

Inglês

Esta é uma prova que visa a avaliar sua compreensão de textos escritos em inglês. Leia os textos atentamente antes de responder às perguntas por meio de frases e preste atenção aos comandos sobre a língua da resposta.

Texto I

news

The 'crumb' that could have exterminated the dinosaurs

Charles Arthur
Science Editor

An object like this may have brought an end to the reign of the dinosaurs 65 million years ago.

It is an interplanetary crumb, dating back to the formation of the solar system, which was never baked into the recipe of the rest of the planets; an asteroid, 33 miles across, whose surface reflects so little light that it is twice as dark as charcoal – meaning that only computer enhancement makes it visible.

The US space agency Nasa released the pictures, which were captured during a flypast of Asteroid 253 – or "Mathilde"

as it is better known. The images were taken by the Near Earth Asteroid Rendezvous (Near) spacecraft, 186 million miles from the sun – beyond the orbit of Mars. The Near spacecraft passed just 750 miles from Mathilde.

Its irregular shape includes many impact craters – some almost half as wide as its diameter – and show that Mathilde has "a very tortured past," according to Donald Yeomans of Nasa's Jet Propulsion Laboratory, who heads the radio science team observing the object.

The Nasa scientists have been surprised by the size and depth of the craters in the asteroid. The fact that it has not broken apart, despite the apparent signs of damage, suggests that it is less dense, yet also more uniform, than a solid piece of rock.

The team have determined that it must be made of carbon-

rich material, and that it formed early in the creation of the solar system, but was not pulled in to any of the processes that formed the planets between 4 and 5 billion years ago.

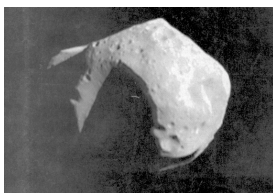
Those would melt and mix the materials of any object, making them increasingly reflective – that is, raising their albedo. The Earth, for example, reflects 33 per cent of the sun's light, meaning its albedo is 0.37. Mathilde rates just 0.03.

Mathilde lies, like millions of other asteroids, in the gap between Mars and Jupiter.

Occasionally some asteroids fall out of those orbits towards the planets; hundreds are believed to be scattered throughout the solar system, some close enough to pose a threat to Earth.

Many scientists believe one such asteroid crashed into the Gulf of Mexico and caused drastic climate changes which killed off the dinosaurs.

The data gathered in the latest fly-by may help scientists to detect them in future, and even to decide how best to deflect them from hitting Earth, if that becomes necessary.



Rock of ages: Could this barely visible "interplanetary crumb" have ended the reign of the dinosaurs?

THE INDEPENDENT
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p. 12

Questão 01

RESPONDA EM PORTUGUÊS

O asteroide Mathilde é apresentado no texto por meio de algumas de suas características físicas.

- A) Descreva as características que se referem a formato e luminosidade.
- B) Mencione as características físicas que os cientistas presumem que o asteroide possua.

Questão 02

ANSWER IN ENGLISH

The new theory presented by the text in relation to the extinction of dinosaurs resulted from scientists' observation of a fact and the development of a hypothesis.

- A) Indicate the fact.
- B) State the hypothesis which gave birth to this theory.

Texto II

THIS WEEK

In the mind's eye

It's all one to the brain whether you're inspecting a chair, a chimp or a human face

WHEN people see a face, a particular spot in the brain leaps into action. This has led some scientists to believe it has a special "face identification area". But now researchers say that everything from a Tabasco bottle to a pelican can light up the same spot. They argue that the area in question recognises all kinds of subtle visual discrimination, not just faces.

Earlier research into how we see faces produced unexpected results. Scientists found, for instance, that people might not recognise a picture of their boss if it were upside down. Similarly, if they saw an image of their lover's eyes slightly further apart than normal, they could not choose the appropriate mouth from a selection. Such confusion did not happen with other objects.

To find out more, neuroscientists compared scans of brain activity as people looked at different things, such as faces and chairs. Looking at faces turned out to excite a specific spot. For some researchers, this



On cue: identification involves heightened brain activity

was proof that recognising a face is an innate human ability located in a special part of the brain.

But for Isabel Gauthier of Yale University and her colleagues, the theory did not ring true. To test it, they used functional magnetic resonance imaging to see which parts of the brain were active when people did certain tasks. Eight volunteers were asked to identify pictures of 90 common objects.

When shown a picture of a Ferrari, for instance, they were asked if it was a car, then if it was a Ferrari. They were asked similar questions about other categories and sub-categories such as "bird—pelican" or "bottle—Tabasco bottle".

In this month's *Current Biology*, the team reports that when people identified the sub-categories, their brain patterns were almost identical to those observed when people looked at faces. "We were basically getting the face area—or what has been reported by many people as being the face area," says Gauthier.

Gauthier thinks earlier studies failed to take account of the fact that people do not scrutinise chairs as carefully as faces. It is enough to recognise that a chair is a chair, but because recognising faces is so important socially, humans are expert at taking in small details about them. "That's just what we do with faces," says Gauthier. "It's a useful social cue."

Alison Motluk

NewScientist

20 September 1997

p. 14

Questão 03

RESPONDA EM PORTUGUÊS

A realização de novas pesquisas modificou a opinião existente sobre a área do cérebro responsável pela discriminação visual.

De acordo com os resultados publicados na revista *Current Biology*, um dado e seu significado não foram observados nas pesquisas anteriores.

A) Identifique esse dado.

B) Indique por que esse dado foi relevante para os resultados da pesquisa.

Questão 04

ANSWER IN ENGLISH

Discourse markers are important elements for text comprehension as they link ideas within a text, thus creating cohesion.

A) Take from the paragraph related to the surprising results of earlier research the sentences in which each of the following ideas has been signalled by discourse markers:

- exemplification;
- comparison.

B) Take the sentence from the text in which there is an indication of a sequence of events by means of a discourse marker.

Questão 05

ANSWER IN ENGLISH

The text reports different methodological procedures and conclusions in relation to the research on the brain area responsible for face recognition.

Fill in the chart taking into account research methodologies and their corresponding conclusions.

Research methodology	Research conclusion
Visual recognition of faces and objects in different positions and distances.	(B)
(A)	The same brain area recognizes faces and sub-categories of objects and animals.

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