

www.Breaking News English.com

Ready-to-Use English Lessons by Sean Banville

**"1,000 IDEAS & ACTIVITIES
FOR LANGUAGE TEACHERS"**

www.breakingnewsenglish.com/book.html

**Thousands more free lessons
from Sean's other websites**

www.freematerials.com/sean_banville_lessons.html

Level 6

Plants can make intelligent decisions

4th July, 2016

<http://www.breakingnewsenglish.com/1607/160704-decisions.html>

Contents

The Article	2	Discussion (Student-Created Qs)	14
Warm-Ups	3	Language Work (Cloze)	15
Before Reading / Listening	4	Spelling	16
While Reading / Listening	5	Put The Text Back Together	17
Match The Sentences And Listen	6	Put The Words In The Right Order	18
Listening Gap Fill	7	Circle The Correct Word	19
Comprehension Questions	8	Insert The Vowels (a, e, i, o, u)	20
Multiple Choice - Quiz	9	Punctuate The Text And Add Capitals	21
Role Play	10	Put A Slash (/) Where The Spaces Are	22
After Reading / Listening	11	Free Writing	23
Student Survey	12	Academic Writing	24
Discussion (20 Questions)	13	Homework	25
		Answers	26

Please try Levels 0, 1 and 2 (they are easier).

Twitter



twitter.com/SeanBanville

Facebook



www.facebook.com/pages/BreakingNewsEnglish/155625444452176

Google +



<https://plus.google.com/+SeanBanville>

THE ARTICLE

From <http://www.BreakingNewsEnglish.com/1607/160704-decisions.html>

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: <http://gizmodo.com/plants-can-make-some-decisions-better-than-humans-1782946737>
<http://www.techtimes.com/articles/168007/20160701/pea-plants-show-ability-to-take-risks-and-gamble-for-nutrients.htm>
<http://www.wired.co.uk/article/pea-plants-can-gamble>

WARM-UPS

1. PLANTS: Students walk around the class and talk to other students about plants. Change partners often and share your findings.

2. CHAT: In pairs / groups, talk about these topics or words from the article. What will the article say about them? What can you say about these words and your life?

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

Have a chat about the topics you liked. Change topics and partners frequently.

3. INTELLIGENCE: Students A **strongly** believe plants have intelligence; Students B **strongly** believe they don't. Change partners again and talk about your conversations.

4. SMART: In what ways might these be smarter than humans? Could we do as they do? Complete this table with your partner(s). Change partners often and share what you wrote.

	The ways they might be smarter	Could we do as they do?
Plants		
Ants		
Dolphins		
Leopards		
Rats		
Bees		

5. RISK: Spend one minute writing down all of the different words you associate with the word "risk". Share your words with your partner(s) and talk about them. Together, put the words into different categories.

6. 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

BEFORE READING / LISTENING

From <http://www.BreakingNewsEnglish.com/1607/160704-decisions.html>

1. TRUE / FALSE: Read the headline. Guess if a-h below are true (T) or false (F).

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

2. SYNONYM MATCH: Match the following synonyms from the article.

- | | |
|----------------------|--------------|
| 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 |

3. PHRASE MATCH: (Sometimes more than one choice is possible.)

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

GAP FILL

From <http://www.BreakingNewsEnglish.com/1607/160704-decisions.html>

Plants are a lot smarter than we thought. According to researchers, they are (1) _____ of making intelligent decisions regarding risk. Scientists have discovered that one plant, the (2) _____ pea, can make decisions regarding how to survive best, even though it does not have a (3) _____. Researchers from the UK's Oxford University and Israel's Tel-Hai College grew (4) _____ pea plants that had their roots (5) _____ between two pots. Each pot contained differing amounts of (6) _____. One pot always had the same amount, while the other pot (7) _____ between a lot and a little. The plants turned out to be (8) _____ consistent at diverting their roots to the pot with the most nutrients.

separated
remarkably
capable
varied
humble
several
brain
nutrients

The research paper will be (9) _____ this week in the 'Current Biology' journal. Researcher Alex Kacelnik said the experiment, "(10) _____ a question, not about plants, but about animals and humans". He (11) _____ whether the pea plant might be more efficient in using its limited decision-making (12) _____ than humans. He said: "We have a very (13) _____ 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 (14) _____, but that they exhibited complex behaviours to efficiently take (15) _____ of natural opportunities. It would be interesting to see how our lives would be different if we adopted (16) _____ strategies.

resources
raises
sense
similar
published
fancy
wondered
advantage

LISTENING – Guess the answers. Listen to check.

From <http://www.BreakingNewsEnglish.com/1607/160704-decisions.html>

- 1) they are capable of making intelligent decisions _____
 - a. regarding risky
 - b. regarding risks
 - c. regarding risked
 - d. regarding risk
- 2) the humble pea, can make decisions regarding how _____
 - a. to survival best
 - b. to survivor best
 - c. to survive best
 - d. to survives best
- 3) grew several pea plants that had their roots separated _____
 - a. between the pots
 - b. between two pots
 - c. between two posts
 - d. between the posts
- 4) while the other pot varied between a _____
 - a. lots and a little
 - b. lot and a little
 - c. lots and a little
 - d. lot and the little
- 5) remarkably consistent at diverting their roots to the pot with _____
 - a. the most nutrients
 - b. the most nutritious
 - c. the most new tridents
 - d. the most new traders
- 6) The research paper will be published this week in the _____
 - a. 'Current Biology' journey
 - b. 'Current Biology' journeyed
 - c. 'Current Biology' journal
 - d. 'Current Biology' journals
- 7) He said: "We have a very _____"
 - a. fancied brain
 - b. fan see brain
 - c. fancy brain
 - d. fan seed brain
- 8) he did not think that pea plants were intelligent in _____
 - a. the human sense
 - b. the human cents
 - c. the human sentence
 - d. the human senses
- 9) they exhibited complex behaviours to efficiently take advantage _____
 - a. of neutral opportunities
 - b. of naturally opportunities
 - c. of neural opportunities
 - d. of natural opportunities
- 10) see how our lives would be different if we adopted _____
 - a. similarly strategies
 - b. similar strategy
 - c. similar strategies
 - d. similar strategise

LISTENING – Listen and fill in the gaps

From <http://www.BreakingNewsEnglish.com/1607/160704-decisions.html>

Plants are a lot smarter (1) _____. According to researchers, they are capable of making intelligent decisions regarding risk. Scientists have discovered that one plant, (2) _____, can make decisions (3) _____ 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 (4) _____ roots separated between two pots. Each pot contained differing amounts of nutrients. One pot (5) _____ amount, while the other pot varied between a lot and a little. The plants turned out to be remarkably consistent at diverting their (6) _____ with the most nutrients.

The research paper will (7) _____ week in the 'Current Biology' journal. Researcher Alex Kacelnik said the experiment, "(8) _____, not about plants, but about animals and humans". He wondered whether the pea plant might (9) _____ in using its limited decision-making resources than humans. He said: "We have a (10) _____, 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 (11) _____ behaviours to efficiently take advantage of natural opportunities. It would be interesting to see how our lives would be different if we adopted (12) _____.

COMPREHENSION QUESTIONS

From <http://www.BreakingNewsEnglish.com/1607/160704-decisions.html>

1. Who said plants were capable of making intelligent decisions?
2. What did scientists say the pea plant did not have?
3. What was the university in the research?
4. What did each pot contain?
5. Which pot did the roots choose most of the time?
6. What is the name of the journal the research will be in?
7. What did the researcher say the experiment raised?
8. What kind of brain did the researcher say we had?
9. In what sense did a professor say pea plants were not intelligent?
10. What did the professor say plants took advantage of?

MULTIPLE CHOICE - QUIZ

From <http://www.BreakingNewsEnglish.com/1607/160704-decisions.html>

- 1) Who said plants were capable of making intelligent decisions?
 - a) botanists
 - b) researchers
 - c) gardeners
 - d) a humble person
- 2) What did scientists say the pea plant did not have?
 - a) a nose
 - b) eyes
 - c) ears
 - d) a brain
- 3) What was the university in the research?
 - a) Tokyo
 - b) Harvard
 - c) Oxford
 - d) Delhi
- 4) What did each pot contain?
 - a) nutrients
 - b) grass
 - c) pellets
 - d) worms
- 5) Which pot did the roots choose most of the time?
 - a) the biggest one
 - b) the one with the most nutrients
 - c) the green one
 - d) the most expensive one
- 6) What is the name of the journal the research will be in?
 - a) 'Current Biology'
 - b) 'Currently Biology'
 - c) 'Current Biological'
 - d) 'Currently Biological'
- 7) What did the researcher say the experiment raised?
 - a) risk
 - b) money
 - c) a question
 - d) peas
- 8) What kind of brain did the researcher say we had?
 - a) a fancy one
 - b) a pea-brained one
 - c) a superior one
 - d) a grey one
- 9) In what sense did a professor say pea plants were not intelligent?
 - a) fashion sense
 - b) nonsense
 - c) common sense
 - d) the human sense
- 10) What did the professor say plants took advantage of?
 - a) beans
 - b) other plants
 - c) natural opportunities
 - d) researchers

ROLE PLAY

From <http://www.BreakingNewsEnglish.com/1607/160704-decisions.html>

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.

AFTER READING / LISTENING

From <http://www.BreakingNewsEnglish.com/1607/160704-decisions.html>

1. WORD SEARCH: Look in your dictionary / computer to find collocates, other meanings, information, synonyms ... for the words 'pea' and 'plant'.

pea	plant
------------	--------------

- Share your findings with your partners.
- Make questions using the words you found.
- Ask your partner / group your questions.

2. ARTICLE QUESTIONS: Look back at the article and write down some questions you would like to ask the class about the text.

- Share your questions with other classmates / groups.
- Ask your partner / group your questions.

3. GAP FILL: In pairs / groups, compare your answers to this exercise. Check your answers. Talk about the words from the activity. Were they new, interesting, worth learning...?

4. VOCABULARY: Circle any words you do not understand. In groups, pool unknown words and use dictionaries to find their meanings.

5. TEST EACH OTHER: Look at the words below. With your partner, try to recall how they were used in the text:

<ul style="list-style-type: none">• thought• humble• though• between• little• turned	<ul style="list-style-type: none">• week• question• using• fancy• complex• similar
---	---

DECISIONS SURVEY

From <http://www.BreakingNewsEnglish.com/1607/160704-decisions.html>

Write five GOOD questions about decisions in the table. Do this in pairs. Each student must write the questions on his / her own paper.
When you have finished, interview other students. Write down their answers.

	STUDENT 1 _____	STUDENT 2 _____	STUDENT 3 _____
Q.1.			
Q.2.			
Q.3.			
Q.4.			
Q.5.			

- Now return to your original partner and share and talk about what you found out. Change partners often.
- Make mini-presentations to other groups on your findings.

DECISIONS DISCUSSION

STUDENT A's QUESTIONS (Do not show these to student B)

1. What did you think when you read the headline?
2. What springs to mind when you hear the word 'pea'?
3. What do you think of peas?
4. What kind of intelligence do you think plants have?
5. What does the adjective "pea-brained" mean?
6. What's the worst decision you've ever made?
7. What do you think about what you read?
8. In what ways are plants more intelligent than humans?
9. What do you think of the test the researchers did?
10. What are your favourite plants, and why?

Plants can make intelligent decisions – 4th July, 2016
Thousands more free lessons at www.BreakingNewsEnglish.com

DECISIONS DISCUSSION

STUDENT B's QUESTIONS (Do not show these to student A)

11. Did you like reading this article? Why/not?
12. How interesting do you think the research paper might be?
13. What's the best decision you've ever made?
14. What processes do you go through when making a decision?
15. How 'fancy' is our brain?
16. Why do some people talk to plants?
17. How decisive are you?
18. What decisions do you have to make in the next week?
19. How would our lives be different if we made decisions like a pea plant?
20. What questions would you like to ask the researchers?

DISCUSSION (Write your own questions)

STUDENT A's QUESTIONS (Do not show these to student B)

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

Copyright © www.BreakingNewsEnglish.com 2016

DISCUSSION (Write your own questions)

STUDENT B's QUESTIONS (Do not show these to student A)

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____

LANGUAGE - CLOZE

From <http://www.BreakingNewsEnglish.com/1607/160704-decisions.html>

Plants are a lot smarter than we (1) _____. According to researchers, they are capable of making intelligent decisions regarding risk. Scientists have discovered that one plant, the (2) _____ pea, can make decisions (3) _____ how to survive best, even though it does not have a (4) _____. 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 (5) _____ 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 (6) _____ 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, "(7) _____ a question, not about plants, but about animals and humans". He (8) _____ whether the pea plant might be more efficient in using its limited decision-making resources than humans. He said: "We have a very (9) _____ 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 (10) _____, but that they exhibited complex behaviours to efficiently (11) _____ advantage of natural opportunities. It would be interesting to see (12) _____ our lives would be different if we adopted similar strategies.

Put the correct words from the table below in the above article.

- | | | | | |
|-----|---------------|----------------|----------------|----------------|
| 1. | (a) thinking | (b) thinks | (c) thought | (d) thoughtful |
| 2. | (a) humble | (b) bumble | (c) crumble | (d) tumble |
| 3. | (a) regards | (b) regarding | (c) regard | (d) regarded |
| 4. | (a) bran | (b) brawn | (c) bean | (d) brain |
| 5. | (a) diffusion | (b) daffodil | (c) differing | (d) diffident |
| 6. | (a) remarked | (b) remarkably | (c) remarkable | (d) remarks |
| 7. | (a) raises | (b) rises | (c) risers | (d) arises |
| 8. | (a) weaned | (b) meandered | (c) wandered | (d) wondered |
| 9. | (a) antsy | (b) infancy | (c) fancy | (d) pansy |
| 10. | (a) sensory | (b) cents | (c) sensor | (d) sense |
| 11. | (a) make | (b) take | (c) fake | (d) rake |
| 12. | (a) how | (b) what | (c) which | (d) while |

SPELLING

From <http://www.BreakingNewsEnglish.com/1607/160704-decisions.html>

Paragraph 1

1. eabcapl of making intelligent decisions
2. the bmlueh pea
3. had their roots astreeadp
4. the other pot diaerv
5. remarkably tnsistecno
6. the pot with the most iuttsnern

Paragraph 2

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

PUT THE TEXT BACK TOGETHER

From <http://www.BreakingNewsEnglish.com/1607/160704-decisions.html>

Number these lines in the correct order.

- () using it." Professor Kacelnik said he did not think that pea plants were intelligent in the human
- (**1**) Plants are a lot smarter than we thought. According to researchers, they are capable of making intelligent
- () and Israel's Tel-Hai College grew several pea plants that had their roots separated between two
- () The research paper will be published this week in the 'Current Biology' journal. Researcher Alex Kacelnik
- () 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.
- () opportunities. It would be interesting to see how our lives would be different if we adopted similar strategies.
- () pots. Each pot contained differing amounts of nutrients. One pot always had the same
- () sense, but that they exhibited complex behaviours to efficiently take advantage of natural
- () how to survive best, even though it does not have a brain. Researchers from the UK's Oxford University
- () 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
- () decisions regarding risk. Scientists have discovered that one plant, the humble pea, can make decisions regarding
- () humans. He said: "We have a very fancy brain, but maybe most of the time we're not

PUT THE WORDS IN THE RIGHT ORDER

From <http://www.BreakingNewsEnglish.com/1607/160704-decisions.html>

1. regarding of risk making They intelligent are decisions capable .
2. two plants their between Pea had separated pots that roots .
3. amounts nutrients pot differing of Each contained .
4. to out turned plants The consistent remarkably be .
5. roots pot most their the the Diverting to with nutrients .
6. Biology' 'Current the in week this Published journal .
7. might efficient whether plant more wondered pea be He the .
8. we're most not of using the it time Maybe .
9. Think plants in sense pea intelligent human that were the .
10. our how see to interesting be would It different be would lives .

CIRCLE THE CORRECT WORD (20 PAIRS)

From <http://www.BreakingNewsEnglish.com/1607/160704-decisions.html>

Plants are a *lot / loads* smarter than we thought. According to researchers, they are *capacity / capable* of making intelligent decisions *regarding / regardless* risk. Scientists have discovered that *one / once* plant, the humble pea, can make decisions regarding how to survive best, even *though / thought* it does not have a brain. Researchers from the UK's Oxford University and Israel's Tel-Hai College *grown / grew* several pea plants that had their roots separated *among / between* two pots. Each pot contained differing amounts of *nutritious / nutrients*. One pot always had the same amount, while the other pot *varied / various* between a lot and a little. The plants turned out to be remarkably consistent *at / of* diverting their roots to the pot with the most nutrients.

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

Talk about the connection between each pair of words in italics, and why the correct word is correct.

INSERT THE VOWELS (a, e, i, o, u)

From <http://www.BreakingNewsEnglish.com/1607/160704-decisions.html>

Plants are intelligent rather than thoughtless creatures, they are capable of making intelligent decisions regarding risk. Scientists have discovered that the humble pea, can make decisions regarding how to survive best, even though it doesn't have a brain. Researchers from the UK's Oxford University and Sir Iain Chalmers' group were the first to show that plants have the ability to communicate with their neighbours. In a paper published in the journal 'Current Biology', researchers at the University of Exeter, UK, reported that pea plants can communicate with their neighbours through a chemical signal. The researchers found that pea plants can detect and respond to the presence of neighbouring plants by releasing a chemical signal. This signal is called 'fusicoccin' and it is produced by the roots of the plant. The researchers found that pea plants can detect and respond to the presence of neighbouring plants by releasing a chemical signal. This signal is called 'fusicoccin' and it is produced by the roots of the plant.

The researchers will be publishing this work in the 'Current Biology' journal. Researcher Iain Chalmers said that the experiment, "was a question, not about plants, but about animals and humans". He wondered whether the pea plant might be more effective than singing its limit to decision-making resources than humans. He said: "We have a very fancy brain, but maybe most of the time we're not singing it." Professor Chalmers said he didn't think that pea plants were intelligent in the human sense, but that they exhibit a complex behaviour that effectively takes advantage of natural processes. It would be interesting to see how well it would be different from the standard strategies.

PUNCTUATE THE TEXT AND ADD CAPITALS

From <http://www.BreakingNewsEnglish.com/1607/160704-decisions.html>

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

PUT A SLASH (/) WHERE THE SPACES ARE

From <http://www.BreakingNewsEnglish.com/1607/160704-decisions.html>

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 may be 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.

HOMework

1. VOCABULARY EXTENSION: Choose several of the words from the text. Use a dictionary or Google's search field (or another search engine) to build up more associations / collocations of each word.

2. INTERNET: Search the Internet and find out more about pea plants. Share what you discover with your partner(s) in the next lesson.

3. DECISIONS: Make a poster about decisions. Show your work to your classmates in the next lesson. Did you all have similar things?

4. PLANTS: Write a magazine article about plants being smart. Include imaginary interviews with people believe this is true and with people who think it is not true.

Read what you wrote to your classmates in the next lesson. Write down any new words and expressions you hear from your partner(s).

5. WHAT HAPPENED NEXT? Write a newspaper article about the next stage in this news story. Read what you wrote to your classmates in the next lesson. Give each other feedback on your articles.

6. LETTER: Write a letter to an expert on decision-making. Ask him/her three questions about it. Give him/her three of your ideas on how best to make decisions. Read your letter to your partner(s) in your next lesson. Your partner(s) will answer your questions.

ANSWERS

TRUE / FALSE (p.4)

a T b F c F d F e T f T g F h T

SYNONYM MATCH (p.4)

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

COMPREHENSION QUESTIONS (p.8)

1. Researchers
2. A brain
3. Oxford
4. Nutrients
5. The one with the most nutrients
6. 'Current Biology'
7. A question
8. A fancy one
9. The human sense
10. Natural opportunities

MULTIPLE CHOICE - QUIZ (p.9)

1. b 2. d 3. c 4. a 5. b 6. a 7. c 8. a 9. d 10. c

ALL OTHER EXERCISES

Please check for yourself by looking at the Article on page 2.
(It's good for your English ;-)