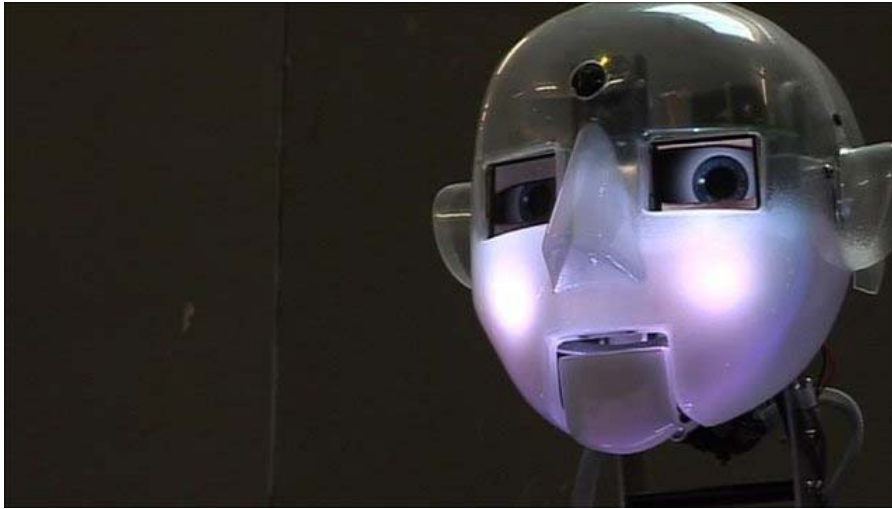


Cornish robot firm lands £79K NASA deal

Adapted from <http://www.bbc.co.uk/news/uk-england-cornwall-11297480>

Name _____ Date _____

A Cornish firm that builds robots has landed a contract with NASA.



A Cornish firm that builds robots has landed a contract with NASA.

Engineered Arts, in Penryn, will supply one of its Robothespians to welcome visitors to the Kennedy Space Centre this autumn.

The £79,500 (\$122,000) robot is being developed by the seven-strong team to converse with visitors to the Florida centre.

NASA chose the 5ft 9in tall Robothespian after seeing it in operation at a trade show.

Engineered Arts director Will Jackson, 45, said: "We got chatting to NASA and they said it would be a really good thing to communicate their ideas.

"NASA is something we used to draw on rockets.

"I remember creeping out of bed to watch those first moon landings, so to actually do something for them is really nice."

Engineered arts has been making robots at a Penryn industrial estate for about five years.

It has sold about 15 Robothespians which, although they cannot walk, can speak and can move their body in a human-like way.

The secret is compressed air which is pumped around the robot like blood through veins.

Rubber "actuators" or tubes, are filled with air and flex in the same way as muscles.

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Eyes are made from mobile phone screens attached to two computers in the head and appear disarmingly humanoid.

Another computer in the back operates the arms and limbs.

Robothespian tech spec

- Weight: 72lb (33kg)
- Height: 5ft 9in (1.75m)
- Languages: 20
- Computers: 3
- Actuators (muscles): 30
- Multi-core processors: 5
- Cost: £36,500-£79,500

Engineered Arts is now working on speech and face recognition so that its robots can converse with people.

"Robots are at the same stage now as computers were when Microsoft started," said Mr Jackson.

"It's a very exciting time because suddenly it's taking off."

Mr Jackson hopes that if Robothespian is successful at Cape Kennedy it will also be taken on at 10 other NASA centres around the US.

He said: "We have spent £2m on research and development, so it's all funded by the robots we sell."

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Questions

- 1) What will NASA do with the robots they have bought?
- 2) For how long has the Cornish firm been developing robots?
- 3) How many of the robots has the firm sold so far?
- 4) The robots can't walk, but in what two ways are the robots especially like human beings?
- 5) How many languages can the robots speak?
- 6) How many computers are used to control each robot?
- 7) How is the firm trying to improve the robots?
- 8) In the first line of the article, the word **won** could be used instead of **landed**.

What other words which could work in the passage instead of each of these following:

- a) Converse
 - b) Chatting
 - c) Operates
 - d) Flex
 - e) Funded
 - f) Disarmingly
- 9) The news article uses quite a few abbreviations and symbols (eg: **NASA** stands for **National Aeronautics and Space Administration**; while **£** stands for **Pounds**).
- The following abbreviations are all found in the article. What do they each stand for?
- a) The letters **US** in **around the US**?
 - b) The symbol **\$** in **\$122,000**?
 - c) The letters **kg** in **33kg**
 - d) The letters **ft** stand for in **5ft 9in**
 - e) The letters **in** stand for in **5ft 9in**
 - f) The letter **m** in **1.75m**
 - g) The letter **m** in **£2m**
 - h) The letter **k** in **£79k**
- 10) Do you think the development of robots like this is a good thing or not? Write a few sentences explaining what you think and why.

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Answers and teaching notes



Source of story - <http://www.bbc.co.uk/news/uk-england-cornwall-11297480>

Related video material can be found at <http://www.robothespian.com/about/videos.html>

- 1) What will NASA do with the robots they have bought? **Use them to welcome visitors to the Kennedy Space Centre**
- 2) For how long has the Cornish firm been developing robots? **About 5 years**
- 3) How many of the robots has the firm sold so far? **15**
- 4) The robots can't walk, but in what two ways are the robots especially like human beings? **They can speak and move like human beings**
- 5) How many languages can the robots speak? **20**
- 6) How many computers are used to control each robot? **3**
- 7) How is the firm trying to improve the robots? **By improving their speech and face recognition**
- 8) In the first line of the article, the word **won** could be used instead of **landed**.

What other words which could work in the passage instead of each of these following:

- a) Converse (**speak**)
 - b) Chatting (**talking**)
 - c) Operates (**works**)
 - d) Flex (**bend**)
 - e) Funded (**financed**)
 - f) Disarmingly (**surprisingly**)
- 9) The news article uses quite a few abbreviations and symbols (eg: **NASA** stands for **National Aeronautics and Space Administration**; while **£** stands for **Pounds**).

The following abbreviations are all found in the article. What do they each stand for?

- a) The letters **US** in **around the US**? (**United States**)
- b) The symbol **\$** in **\$122,000**? (**dollars**)
- c) The letters **kg** in **33kg** (**kilograms**)
- d) The letters **ft** stand for in **5ft 9in** (**feet**)
- e) The letters **in** stand for in **5ft 9in** (**inches**)
- f) The letter **m** in **1.75m** (**metres**)
- g) The letter **m** in **£2m** (**million**)
- h) The letter **k** in **£79k** (**thousand**)