous system and the stomach. Together, all of these parts make it possible for the worm to hunt for food. The worm is the first hunter! The worm's brain was very small, it was just a few nerve cells, but this humble beginning contained the blueprint for all future brains, including yours!



WHAT DOES YOUR BODY HAVE IN COMMON WITH WIGGLY WORMS?

Humans and worms share a similar body plan. Our heads are at the front of our bodies and our “tails” are at the back. In the middle we both have a digestive system. Thanks to your wiggling ancestors you have a brain that, through a nervous system, is connected to your eyes, your mouth, and your stomach.

1. We all have DNA and are made of cells.

2. We are all made from complex (eukaryotic) cells.

3. We are all multicellular.

4. We all have brains.



LUCA



Eukaryote



Sponge



Worm



Fish



Reptile



Mammal



Primate



Hominid



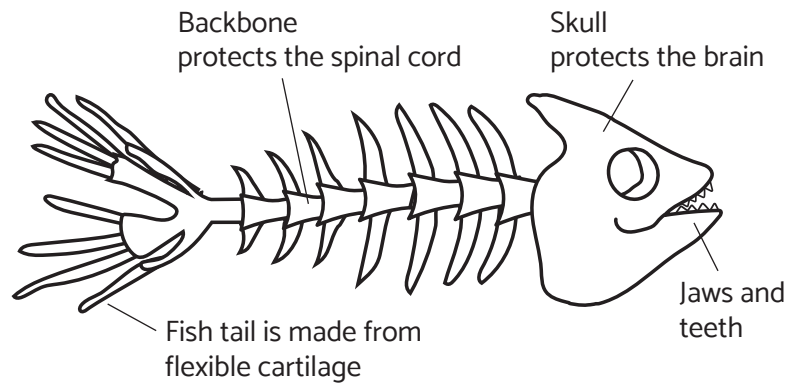
Human



A BRANCH OF THE WORM FAMILY SPLIT OFF AND EVOLVED INTO FISH.

GIFTS FROM FISH

The big upgrade that fish brought to the family of life was the backbone. Fish were the first animals to evolve a strong, flexible spinal column. All animals with backbones are called vertebrates, and all vertebrates are descended from fish. The spinal column is like flexible armor that protects the spinal cord. Muscles and bones bring us the gift of strength and motion. Thanks to your skeletal system you can run, jump and twist your body.



WHAT DOES YOUR BODY HAVE IN COMMON WITH SWIMMING FISH?

From the first fish you received the gift of a strong, flexible backbone. Like fish you also have jaws and teeth. Your eyesight is also a gift from the fish. Although vision started with eyespots in the worm, our ancestor the fish evolved a much more complex visual system.

1. We all have DNA and are made of cells.

2. We are all made from complex (eukaryotic) cells.

3. We are all multicellular.

4. We all have brains.

5. We all have backbones.



LUCA



Eukaryote



Sponge



Worm



Fish



Reptile



Mammal



Primate



Hominid



Human



A BRANCH OF THE FISH FAMILY SPLIT OFF AND EVOLVED INTO REPTILES.