

Name: \_\_\_\_\_

## Text 1

# With Dogs, It's What You Say – and How You Say It

By JAMES GORMAN AUG. 29, 2016

## Who's a good dog?

Well, that depends on whom you're asking, of course. But new research suggests that the next time you look at your pup, whether Maltese or mastiff, you



*Dogs that were trained to enter an M.R.I. machine for the research. Photo Credit: Enik Kubinyi*

might want to choose your words carefully.

“Both what we say and how we say it matters to dogs,” said

Attila Andics, a research fellow at Eotvos Lorand University in Budapest.

Dr. Andics, who studies language and behaviour in dogs and humans, along with Adam Miklosi and several other colleagues, reported in a paper to be published in this week's issue of the journal *Science* that different parts of dogs' brains respond to the meaning of a word, and to how the word is said, much as human brains do.



*A dog waiting for its brain activity to be measured in a magnetic resonance imaging machine for research reported in the journal *Science*. Photo Credit: Enik Kubinyi*

As with people's brains, parts of dogs' left hemisphere react to meaning and parts of the right hemisphere to intonation – the emotional content of a sound. And, perhaps most interesting to

dog owners, only a word of praise said in a positive tone really made the reward system of a dog's brain light up.

The experiment itself was something of an achievement. Dr. Andics and his colleagues trained dogs to enter a magnetic resonance imaging machine and lie in a harness while the machine recorded their brain activity.

A trainer spoke words in Hungarian – common words of praise used by dog owners like “good boy,” “super” and “well done.” The trainer also tried neutral words like “however” and “nevertheless.”

The research found that different parts of dogs' brains respond to the meaning of a word and to how the word is said, much as human brains do.

The positive words spoken in a positive tone prompted strong activity in the brain's reward centers. All the other conditions resulted in significantly less action, and all at the same level.

In other words, “good boy” said in a neutral tone and “however” said in a positive or neutral tone all got the same response.

What does it all mean? For dog owners, Dr. Andics said, the findings mean that the dogs are paying attention to meaning, and that you should, too.



That doesn't mean a dog won't wag its tail and look happy when you say, "You stinky mess" in a happy voice. But the dog is looking at your body language and your eyes, and perhaps starting to infer that "stinky mess" is a word of praise.

In terms of evolution of language, the results suggest that the capacity to process meaning and emotion in different parts of the brain and tie them together is not uniquely human.



Anna Gabor speaking to a dog as part of the research. Photo Credit Vilja and Vanda Molnár

**Article taken from:** <https://goo.gl/LNEEYC>

### Questions - Text 1 (20 marks)

1. What is the main point of this article? (2)
2. Who do you think the target audience is? (2)
3. What kind of language has been used in this article? (1)
4. Using one adjective, describe the tone of this article. (1)
5. Give an example of emotive language in this article and explain why you think it is emotive. (3)
6. Write down one example of an obviously biased opinion that the writer shows and explain your answer. (2)
7. Rewrite the following facts from the article into chronological order. (7)
  - A trainer spoke words in Hungarian — common words of praise used by dog owners like "good boy," "super" and "well done."
  - Dr. Andics and his colleagues trained dogs to enter a magnetic resonance imaging machine.
  - The trainer also tried neutral words like "however" and "nevertheless."
  - Dr. Andics reported in a paper to be published in this week's issue of the journal *Science* that different parts of dogs' brains respond to the meaning of a word, and to how the word is said.
  - Dr. Andics and his colleagues devised an experiment using dogs to measure whether dog's brains respond to how we say things as opposed to just 'what' we say.
  - The dogs had to lie in a harness while the machine recorded their brain activity.
  - The positive words spoken in a positive tone prompted strong activity in the brain's reward centers.
8. Write down an alternate title for this article. (2)

## Text 2

# Meet Octobot: Squishy, Adorable and Revolutionary

By NICHOLAS ST. FLEUR AUG. 26, 2016

## Hello, Octobot!

This squishy eight-armed machine is the world's first fully autonomous soft-bodied robot. Researchers at Harvard University created the octopus by three-dimensional printing, using silicone gel, which gives it its flexible, rubbery texture.

On Wednesday, they unveiled their adorable step toward the robot uprising in the journal *Nature*. The scientists said in their paper that their creation could be a foundation for the future of soft-bodied robots.

Octobot is similar to other soft robots who mimic the movements of animals, such as starfish, squids and octopuses. But while many of those were tethered to a power source, the octobot can move free. It's cordless.

**Article taken from:** <https://goo.gl/cRmkG5>

## Questions - Text 2 (15 marks)

1. In one sentence, explain what this article is about. (2)
2. What is unique about the octobot compared with other soft-bodied robots? (2)
3. Say which of the following headlines are literal / figurative: (4)
  - a) Meet the Octobot!
  - b) Harvard Scientists make waves with new creation.
  - c) Octobot steals five awards at technology fair.
  - d) Discover the Octobot: a new kind of invertebrate.
4. What 'human-like' characteristics does the octobot possess? Name two. (2)
5. Would you like to own the octobot? Explain your answer. (2)
6. Do you think that inventions like the octobot are important contributions to science and technology? Explain your answer. (3)



*Octobot, a small, eight-armed machine, is the first fully autonomous soft-bodied robot. Credit Lori Sanders/Harvard University*

Also, unlike other soft-bodied robots, which typically have batteries, wires or circuit boards, the octobot has no rigid parts in its gummy body. Instead, chemicals course through its veins to give it power.

Liquid hydrogen peroxide is its fuel, and when it reacts with a platinum catalyst in the cephalopod's core, it creates a gas that inflates the creature's limbs, like a balloon. Using the chemical reaction, the octobot can wriggle its arms. It starts by lifting four of its arms while lowering its other four, and then reversing the motion. The octobot will continue cycling through its dance until it runs out of fuel, which usually takes four to eight minutes.

The Octobot also has its own preservation code. While moving, it avoids exploding by releasing its excess gas through vent orifices. In other words, it farts.

## Language Exercises – Texts 1 & 2

(40 marks)

### Exercise 1 – Word Meanings: Antonyms and Synonyms (10 marks)

Write your own synonym and antonym for each of the following words found in Text 2.

**Eg:** core – centre/middle; outside/covering

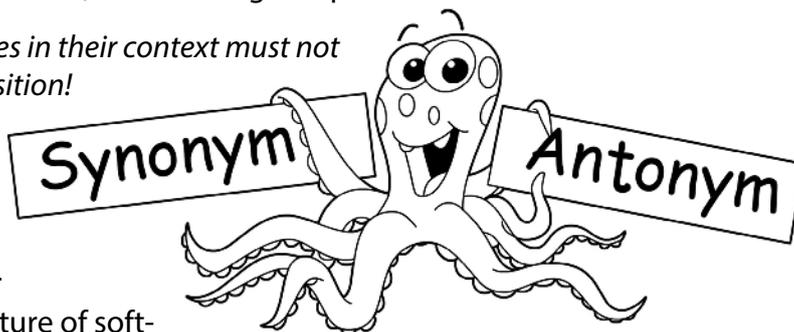
Original Word from Passage	Synonym	Antonyms
1. squishy		
2. unveiled		
3. adorable		
4. rigid		
5. preservation		

### Exercise 2 – Parts of Speech: Prepositions and Compound and Complex Sentences (5 marks)

Use prepositions to join the following sentences, thus forming compound and / complex sentences.

**\*NB:** *the original meaning of the sentences in their context must not be changed by your choice of preposition!*

**Eg:** On Wednesday, they unveiled their adorable step toward the robot uprising in the journal Nature.



The scientists said in this paper that their creation could be a foundation for the future of soft-bodied robots.

**Becomes:** On Wednesday, they unveiled their adorable step toward the robot uprising in the journal Nature **and** the scientists said in this paper that their creation could be a foundation for the future of soft-bodied robots.

- The experiment itself was something of an achievement.  
Dr. Andics and his colleagues had to train the dogs to enter a magnetic resonance imaging machine and lie in a harness while the machine recorded their brain activity.
- A trainer spoke words in Hungarian — common words of praise used by dog owners like “good boy,” “super” and “well done.” The trainer also tried neutral words like “nevertheless.”
- The positive words spoken in a positive tone prompted strong activity in the brain’s reward centers. All the other conditions resulted in significantly less action, and all at the same level.
- That doesn’t mean a dog won’t wag its tail and look happy when you say, “You stinky mess” in a happy voice. The dog could be looking at your body language and your eyes, and perhaps starting to infer that “stinky mess” is a word of praise.
- We may have thought up until now that the capacity to process meaning and emotion in different parts of the brain and tie them together is uniquely human. The results of this study suggest otherwise.

**Exercise 3 – Parts of Speech: Adjectives and Degrees of Comparison (10 marks)**

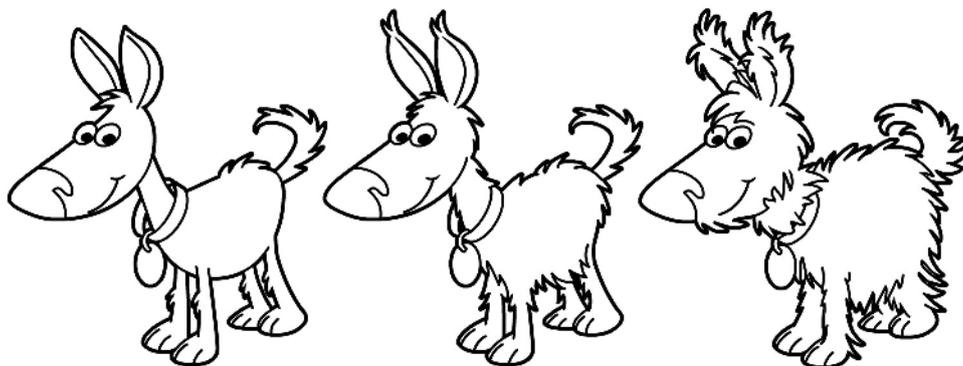
Complete the following sentences by changing the adjectives in brackets into their correct forms.

**Eg:** Dogs are intelligent, but not necessarily (intelligent) than other animals.

**Answer:** more intelligent.

11. My dog is fluffy, but your St. Bernard is (fluffy).

12. The experiment measured many aspects of dog behaviour but the (interesting) finding was that dogs respond to body language and the tone of peoples' voices.



13. The Octobot is the (mobile) soft bodied robot ever invented.

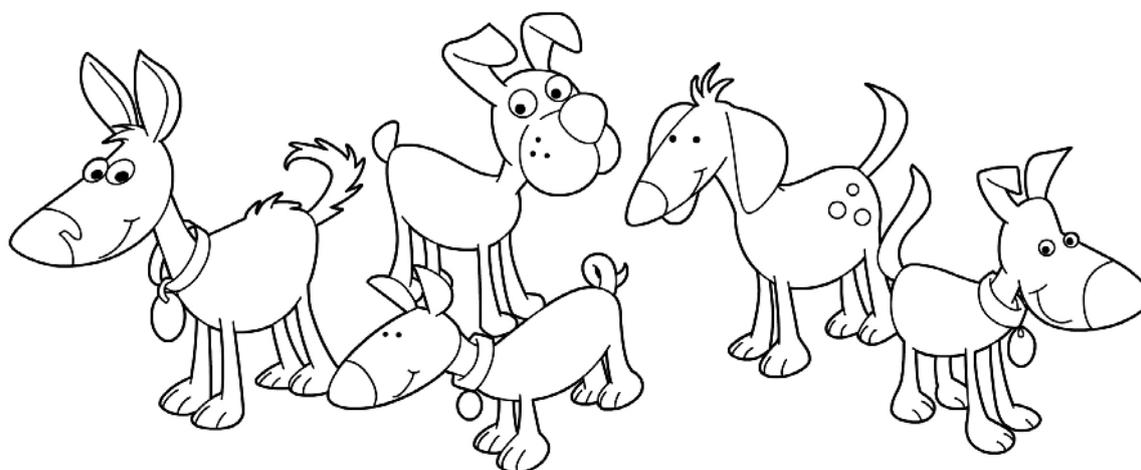
14. I have seen other robots, but I like the Octobot the (good).

15. The Octobot is (squishy) than jelly.

**Exercise 4 – Punctuation (15 marks)**

Punctuate the following paragraph.

when you praise a dog, its listening not just to the words you say but also how you say them. That might not be huge news to dog owners But now scientists have explored this phenomenon by using an imaging machine to peek inside the brains of 13 dogs as they listened to their trainers voice. The reward pathway in the dogs brains lit up when they heard both praising words and an approving intonation but not when they heard random words spoken in a praising tone or praise words spoken in a flat tone according to a report in the journal science. Dogs process both what we say and how we say it in a way which is amazingly similar to how human brains do says Attila Andics a neuroscientist at eotvos lorand university in Hungary



## Activity 6: Reading and Viewing – ‘Reading Comprehension and Language Assessment’

Suggested Answers - Text 1 (20 marks)

For each of these answers the learner’s answers may differ from this memo as long as they contain the same ideas. For each question, where 2 or more marks are allocated (besides question: 7), ½ of the mark allocation for each question should be awarded for grammar. So, each grammatical mistake should be penalised by a ½ mark up to ½ of the allocated marks for a question. So for example, in question 1, a good answer with two spelling mistakes would be awarded only 1 out of 2 marks as each mistake would be penalised by ½ a mark. However, a good answer with 3 spelling errors would also get 1 mark and no more than ½ of the mark allocation should be deducted for grammatical errors.

1. What is the main point of this article? (2)

**Answer:** *The main point of this article is that both what we say and how we say it matters to dogs.*

2. Who do you think the target audience is? (2)

**Answer:** *The target audience of this article is dog Owners and people interested in research and science to do with animals.*

3. What kind of language has been used in this article? (1)

**Answer:** *This article uses a mixture of formal and informal language with some witty phrases to keep the reader entertained.*

4. Using one adjective, describe the tone of this article. (1)

**Answer:** *playful / fun / informative etc...*

5. Give an example of emotive language in this article and explain why you think it is emotive. (3)

\*There are a few different appropriate examples in this article, as long as the learner has explained his/her reasoning appropriately, he/she may be awarded the marks.

**Suggested Answer:** *“Who’s a good dog?” This is an example of emotive language because as soon as you read it you can picture a dog owner saying it positively to his/her dog. This phrase conjures up a positive emotive scenario where a dog has been well-behaved and is being praised.*

6. Write down one example of an obviously biased opinion that the writer shows and explain your answer. (2)

\*There are a few different appropriate examples in this article, as long as the learner has explained his/her reasoning appropriately, he/she may be awarded the marks.

**Suggested Answer:** *“For dog owners, Dr. Andics said, the findings mean that the dogs are paying attention to meaning, and that you should, too.” This quotation leaves no room for the reader to think anything else. The use of the imperative ‘should’ orders the reader to behave in a certain way instead of inviting him/her to form his/her opinion.*

7. Rewrite the following facts from the article into chronological order. (7)

- A trainer spoke words in Hungarian — common words of praise used by dog owners like “good boy,” “super” and “well done.”
- Dr. Andics and his colleagues trained dogs to enter a magnetic resonance imaging machine.
- The trainer also tried neutral words like “however” and “nevertheless.”
- Dr. Andics reported in a paper to be published in this week’s issue of the journal Science that different parts of dogs’ brains respond to the meaning of a word, and to how the word is said.
- Dr. Andics and his colleagues devised an experiment using dogs to measure whether dog’s brains respond to how we say things as opposed to just ‘what’ we say.
- The dogs had to lie in a harness while the machine recorded their brain activity.
- The positive words spoken in a positive tone prompted strong activity in the brain’s reward centers.

**Answer:** (1 mark for each fact correctly ordered).

- a) Dr. Andics and his colleagues devised an experiment using dogs to measure whether dog's brains respond to how we say things as opposed to just 'what' we say.
- b) Dr. Andics and his colleagues trained dogs to enter a magnetic resonance imaging machine.
- c) The dogs had to lie in a harness while the machine recorded their brain activity.
- d) A trainer spoke words in Hungarian — common words of praise used by dog owners like "good boy," "super" and "well done."
- e) The trainer also tried neutral words like "however" and "nevertheless."
- f) The positive words spoken in a positive tone prompted strong activity in the brain's reward centers.
- g) Dr. Andics reported in a paper to be published in this week's issue of the journal Science that different parts of dogs' brains respond to the meaning of a word, and to how the word is said.

8. Write down an alternate title for this article. (2)

Answers will differ, so refer to the following guideline when marking:

**1 mark** - an attempt at an appropriate title but contains spelling mistakes or is slightly inappropriate like being too long or off topic.

**1.5 marks** – a good title idea with grammatical error/s.

**2 marks** – an appropriate, catchy title with no grammatical errors.

**Suggested Answers - Text 2** (15 marks)

1. In one sentence, explain what this article is about. (2)

**Answer:** *The article is about the Octobot – the world's first fully autonomous soft-bodied robot.*

2. What is unique about the octobot compared with other soft-bodied robots? (2)

**Answer:** *The Octobot can move freely - it's cordless. Also, unlike other soft-bodied robots, which typically have batteries, wires or circuit boards, the octobot has no rigid parts in its gummy body. Instead, chemicals course through its veins to give it power.*

3. Say which of the following headlines are literal / figurative. (4)

- a) Meet the Octobot!
- b) Harvard Scientists make waves with new creation.
- c) Octobot steals five awards at technology fair.
- d) Discover the Octobot: a new kind of invertebrate.

**Answers:**

- a) Meet the Octobot! - Literal
- b) Harvard Scientists make waves with new creation. – Figurative.
- c) Octobot steals five awards at technology fair. – Figurative.
- d) Discover the Octobot: a new kind of invertebrate. – Literal.

4. What 'human-like' characteristics does the octobot possess? Name two. (2)

**Answer:** *The Octobot can move and fart.*

5. Would you like to own the octobot? Explain your answer. (2)

**Answer:** *\*Learners' answers will differ.*

1 mark for Yes / No and 1 mark for a valid explanation.

6. Do you think that inventions like the octobot are important contributions to science and technology? Explain your answer. (3)

**Answer:** \*Answers will differ.

1 mark for Yes / No and 2 marks for two valid justifications such as:

- The Octobot is advancement in robotic technology which means that Scientists are making progress in this field and we can expect that robots will be relied upon more readily in the future.
- If scientists are able to invent a robot that is almost animate, perhaps they are closer to being able to create animate objects. Etc...

## Language Exercises – Texts 1 & 2: Suggested Answers (40 marks)

### Exercise 1 – Word Meanings: Antonyms and Synonyms (10 marks)

1 mark for each word correctly spelt. -1/2 for each number for any spelling errors.

Original Word from Passage	Synonym	Antonyms
1. squishy	soft/squidgy/spongy/squelchy etc...	hard/brittle/tough/stiff etc...
2. unveiled	uncovered/revealed/showed etc...	veiled/covered/hidden etc...
3. adorable	cute/loveable/likeable etc...	hated/vile/despised etc...
4. rigid	solid/hard/stiff/firm etc...	soft/malleable/supple etc...
5. preservation	protection/defence/safeguarding etc...	destruction/damage/ruin etc...

### Exercise 2 – Parts of Speech: Prepositions and Compound and Complex Sentences (5 marks)

The below answers are not the only options for some of these questions, but are probably the most obvious choices. If a learner chooses another appropriate answer, he/she may be awarded the full mark.

- The experiment itself was something of an achievement **because / as / seeing that** Dr. Andics and his colleagues had to train the dogs to enter a magnetic resonance imaging machine and lie in a harness while the machine recorded their brain activity.
- A trainer spoke words in Hungarian — common words of praise used by dog owners like “good boy,” “super” and “well done” **and / but / although** the trainer also tried neutral words like “nevertheless.”
- The positive words spoken in a positive tone prompted strong activity in the brain’s reward centers **although / whilst / but** all the other conditions resulted in significantly less action, and all at the same level.
- That doesn’t mean a dog won’t wag its tail and look happy when you say, “You stinky mess” in a happy voice **however / but / although** the dog could be looking at your body language and your eyes, and perhaps starting to infer that “stinky mess” is a word of praise.
- We may have thought up until now that the capacity to process meaning and emotion in different parts of the brain and tie them together is uniquely human but / although / however the results of this study suggest otherwise.

**Exercise 3 – Parts of Speech: Adjectives and Degrees of Comparison** (10 marks)

1 mark awarded for each, correctly spelt, degree of comparison.

11. My dog is fluffy, but your St. Bernard is (fluffier).
12. The experiment measured many aspects of dog behaviour but the (most interesting) finding was that dogs respond to body language and the tone of peoples' voices.
13. The Octobot is the (most mobile) soft bodied robot ever invented.
14. I have seen other robots, but I like the Octobot the (best).
15. The Octobot is (squishier) than jelly.

**Exercise 4 – Punctuation** (15 marks)

1 mark for each punctuation mark correctly added. No negative marking.

When you praise a dog, it's listening not just to the words you say but also how you say them.

That might not be huge news to dog owners. But now scientists have explored this phenomenon by using an imaging machine to peek inside the brains of 13 dogs as they listened to their trainer's voice. The reward pathway in the dogs' brains lit up when they heard both praising words and an approving intonation but not when they heard random words spoken in a praising tone or praise words spoken in a flat tone, according to a report in the journal Science. "Dogs process both what we say and how we say it in a way which is amazingly similar to how human brains do," says Attila Andics, a neuroscientist at Eotvos Lorand University in Hungary.