

Primates have been laughing for 10m years

Level 2 • Intermediate

tickle (verb)

To move your fingers gently on someone's skin in order to give them a pleasant feeling or to make them laugh

Example: The dog rolled over, waiting for his tummy to be tickled.

1 Warmer

Answer the questions and talk about your answers with another student.

- Are you ticklish?
- Do you know anyone who likes (or hates) to be tickled?
- What makes you laugh?

2 Key words

Match the key words from the article with their meanings. The paragraph number will help you.

evolutionary path
whistle

unique
bonding

emerge
ancestor

trait
primate

acoustic
exhale

trace
origin

- _____ an animal belonging to the same group as humans (title)
- _____ someone who is related to you and lived a long time ago (title)
- _____ a particular quality in someone's character (subtitle)
- _____ to discover the origin of something or how something developed (para 2)
- _____ the place or moment where something begins to exist (para 2)
- _____ the way along which something gradually changes and develops (para 3)
- _____ to appear, or to become recognized (para 4)
- _____ relating to sound and the way people hear things (para 9)
- _____ to breathe out (para 11)
- _____ developing feelings of love or friendship towards other people (para 12)
- _____ not the same as anything or anyone else (para 14)
- _____ to make a tune or musical notes by forcing air through your mouth (para 15)

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Our primate ancestors have been laughing for 10 million years

A study that involved tickling apes suggests laughter is not a uniquely human trait after all

Ian Sample, science correspondent

4 June, 2009

- 1 The first hoots of laughter from an ancient ancestor of humans could be heard at least 10 million years ago, according to the results of a new study.
- 2 Researchers used recordings of apes and babies being tickled to trace the origin of laughter back to the last common ancestor that humans shared with the modern great apes, which include chimpanzees, gorillas and orang-utans.
- 3 The finding challenges the opinion that laughter is a uniquely human trait, suggesting instead that it emerged long before humans split from the evolutionary path that led to our primate cousins, between 10m and 16m years ago.
- 4 "In humans, laughing can be the strongest way of expressing how much we are enjoying ourselves, but it can also be used in other contexts, like making fun of someone," said Marina Davila Ross, a psychologist at Portsmouth University. "I was interested in whether laughing emerged earlier on than we (humans) did."
- 5 Davila Ross travelled to seven zoos around Europe and visited a wildlife reserve in Sabah, Borneo, to record baby and juvenile apes while their caretakers tickled them. Great apes are known to make noises that are similar to laughter when they are excited and while they are playing with each other.
- 6 "The caretakers play with the apes all the time and tickling is a very important part of that. There are certain body parts that are more ticklish than others, depending on the individual ape. Some were tickled on their necks or armpits, while others offered their feet to be tickled," said Davila Ross.
- 7 In total, Davila Ross collected recordings of laughter from 21 chimps, gorillas, orang-utans and bonobos and added recordings of three babies that were tickled to make them laugh.
- 8 To analyze the recordings, the team put them into a computer program. Remarkably, the laughter recorded from different primates linked together in a way that matched the evolutionary tree linking all of the species to one common ancestor.
- 9 "Our evolutionary tree based on these acoustic recordings alone showed that humans were closest to chimps and bonobos, but furthest from orang-utans, with gorillas somewhere in the middle," said Davila Ross. "What this shows is strong evidence to suggest that laughing comes from a common primate ancestor."
- 10 Writing in the journal *Current Biology*, the researchers describe how the earliest laughter-like sounds were shorter and noisier, but with time became longer and clearer as the great apes evolved.
- 11 Human laughter sounds very different from the noises produced by great apes. Humans laugh as they exhale, but chimps can laugh as they breathe in as well. The human laugh is also produced by more regular vibrations of the vocal cords than in any of the apes.
- 12 Few studies have been carried out into the role of laughter in primates, but at least one study has suggested that it is important in expressing excitement. Laughing might also have been important for bonding within groups of animals.
- 13 "The ways human and ape laughter is produced are as different as the sound. The ape laughter is produced during both inward and outward breaths, while humans turn an outward breath into a 'ha-ha' sound," said Robert Provine, a psychologist and neuroscientist at the University of Maryland and author of the book *Laughter: A Scientific Investigation*. "The simplicity of laughter provides a valuable tool with which to trace vocal evolution," he added.

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14 In March 2009, researchers reported that a chimp at a zoo in Sweden had started to challenge scientists' views about the unique nature of human behaviour. The 31-year-old male, Santino, regularly prepared piles of rocks while the zoo was closed and then threw them at visitors when the gates opened.

15 Zookeepers at the Smithsonian National Zoo in Washington DC have reported another human trait in one of its apes, Bonnie, a 30-year-old orang-utan. Bonnie has learned to whistle by copying the zookeepers.

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3 Comprehension check

Match the sentence halves to summarize the information from the article.

- | | |
|--|---|
| 1. According to the results of the study, laughter ... | ... when they are excited. |
| 2. Laughter has been ... | ... the laughter of babies. |
| 3. Laughter existed when humans and apes ... | ... recorded laughing. |
| 4. Humans laugh ... | ... live in captivity. |
| 5. Apes laugh ... | ... had a common ancestor. |
| 6. The apes recorded for the study ... | ... is not only a human characteristic. |
| 7. 21 apes were ... | ... feet to be tickled. |
| 8. The laughter was compared to ... | ... when they breathe out. |
| 9. Tickling the apes is part of ... | ... around for millions of years. |
| 10. Apes often present their ... | ... a zookeeper's job. |

4 Language: Phrases

Match the halves of the phrases and check your answers by finding them in the article. Then write your own example sentences for at least four of the phrases.

- | | |
|-----------------|-------------------|
| 1. a hoot | years ago |
| 2. 10 million | human trait |
| 3. a uniquely | the recordings |
| 4. making fun | scientists' views |
| 5. analyze | tool |
| 6. one common | of someone |
| 7. a valuable | of laughter |
| 8. to challenge | ancestor |

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KEY

1 Key words

1. primate
2. ancestor
3. trait
4. trace
5. origin
6. evolutionary path
7. emerge
8. acoustic
9. exhale
10. bonding
11. unique
12. whistle

3 Comprehension check

1. According to the results of the study laughter is not only a human characteristic.
2. Laughter has been around for millions of years.
3. Laughter existed when humans and apes had a common ancestor.
4. Humans laugh when they breathe out.
5. Apes laugh when they are excited.
6. The apes recorded for the study live in captivity.
7. 21 apes were recorded laughing.
8. The laughter was compared to the laughter of babies.
9. Tickling the apes is part of a zookeeper's job.
10. Apes often present their feet to be tickled.

4 Language: Phrases

1. a hoot of laughter
2. 10 million years ago
3. a uniquely human trait
4. making fun of someone
5. analyze the recordings
6. one common ancestor
7. a valuable tool
8. to challenge scientists' views

Teacher's notes

You can read the other two ape stories mentioned in the article here:

<http://www.guardian.co.uk/science/2009/mar/09/chimp-zoo-stones-science>

<http://nationalzoo.si.edu/Publications/ZooGoer/2009/1/BrainyBonnie.cfm>

And here you can watch a short video report about an orang-utan who escaped from her cage in an Australian zoo:

<http://www.youtube.com/watch?v=g4bwp90dOTU>

<http://www.guardian.co.uk/world/2009/may/10/adelaide-zoo-orang-utan-escape>