

## ***Soiliversity Challenge***

### **Supporting resources:**

- [Anagram and picture round slides](#)
- [Template answer sheet](#)

### **Notes for the host:**

- We recommend teams of 5-7 people
- First, teams need to think of a soil related team name.
- **Red** = the correct answer
- **Blue** = a clue!

1. Based on the most recent science evidence, what proportion of earth's species live in the soil?
  - a. 19%
  - b. 39%
  - c. **59%**
    - i. Soil estimated to be home to 90% of world's fungi, 85% of plants and more than 50% of bacteria,
  - d. 79%
2. Soil texture can be divided into clays silts and sands, but what is the perfect mix of all three that sits in the middle of the soil triangle called?
  - a. **Loam**
    - i. No clue here
3. Which famous 19<sup>th</sup> Century British scientist wrote his final book on "The Formation of Vegetable Mould, through the Actions of Worms"
  - a. **Charles Darwin**
    - i. This writer admitted in a letter that 'My whole soul is absorbed with worms ' but in we should remember that worms themselves 'have much bigger souls than anyone would suppose'
4. How many earthworms does the average mole need to eat in a day in order to survive?
  - a. 10
  - b. **20**

- i. This may not seem like lots but remembering moles weigh about 80g this is about half their body weight
  - c. 50
  - d. 100
  
- 5. What will be the most common type of soil in a coniferous forest?
  - a. Brown Earth
  - b. Podzols
    - i. have an acidic humus from coniferous leaves and are likely to have an iron pan, due to the snow melt in many coniferous forest areas.
  - c. Gley
  
- 6. Which Irish writer wrote the inspiring poem about soil called 'digging'?
  - a. Seamus Heaney
    - i. Its not that inspiring but there aren't many poems that mention soil.
  
- 7. How many soil types are there in the UK?
  - a. 447
  - b. 547
  - c. 647
  - d. 747 – bonus point if you get it exactly, none point to the nearest 100?
    - i. No extra points for naming these
  
- 8. How many litres of water do UK soil store? Closest answer wins
  - a. 130 trillion litres
    - i. As a clue we're looking for an answer in trillion litres - More than all the rivers and lakes combined
  
- 9. How do earthworms breathe?
  - a. Through their mouth
  - b. Through their nose
  - c. Through their skin
  - d. Through their anus
    - i. We have not yet reached the most graphic earthworm question of the evening
  
- 10. As you may know the largest single organism on the planet is not a blue whale but a fungus living in the soil that covers around 3.7 square miles, but in what country is it located?
  - a. USA
    - i. Oregon's blue mountains- Honey Mushroom aka The Humongous Fungus
  
- 11. How long does the typical earthworms mating session last?
  - a. 10 seconds
  - b. Between 1 and 10 minutes
  - c. up to an hour

- d. **between 1 and 3 hours**
      - i. Earthworms are simultaneous hermaphrodites so both partners will be involved in both aspects of sex- no more detail necessary
12. Clinical studies have revealed daily gardening can reduce the risk of what by up to 36%?
- a. Autoimmune Diseases
  - b. Arthritis
  - c. **Dementia**
  - d. Diabetes
13. 75% is the figure for what?
- a. **...of commonly used antibiotics come from soil**
  - b. ...of the world's food that comes from soil.
  - c. ...of the precious topsoil is likely to be at risk by 2050
    - i. **This is the last on percentages**
14. How many ministers have there been for the Environment, Food and Rural Affairs since the SSA started in 2017?
- i. **We're looking for the Secretary of state for the whole of Defra, rather than the farming minister**
  - b. **Only 6 (in 7 years)**
    - i. Michael Gove, Theresa Villiers, George Eustice, Ranil Jayawardena, Therese Coffey and Steve Barclay
15. We're going to put up a few anagrams before the picture round. Each are government agencies operating around the subject of agriculture – can you work them out?
- 1. Contravening enemy = **Environment Agency**
  - 2. Stands for "go and decay" = **Food Standards Agency**
  - 3. A masterly repugnancy = **Rural Payments Agency**
16. Finishing on a picture round – this is going to be quick fire- we have got a presentation of famous worms - you're going to see them up on the screen for a few seconds, and what we're looking for is the title of the book or film it comes from, or the name of the worm, or both for a bonus point
- a. Jeff- Men in black II
    - i. **Known for eating subway trains**
  - b. James and the Giant peach – 'Earthworm'
    - i. **Blind Scottish-accented friend**
  - c. Dune- 'Sandworm'/'Shai-Hulud'
    - i. **This one lives on the desert planet Arrakis**

- d. Lowly Worm by Richard Scarry
  - i. American Children's books- His best friend is Huckle Cat, he lives in Busytown, and he drives an apple-shaped
- e. Graboid - Tremors
  - i. 1990 comedy horror film starring Kevin Bacon
- f. Mr Men- Walter the worm
  - i. Features in a series of children's books.. but he also has his own book
- g. Sarlacc - return. of the jedi
  - i. As you will see there's lots of sci-fi – if you make a guess you might just be right – this from 1983 film – the third in the series
- h. Bookworm- Toystory (3)
  - i. Keeps a library of manuals in this film
- i. Alien – Chestbursters
  - i. This is why we left the quiz till after dinner- this worm is know as a Xenomorph larvae, you can give the common name
- j. Two from Adventure time- King worm and Shelby
  - i. American TV show following the quests of Finn and Jake

Tie break question- first to shout tardigrade wins- this is open to anyone from your team:

- There has been a lot in the news recently about water pollution from farmers- but what is the longest river in the UK?
  - **Severn**
- “Flastaff” is a character in three of Shakespeare's plays, but also a variety of what British produce?
  - If clue- wheat, potato, apple (**apple**)