The Guardian

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Four reasons trees are more like humans than you think

Level 3: Advanced

1 Warmer

a. Discuss the following questions in pairs.

- What do you already know about how trees live and survive in forests?
- Do you think trees can interact with one another in any way? Why or why not?
- In what ways do you think humans could be more similar to trees than we generally assume?

2 Key words

a. Find the words in the article. Then match them to the definitions

taxonomist	fungi	nemeses	saplings
array	girth	arboreal	thrive
felled	inextricably	partition	wafting
audible	labyrinth	pheromones	
breach	sloughed	marauders	

1. a person whose job is to classify living organisms into groups based on shared characteristics _____
2. very young trees that have recently begun to grow _____
3. the measurement around something's middle or width; its circumference _____
4. living or occurring in trees; related to trees _____
5. a confusing and complicated network of paths or connections _____
6. cut down a tree, usually using tools or machinery _____
7. a chemical message released into the air by an organism to influence the behaviour of others of the same species _____
8. damage caused by something breaking through a barrier or surface _____
9. sending through the air gently in a current of air _____

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10. a group of things, usually of the same type, arranged or displayed together _____
11. capable of being heard _____
12. removed from the surface in thin layers or pieces, often as part of a natural shedding process, e.g. dead skin _____
13. live and grow successfully; be strong and healthy _____
14. creatures or people who attack a place _____
15. a type of organism that includes mushrooms, moulds and yeasts, often living in soil or on decaying material (plural) _____
16. opponents or enemies, especially ones who consistently challenge or defeat someone or something _____
17. formed in a way that cannot be separated or undone; closely and permanently connected _____
18. the act of dividing something into separate parts or sections _____

b. Complete the sentences with words from the previous activity in the correct form.

1. The castle walls showed a clear _____ where part of the stone barrier had collapsed.
2. Several hikers got lost in the forest's _____ of narrow, twisting paths.
3. The young oak _____ were protected by a fence to stop deer from eating them.
4. The sound was barely _____ over the noise of the wind in the trees.
5. A rise in social media platforms is _____ linked to the decline in traditional journalism.
6. There are gorgeous aromas _____ from the kitchen!

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7. Only a(n) _____ would instantly recognise the subtle differences between the two types of mouse species.
8. Even after the tree was _____, its huge trunk took days to cut into pieces.
9. The ancient redwood tree had an incredible _____, wider than a small car.
10. It is virtually impossible for any plant species to _____ in the desert.
11. The bark _____ off in strips, revealing fresh growth underneath
12. The invading _____ stormed the village and took everything of value.
13. In mythology, heroes often face their greatest _____ in the final battle
14. The wood is home to different types of _____, many of which are poisonous.
15. The forest canopy creates a perfect environment for _____ creatures such as squirrels.
16. Scientists discovered a(n) _____ of minerals in the soil sample.
17. Females in the herd release _____ to attract the male elephants.
18. The government's new policy would _____ the region into several smaller administrative areas.

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Ecologist and natural history presenter Mike Dilger shares four remarkable facts on the inner workings of trees, from their ability to share resources to the existence of their very own social networks

Mike Dilger

21 October, 2025

1 When the great 18th-century taxonomist Carl Linnaeus introduced his classification system of the natural world, his first act was to partition animals and plants into separate kingdoms due to their clear and obvious differences. But delve a little deeper into the world of dendrology (the scientific study of trees) and it appears we have far more in common with our beloved trees than we think.

2 **Trees can warn one another of danger**

The dictionary I have at home describes "language" as "a structured system of communication used by humans to convey meaning". But while trees don't produce audible sounds, they are still capable of communicating an array of important messages for the good of their own community.

3 Acacia trees in Africa are able to produce ethene gas to warn other trees close by that their leaves are under attack from hungry giraffes. When they detect this gas, the neighbouring trees start releasing distasteful chemicals into their own leaves as protection from these long-necked marauders.

4 Closer to home, elms and pines under attack from caterpillars are capable of wafting species-specific pheromones into the air to attract parasitic wasps. Representing the caterpillars' nemeses, these wasps lay eggs inside the caterpillars, which upon hatching proceed to eat their prey from the inside out. This calculated strategy is not only highly unpleasant for the caterpillars but hugely beneficial for the trees own welfare.

5 **Trees have their own 'social network'**

The internet has become the primary way that humans exchange information. But with the help of a vast underground labyrinth of fungi, trees are able to tap into an astonishing network where resources are ready and waiting to be shared. And they seem to fare much better when inextricably and intimately linked to one another by their root systems.

6 In return for a regular supply of photosynthetically produced sugars from the tree, some fungi will not only provide access to water, via their massive underground networks, but also increase the quantity of essential nutrients, such as nitrogen and phosphorus, available to the tree, helping it to stay in good health.

7 By aiding the trees to filter out heavy metals and ward off potentially harmful microorganisms, these smooth fungal operators can also help convey messages between trees, much like Facebook or X are used to spread the word with issues concerning us humans. For trees, stress signals are relayed and resources shared – playing an important role in helping them survive and thrive.

8 **Mother trees look after their young**

Mothers can be considered both an authoritative and yet reassuring presence in our early years, and the same can be said for tree saplings. Unless carried off by birds or mammals, most acorns and beech nuts, for example, will sprout where they fall, which will invariably be directly under the boughs of their mighty mothers.

9 In the saplings' early years, slow growth is the key to arboreal longevity, so the matriarch keeps her offspring in the shade. Under beech trees, for example, only 3 per cent of the light is thought to reach the forest floor, ensuring saplings don't grow too rapidly.

10 The mother tree will also be in contact with her saplings via their connected root systems underground. This sharing of crucial resources is a way of helping the seedlings survive. The saplings must then play a waiting game, hoping when their mother finally dies, or is felled in a storm, they will be in pole position to plug that gap in the canopy.

11 **Their ageing process mimics ours**

While humans have skin, trees have bark – and both fulfil a remarkably similar function. Representing a physical barrier, these external layers primarily protect the delicate inner workings from an aggressive world of pathogens.

12 While we shed skin daily to keep our outer organ in the best possible shape, the same occurs with bark being constantly sloughed to protect trees that are in an active growth phase. But age always catches up, and as our own skin ultimately begins to sag, so too does the bark of a tree, which becomes wrinkled with age.

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13 And finally, in yet one more parallel, as trees reach great maturity, they will stop growing taller and start increasing in girth – sound familiar?! By now, at the beginning of the end, the tree's branches will begin to drop, before a breach of the bark sees fungi attacking the heartwood. But when the tree's demise finally arrives, its rotting body will still play an important role in nourishing those following behind – releasing nutrients into the soil and creating habitats for plants, fungi and animals.

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3 Comprehension check

a. Read the text and choose the correct answer (a, b, c or d).

1. According to the article, how do trees share resources within a forest ecosystem?
   a. by competing for nutrients
   b. through interconnected root networks
   c. via airborne spores
   d. by relying on human intervention
2. What does the author suggest about the 'social networks' of trees?
   a. They are a metaphor but have little scientific basis.
   b. They allow trees to communicate and support one another.
   c. They exist only in certain areas.
   d. They are formed by insects rather than plants.
3. Why are young saplings able to survive in low-light environments?
   a. Because they grow faster than older trees.
   b. Because the canopy of nearby trees gives a level of protection.
   c. Because nutrients are supplied to them by mature trees.
   d. Because they absorb nutrients more efficiently than adult trees.
4. The article implies that when a tree is under attack by pests, it can ...
   a. produce chemicals that alert other trees.
   b. cut itself off from the network.
   c. drop its leaves instantly.
   d. attract birds to defend it.

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5. What does the article say about fungi?

   a. They operate in the same way as computer software.

   b. They are responsible for the destruction of many forests.

   c. They compete with trees for all available nutrients.

   d. They act as both transport and communication systems.

6. Overall, what is the main purpose of the article?

   a. to warn readers about the threats facing forests

   b. to criticise scientific research

   c. to highlight surprising and little-known aspects of tree biology

   d. to encourage people to plant more trees in urban areas

4 Key language

a. Write an expression from the box next to the correct definition.

inner workings	**in pole position**	**plug that gap**
delve a little deeper	**play a waiting game**	**ward off**
fare much better	**tap into**	

1. to prevent something harmful from affecting _____
2. to access or make use of a resource or feeling _____
3. in the best or most advantageous place to succeed _____
4. to fill a deficiency or address a shortage _____
5. to perform more successfully than others _____
6. the hidden processes of how something operates _____

7. to deliberately delay doing something, hoping that waiting will give an advantage _____

8. to investigate or examine something more thoroughly _____

a. Complete the sentences with expressions from task a.

1. The documentary revealed the _____ of the fashion industry.
2. If you _____ into the data, you'll find some surprising trends
3. Students who prepare consistently throughout the term _____ on final exams
4. We need to hire two more engineers to _____ in our development team.
5. After securing a major contract, the company is _____ to dominate the market.
6. Eating citrus fruits can help _____ colds during the winter months.
7. Rather than make an offer immediately, the buyer decided to _____ until the price dropped.
8. The company managed to _____ the growing demand for eco-friendly products.

5 Discussion

a. Discuss these questions.

- After reading this article, has your perception of trees changed? In what way?
- If you could ask a tree one question, what would it be and why?

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6 In your own words

a. Imagine trees have their own social media platform called 'The Wood Wide Web'. Work in small groups to create a social media post that a tree might share with its network.
Step 1: Choose one of the following scenarios for your post:

- a warning about a threat (e.g. insects, disease, humans)
- a request for help (e.g. needing water, nutrients, sunlight)
- an offer to share resources with a neighbour
- an announcement about a new sapling in the community

Step 2: Decide on the details:

- What type of tree is posting? (e.g. oak, beech, acacia, pine)
- Where is the tree located? (e.g. forest, park, city street)
- What tone will your post have? (e.g. urgent, friendly, humorous)

Step 3: Write your post. Include:

- a short message
- at least one hashtag
- an emoji if appropriate

b. Present your posts to the class. Explain why your tree is sharing this message and how other trees in the network might respond.