

10 things that make us human



All species on Earth, including humans, are unique. Yet our intelligence and creativity go well beyond those of any other animal. Humans have long communicated through language, created and appreciated art and music, and invented ever more complex tools that have enabled our species to survive and **thrive**.

We owe our creative success to the human brain and its capacity to use symbols to recreate the world mentally. This symbolic thought has also opened our minds to spirituality and a sense of empathy and morality.

1 Our brains

Without doubt, the human **trait** that sets us apart the most from the animal kingdom is our extraordinary brain. Humans don't have the largest brains in the world – those belong to sperm whales. We don't even have the largest brains relative to body size – many birds have brains that make up more than 8% of their body weight, compared to only 2.5% for humans. Yet the human brain, which weighs about three pounds when fully grown, gives us the ability to reason and think on our feet beyond the capabilities of the rest of the animal kingdom. (1) .



2 Walking upright

Humans are unique among the primates in how walking fully upright is our **chief** mode of locomotion. This frees our hands up for using tools. Unfortunately, it also results in changes to the pelvis which, in combination with the large brains of our babies, makes human childbirth unusually dangerous compared with the rest of the animal kingdom.

(2) .



3 Long childhoods

It seems a **puzzling** paradox that for all our brilliance, human babies come into the world so useless and helpless. However, our large heads plus our upright posture mean that a later birth would be even more difficult. Therefore, humans remain in the care of their parents for much longer than other living primates because we require a long time to grow and learn. We have more learned behaviour and skills. Flies don't have to 'learn' how to fly, we don't have to 'learn' how to walk and talk, but (3) .

4 Language

Many species communicate with vocal sounds. But language is a special form of communication. Full language, with rules for combining sounds into words, and words into sentences, probably originated at some point about 50,000 years ago. But we will probably never know precisely when and where language originated. Fossils, DNA evidence, comparisons with other animals, and studies of how languages change over time all provide clues, but spoken language itself leaves **few traces**. It most likely evolved from a simpler form of communication. Chimpanzees use both gestures and vocal calls to communicate status and other complex social information. It is possible that our ancestors also expressed themselves first with gestures or simple words, then (4) .



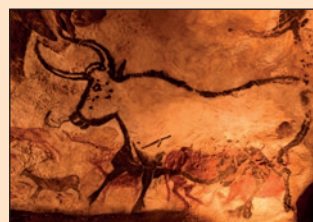
5 Music

No one knows if music was invented before language, after language, or at the same time. Music might have served many **functions** for early humans. It could have been used for courtship, territorial claims, and uniting social groups, much as calls and songs are used by whales, birds, and apes. Whatever its original uses, music is now present in every human culture, implying that (5) .



6 Art

We create art to communicate, depict the material world, and stir emotions. Where did this **urge** to create come from and when did it strike for the first time? European cave paintings of astonishing beauty date back as far as 35,000 years, and (6) .



7 Tools and technology

Life is hard to imagine without tools. We use them every day, and we have for a very long time. Our **ancestors** made the first stone tools at least 2.5 million years ago – long before modern humans evolved. Since then, our ability to invent has taken us far beyond our basic need for food and shelter: (7) .



8 Learning from each other

Our unique brains and the dexterity of our hands make amazing **feats of** tool use possible, but we also rely on the cultural transmission of ideas. Culture is at the heart of being human. We put our heads together, we share ideas, and learn from each other, recognizing a past, a present, and a future. We learn from the past, build on this in the present, and anticipate the future. Without culture, (8) .



9 Life after children

Most animals reproduce until they die, but human females survive long after ceasing reproduction. This might be due to the social **bonds** seen in humans – grandparents can help ensure the success of their families (9) .

10 Clothing and fire

Humans are sometimes called ‘naked apes’ because we look naked compared to our hairier ape cousins. Surprisingly, however, a square inch of human skin on average possesses as many hair-producing follicles as other primates. We just have thinner, shorter, lighter hairs, and we use clothing and fire to keep warm. The development of clothing and our ability to control fire enabled humans to **inhabit** colder parts of the world. Fire also gave us cooking, which some scientists suggest influenced human evolution because cooked foods are easier to chew and digest, (10) .

