

Plants can make intelligent decisions

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Plants are a lot smarter than we thought. According to researchers, they are capable of making intelligent decisions regarding risk. Scientists have discovered that one plant, the humble pea, can make decisions regarding

how to survive best, even though it does not have a brain. Researchers from the UK's Oxford University and Israel's Tel-Hai College grew several pea plants that had their roots separated between two pots. Each pot contained differing amounts of nutrients. One pot always had the same amount, while the other pot varied between a lot and a little. The plants turned out to be remarkably consistent at diverting their roots to the pot with the most nutrients.

The research paper will be published this week in the 'Current Biology' journal. Researcher Alex Kacelnik said the experiment, "raises a question, not about plants, but about animals and humans". He wondered whether the pea plant might be more efficient in using its limited decision-making resources than humans. He said: "We have a very fancy brain, but maybe most of the time we're not using it." Professor Kacelnik said he did not think that pea plants were intelligent in the human sense, but that they exhibited complex behaviours to efficiently take advantage of natural opportunities. It would be interesting to see how our lives would be different if we adopted similar strategies.

Sources: gizmodo.com / techtimes.com / wired.co.uk

Writing

Plants are intelligent and we can learn from them. Discuss.

Chat

Talk about these words from the article.

smarter / capable / intelligent / decisions / survive / roots / nutrients / consistent / research / journal / experiment / question / efficient / resources / complex / strategies

True / False

- Researchers say plants make decisions regarding risk. T / F
- Scientists found that the pea plant has a brain. T / F
- Scientists tied the roots of different pea plants together. T / F
- The roots of pea plants were inconsistent in finding pots with nutrients. T / F
- The research will be published in a journal called 'Current Biology'. T / F
- A researcher said we don't use our brain most of the time. T / F
- The researcher said pea plants were intelligent in the human sense. T / F
- The researcher said pea plants took advantage of natural opportunities. T / F

Synonym Match

- | | |
|----------------------|--------------|
| 1. smarter | a. amazingly |
| 2. capable | b. divided |
| 3. humble | c. meaning |
| 4. separated | d. simple |
| 5. remarkably | e. competent |
| 6. raises | f. exploit |
| 7. wondered | g. took on |
| 8. sense | h. brings up |
| 9. take advantage of | i. cleverer |
| 10. adopted | j. pondered |

Discussion – Student A

- What's the best decision you've ever made?
- What processes do you go through when making a decision?
- How 'fancy' is our brain?
- Why do some people talk to plants?
- How decisive are you?
- What decisions do you have to make in the next week?
- How would our lives be different if we made decisions like a pea plant?
- What questions would you like to ask the researchers?

Phrase Match

1. they are capable of
 2. make decisions regarding how
 3. Each pot contained differing
 4. The plants turned out to be remarkably
 5. diverting their roots to the pot with
 6. research
 7. raises a
 8. We have a very fancy
 9. take advantage
 10. if we adopted
- a. to survive best
 - b. the most nutrients
 - c. similar strategies
 - d. question
 - e. amounts of nutrients
 - f. brain
 - g. consistent
 - h. of natural opportunities
 - i. paper
 - j. making intelligent decisions

Discussion – Student B

- a) What do you think of peas?
- b) What kind of intelligence do you think plants have?
- c) What does the adjective "pea-brained" mean?
- d) What's the worst decision you've ever made?
- e) What do you think about what you read?
- f) In what ways are plants more intelligent than humans?
- g) What do you think of the test the researchers did?
- h) What are your favourite plants, and why?

Spelling

1. eabcapl of making intelligent decisions
2. the bmlueh pea
3. had their roots astreeadp
4. the other pot diaerv
5. remarkably nsistecno
6. the pot with the most iuttsnern
7. the 'Current Biology' uanojlr
8. be more nfecfteii
9. they bxeedtihi complex behaviours
10. take tangdavae of
11. natural riitopopuetsn
12. adopted similar itseagesrt

Answers – Synonym Match

1. i	2. e	3. d	4. b	5. a
6. h	7. j	8. c	9. f	10. g

Role Play

Role A – Relationships

You think decisions about relationships are the hardest. Tell the others three reasons why. Tell them why their decisions aren't so difficult. Also, tell the others which is the easiest of these (and why): what to buy, hair or what to eat.

Role B – What to buy

You think decisions about what to buy are the hardest. Tell the others three reasons why. Tell them why their decisions aren't so difficult. Also, tell the others which is the easiest of these (and why): relationships, hair or what to eat.

Role C – Hair

You think decisions about hair are the hardest. Tell the others three reasons why. Tell them why their decisions aren't so difficult. Also, tell the others which is the easiest of these (and why): what to buy, relationships or what to eat.

Role D – What to eat

You think decisions about what to eat are the hardest. Tell the others three reasons why. Tell them why their decisions aren't so difficult. Also, tell the others which is the easiest of these (and why): what to buy, hair or relationships.

Speaking – Decisions

Rank these with your partner. Put the most difficult decisions at the top. Change partners often and share your rankings.

- relationships
- financial
- job
- hair
- home
- food
- holidays
- clothes

Answers – True False

a	T	b	F	c	F	d	F	e	T	f	T	g	F	h	T
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Answers to Phrase Match and Spelling are in the text.