6a Reading

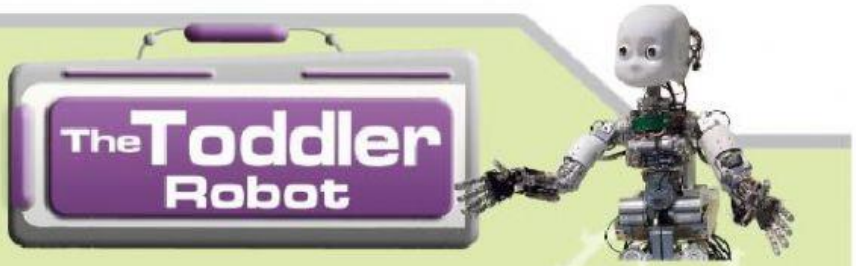
2 **Which of these sentences are true about the toddler robot? Decide in pairs. Read and check.**

1 It can think for itself.
T F

2 It is modelled on a baby human.
T F

3 It works in hospitals.
T F

4 It can't respond to the environment like a human.
T F



A It is only one metre high. It looks and behaves like a human child of about three. It can crawl and sit up. It can even play the drums. 1 What is it? It's the iCub robot – the latest in artificial intelligence and technology! The humanoid iCub robot was created by scientists at the Italian Institute of Technology in Genoa, Italy, in order to understand how human children learn about the world around them. This is important because scientists believe that once they understand how human beings learn, they will be able to apply these principles to robots.

B How can a robot teach scientists about how humans learn? Well, many scientists believe that one way humans learn is by physically interacting with objects and other humans. 2 So, by building a robot with a physique that is as human as possible, scientists can study how our physical form helps us develop our learning abilities.

C 3 Well, it has a large number of motors in its body that generate movement in the head, arms, hands and legs. It has cameras for eyes and it listens with two tiny microphones on its head that record sounds. 4 This enables the iCub to crawl, walk and even pick up objects in its hand in a similar way to a toddler.

D On the outside, the iCub looks like a small child. However, a child will interact with interest to what it sees. 5 The iCub robot has only just managed to 'learn' how to control its eye movements based on external stimuli. That's a long way from being able to learn by interacting with its surroundings the way a child does.

E 6 If so, you could be in for a long wait! Nevertheless, the iCub – and robots like it – demonstrate that one day it should be possible to introduce 'thinking' robots into the workplace. Places such as hospitals and residential care homes could use these robots to assist with patient care. If the iCub experiment succeeds, many busy

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E [6] If so, you could be in for a long wait! Nevertheless, the iCub – and robots like it – demonstrate that one day it should be possible to introduce 'thinking' robots into the workplace. Places such as hospitals and residential care homes could use these robots to assist with patient care. If the iCub experiment succeeds, many busy doctors and nurses will get a helping hand with their workload. Meanwhile, the iCub research team are patiently waiting and watching – much like normal parents – to see how their 'child' learns as it grows up!

6a Reading

Check these words

3 **Read the text and fill in the gaps 1-6 with a correct sentence A-H. Two sentences are extra.**

1 [ ]
2 [ ]
3 [ ]
4 [ ]
5 [ ]
6 [ ]

A How has the iCub robot been equipped to help scientists research this idea?

B Also, it has been programmed with 53 different movements.

C In short, they will be able to build robots that can actually think!

D Would you believe such a future is likely to come about?

E What's more, it will investigate it, then store what it has learnt.

F It isn't made of flesh and blood, though; it's made of metal and circuits.

G A baby, for instance, learns many things simply by touching, smelling or seeing objects around it.

H Do you dream of a future where robots can think and make their own decisions?

6a Reading

6 Fill in:

residential | artificial | human | helping | research | pick up

1 _____ team

2 _____ objects

3 _____ care home

4 _____ being

5 _____ hand

6 _____ intelligence

6b Vocabulary

Vocabulary from the text

1 Fill in the correct word(s). CHECK

• *develop* • *grow up*

1 Babies _____ learning skills by interacting with the environment.

2 Children who _____ in big cities have more educational facilities.

• *investigate* • *research*

3 It took Sarah six months to _____ her topic before she started to write her book.

4 "What's that strange smell coming from the kitchen?"
"I'll go and _____ !"

• *control* • *manage*

5 The joke the student told was so funny that the teacher couldn't _____ her laughter.

6 Will scientists ever _____ to find a cure for the common cold?