

CAM 19 - TEST 2 - PART 4

Tardigrades

DICTATION

For my 1. _____ on 2. _____, I chose to study 3. _____. These are 4. _____ — or to be more 5. _____ — near-6. _____ animals. There are well over a thousand 7. _____ 8. _____ of these tiny animals, which 9. _____ to the 10. _____ Tardigrada. Most 11. _____ 12. _____ in 13. _____ from 0.05 to 1 millimetre, though the largest 14. _____ can grow to be 1.2 millimetres in 15. _____. They are also sometimes called 'water bears': 'water' because that's where they 16. _____ best, and 'bear' because of the way they move. 'Moss 17. _____' is another name for tardigrades because of the way they look when 18. _____ from the 19. _____. They were first 20. _____ in Germany in 1773 by Johann Goeze, who 21. _____ Tardigrada.

As I say, there are many 22. _____ species of tardigrade — too many to 23. _____ here — but, generally speaking, the different species 24. _____ similar physical 25. _____. They

have a **26.** _____ which is **27.** _____, and also **28.** _____ — a bit like a **29.** _____ — and the body **30.** _____ four **31.** _____. Each **32.** _____ has a pair of legs, at the end of which are between four and eight **33.** _____ **34.** _____. I should also say that some **35.** _____ don't have any **36.** _____.: what they have are **37.** _____, and these work by **38.** _____ of **39.** _____. They **40.** _____ the **41.** _____ to **42.** _____ to surfaces or to **43.** _____ its **44.** _____. Within the body, there are no **45.** _____, or any **46.** _____ for **47.** _____ at all. Instead, **48.** _____ and also blood are **49.** _____ in a **50.** _____ that **51.** _____ of the body.

As far as the tardigrade's **52.** _____ is **53.** _____, the best way I can **54.** _____ this is that it looks **55.** _____ **56.** _____ — a bit **57.** _____ even — though many of the websites I looked at **58.** _____ its **59.** _____ as cute, which isn't exactly very **60.** _____. The tardigrade's **61.** _____ is a kind of **62.** _____ that can open **63.** _____ to **64.** _____ teeth-like **65.** _____ known as 'stylets'. These are **66.** _____ enough to **67.** _____ plant or animal cells.

So, where are tardigrades **68.** _____? Well, they live in every part of the world, in a **69.** _____ of **70.** _____.: most **71.** _____, on the **72.** _____ of a lake, or on many **73.** _____ of plants or in very **74.** _____ environments. There's been some interesting **75.** _____ which has **76.** _____ that tardigrades are **77.** _____ of **78.** _____ **79.** _____ and very high **80.** _____, and they're also able to **81.** _____ temperatures as low as **82.** _____ -200 **83.** _____ **84.** _____, or highs of more than 148 degrees centigrade, which is **85.** _____ hot.

It has been said that tardigrades could **86.** _____ long after **87.** _____ have been **88.** _____, even in the event of an **89.** _____ hitting the **90.** _____. If **91.** _____ become too **92.** _____ and tardigrades are **93.** _____ of **94.** _____, they **95.** _____ a **96.** _____ called cryptobiosis. They **97.** _____ a little ball, called a tun — that's T-U-N — by **98.** _____ their **99.** _____ and legs, and their **100.** _____ drops to less than one percent of normal levels. They can stay in this **101.** _____ for decades, and if **102.** _____ to water, then they will **103.** _____ to life in a **104.** _____ of a few hours. While in this state of **105.** _____, tardigrades **106.** _____ a **107.** _____ that **108.** _____ their DNA. In 2016, scientists **109.** _____ two tardigrades that had been **110.** _____

_____ for more than 30 years. There was a **111.** _____ that, in 1948, a 120-year-old tun
was **112.** _____, but this **113.** _____ has never been **114.** _____. There are **115.**
_____ several tests **116.** _____ in **117.** _____, to **118.** _____ how long
tardigrades might be able to **119.** _____ there. I believe the **120.** _____ **121.** _____ is
10 days.

So, erm, moving on. **122.** _____ their diet, tardigrades **123.** _____ liquids **124.** _____
survive. Although they have **125.** _____, they don't use these for **126.** _____. They **127.**
_____ the juices from **128.** _____, or **129.** _____ **130.** _____ from **131.**
_____, but some species **132.** _____ other tardigrades, from other species or within their
own. I **133.** _____ this isn't **134.** _____, given that tardigrades are **135.** _____ **136.**
_____ of liquid and are **137.** _____ with a type of **138.** _____.

Finally, I'd like to mention the **139.** _____ **140.** _____ of tardigrades. It is **141.** _____
that they have been in **142.** _____ for **143.** _____ half a billion years and, in that time, they
have **144.** _____ five **145.** _____ **146.** _____. So, it will **147.** _____ come as
no **148.** _____ to you, that tardigrades have not been **149.** _____ by the International Union

for Conservation of Nature and are not on any **150.** _____ list. Some **151.** _____ have **152.** _____ them as **153.** _____.

Does anyone have any questions they'd like to ask?