



Science



STUDENT NAME _____

NAME OF SCHOOL _____



TEST INSTRUCTIONS

FILL IN YOUR DETAILS

Turn to your ANSWER SHEET and fill in your name, school, grade, section, today's date, your date of birth and gender.

ANSWERING QUESTIONS

Go to the SCIENCE ANSWER SHEET.
 This test has **40 QUESTIONS**. Each question has four possible options.
 Choose the **BEST** answer from the four options, **A, B, C** or **D**.
 FILL in **ONE** circle on your answer sheet with a pencil.
 If you make a mistake, erase the pencil mark and fill in a different circle.
 You must colour the entire circle as shown below:

Correct response 	Incorrect responses 
	<small>Line Very light pencil Pen Colored pencil</small>

Marks are NOT deducted for incorrect answers.

ALL ANSWERS SHOULD BE MARKED ON YOUR ANSWER SHEET ONLY.

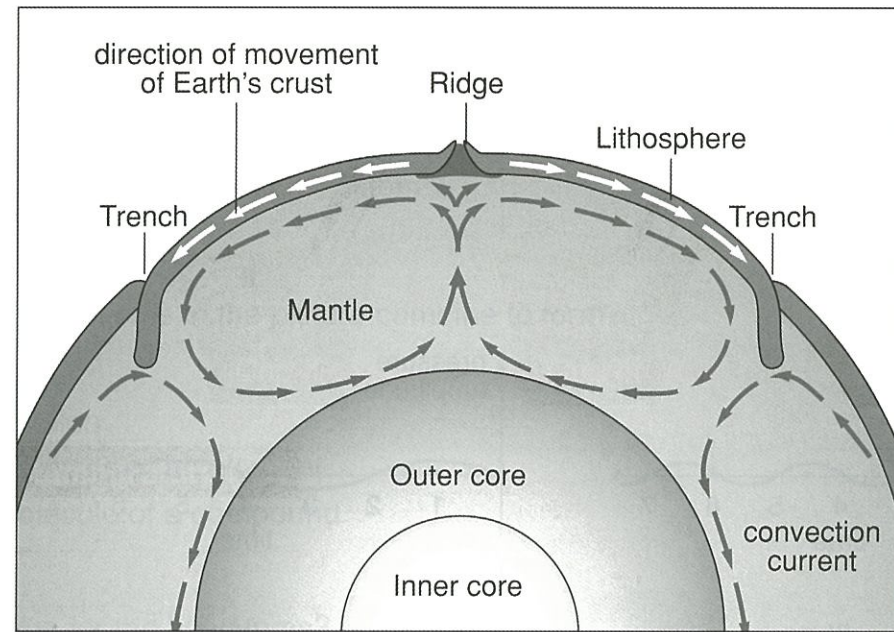
EQUIPMENT ALLOWED IN THIS TEST

You may use a 2B or B pencil for this test. You may NOT use a dictionary for this test.

TIME ALLOWED FOR TEST

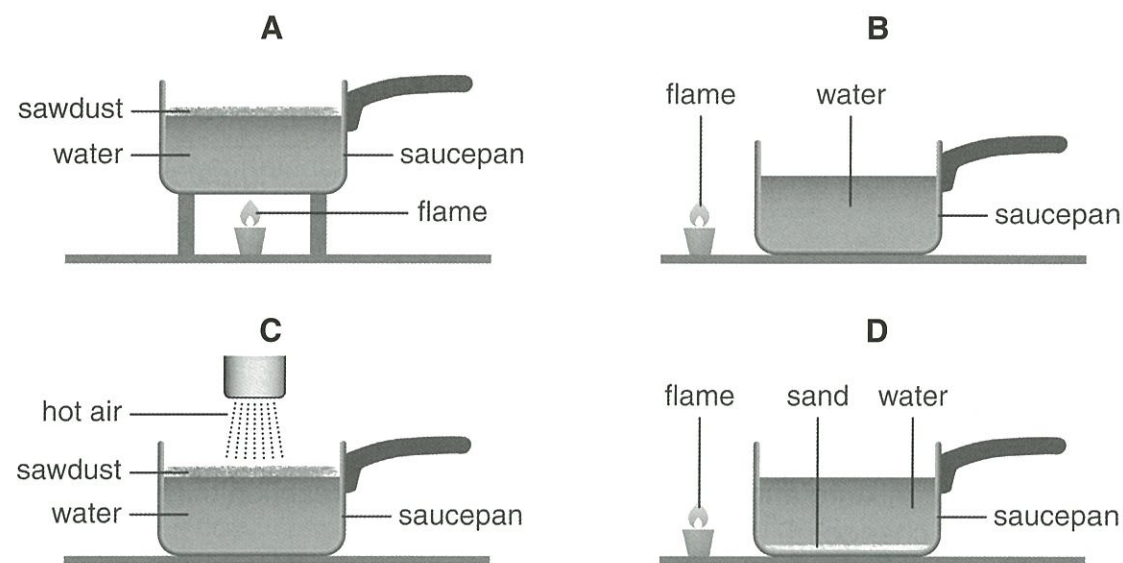
The time allowed to complete this test is **60 minutes**.

The lithosphere is the solid crust on the Earth's surface. Heat from the Earth's core causes convection currents in the liquid mantle.

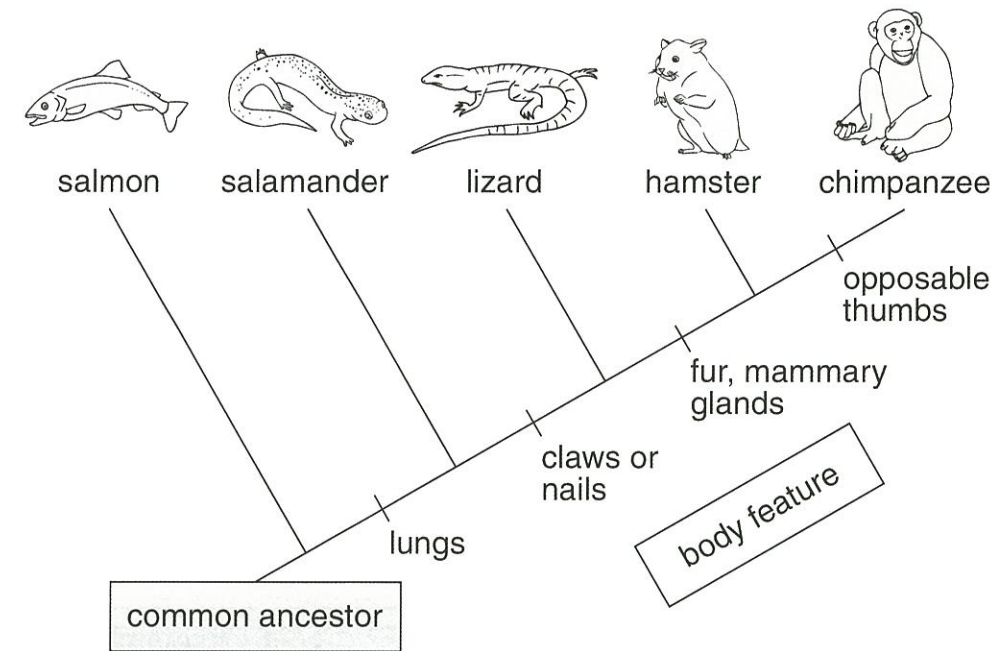


- 13 What can be concluded from the diagram?
- A The mantle is hotter than the outer core.
 - B The mantle is the thinnest internal structure of the Earth.
 - C Convection currents within the mantle can lead to movement of continents.
 - D Convection currents within the mantle can change the thickness of the lithosphere.

- 14 A student makes a model of the above diagram. Which of the following is the best model?



The picture shows how different animals evolved from a common ancestor.



- 27 Which animal is the closest relative to the salmon?

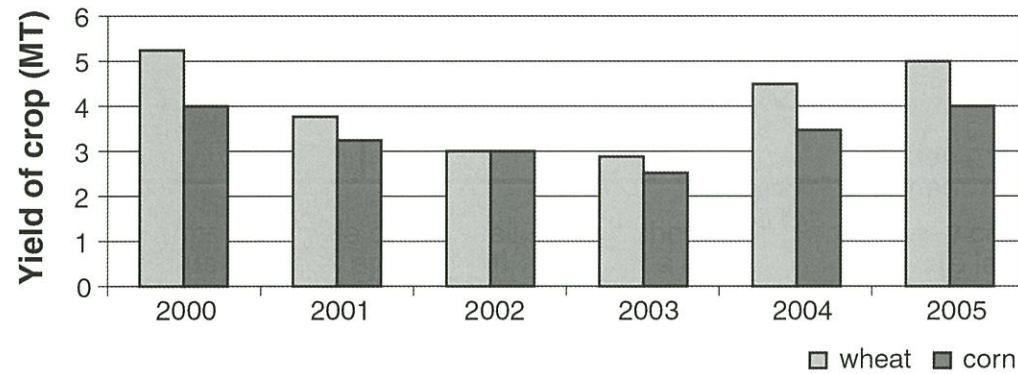
- A lizard
- B hamster
- C salamander
- D chimpanzee

- 28 Which row shows the common features between a lizard and a chimpanzee?

	Lungs	Claws or nails	Mammary glands
A	yes	no	no
B	no	yes	yes
C	yes	yes	no
D	no	no	yes

A scientist collects data on the yield of wheat and corn crops grown on two nearby farms over a six year period.

Yield of wheat and corn crops



25 The scientist concludes that a single factor affects the yield of the crops on the farms. What best supports this conclusion?

- A Environmental factors will always affect all crops equally.
- B The yields of wheat and corn show similar patterns of change.
- C The yield of wheat is consistently more than corn over the years.
- D Wheat and corn crops require the same nutrients for a good yield.

The scientist lists the environmental factors known to affect crop yield.

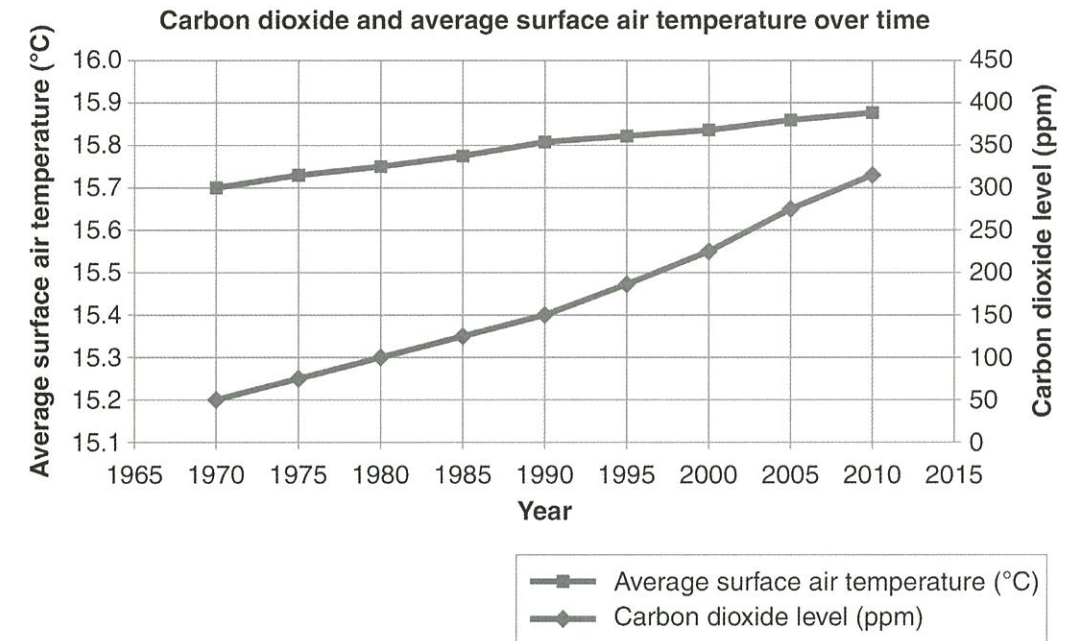
He records information about these factors from the two farms.

	Wheat						Corn					
	2000	2001	2002	2003	2004	2005	2000	2001	2002	2003	2004	2005
annual rainfall (mm)	674	700	660	680	705	698	700	690	650	720	690	680
pH	6.5	5.5	5.2	5	5.9	6	6.8	5.4	5	4.8	5.6	6.2
soil type	loam						loam					
common pests	wheat mite, aphid						stalk borer, pink stem borer					

26 Which of the factors was most likely to have caused the changes in crop yield?

- A rainfall
- B pH
- C soil type
- D common pests

The graph shows the Earth's average surface air temperature and atmospheric carbon dioxide concentration since 1970.



15 Which statement about the graph is most likely correct?

- A As carbon dioxide levels have increased so has surface air temperature.
- B Increased surface air temperatures have caused the carbon dioxide levels to increase.
- C Surface air temperatures have not been affected by an increase in global carbon dioxide.
- D A third unknown factor has caused the temperature and carbon dioxide levels to increase.

16 The use of which energy source has been most responsible for the change in carbon dioxide levels?

- A solar
- B coal
- C wind
- D nuclear

17 How will increased air temperature affect the temperature of the oceans?

- A The oceans will get warmer as they absorb heat from the air.
- B Water from the oceans will cool the air and this will cool the oceans.
- C The effect of air temperature on the temperature of the oceans is not known.
- D There will be no effect, because the air and oceans are separate from each other.

18 How many non-identical chromosome pairs are in a human cell?

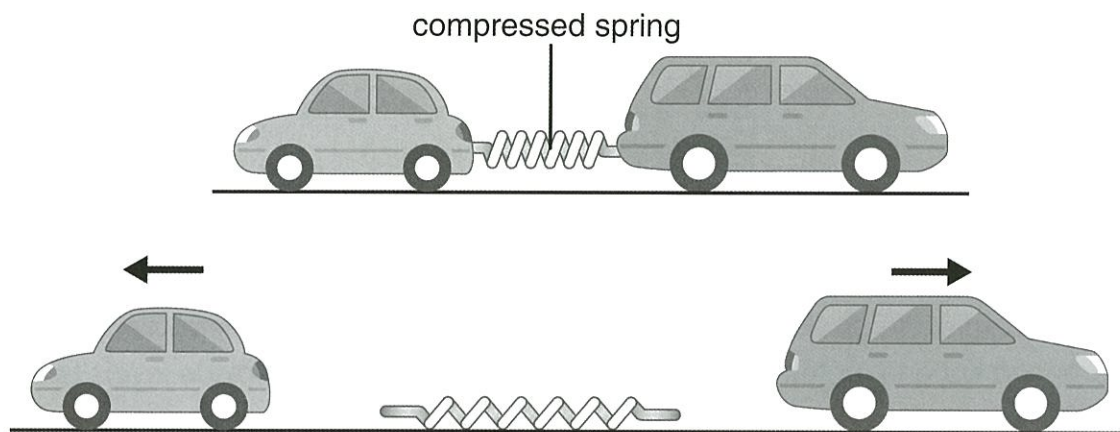
- | | | | |
|----------|----------|----------|----------|
| A | B | C | D |
| 1 | 11 | 22 | 23 |

19 How many chromosomes are present in a human gamete?

- | | | | |
|----------|----------|----------|----------|
| A | B | C | D |
| 1 | 22 | 23 | 46 |

Two stationary cars have a compressed spring placed between them. The bigger car is heavier.

The cars are released and they are pushed apart by the spring.



20 How does the pushing force of the spring act on the two cars?

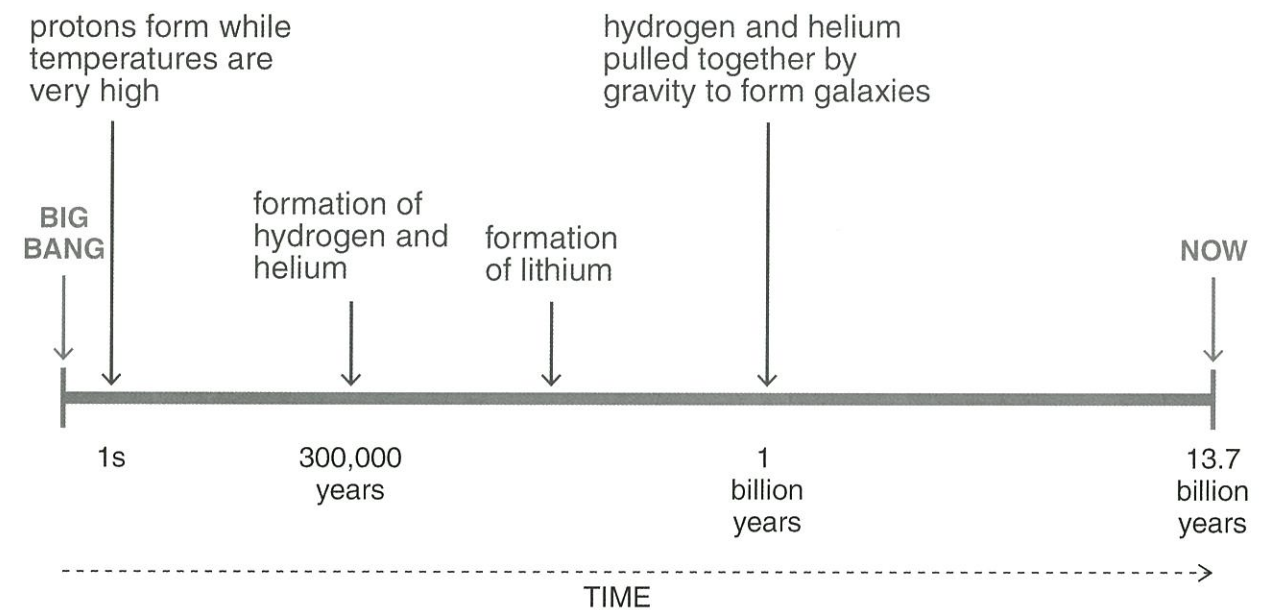
- A The heavier car is pushed with a greater force.
- B The lighter car is pushed with a greater force.
- C Both the cars are pushed apart with an equal force.
- D The cars are pushed according to their masses.

21 After some time the cars stop moving.

What causes the cars to stop?

- | | | | |
|----------|----------|---------------|----------|
| A | B | C | D |
| gravity | inertia | loss of force | friction |

The diagram shows some of the stages in the development of the universe based on the Big Bang theory.



Important stages in the formation of the universe, according to the Big Bang theory

22 The Big Bang Theory is a scientific theory.

Which characteristic do all scientific theories share?

- A Scientific theories are proven explanations of known events.
- B Once a scientific theory has been established it never changes.
- C Scientific theories are only developed within physics and cosmology.
- D All scientific theories contain scientifically testable ideas.

23 How are the heavier elements formed from hydrogen and helium?

- A fusion reactions
- B fission reactions
- C chemical reactions
- D state changes

24 Where did elements heavier than lithium form?

- A in stars and supernova
- B on the edges of black-holes
- C in the space between galaxies
- D on the surface of newly formed planets