91606M

916065

NEW ZEALAND QUALIFICATIONS AUTHORITY
MANA TOHU MĀTAURANGA O AOTEAROA

QUALIFY FOR THE FUTURE WORLD
KIA NOHO TAKATŪ KI TŌ ĀMUA AO!

3

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Koiora, Kaupae 3, 2015

91606M Te whakaatu māramatanga ki ngā ia i roto i te kunenga tangata

2.00 i te ahiahi Rāhina 23 Whiringa-ā-rangi 2015
Whiwhinga: Whā

Paetae	Kaiaka	Kairangi
Te whakaatu māramatanga ki ngā ia i roto i te kunenga tangata.	Te whakaatu māramatanga hōhonu ki ngā ia i roto i te kunenga tangata.	Te whakaatu māramatanga matawhānui ki ngā ia i roto i te kunenga tangata.

Tirohia mēnā e rite ana te Tau Ākonga ā-Motu (NSN) kei runga i tō puka whakauru ki te tau kei runga i tēnei whārangi.

Me whakamātau koe i ngā tūmahi KATOA kei roto i tēnei pukapuka.

Mēnā ka hiahia whārangi atu anō mō ō tuhinga, whakamahia ngā whārangi wātea kei muri o tēnei pukapuka, ka āta tohu ai i ngā tau tūmahi.

Tirohia mēnā e tika ana te raupapatanga o ngā whārangi 2–15 kei roto i tēnei pukapuka, ka mutu, kāore tētahi o aua whārangi i te takoto kau.

ME HOATU RAWA KOE I TĒNEI PUKAPUKA KI TE KAIWHAKAHAERE Ā TE MUTUNGA O TE WHAKAMĀTAUTAU.

TAPEKE

MĀ TE KAIMĀKA ANAKE

© Mana Tohu Mātauranga o Aotearoa, 2015. Pūmau te mana.
Kia kaua rawa he wāhi o tēnei tuhinga e whakahuatia ki te kore te whakaaetanga tuatahi a te Mana Tohu Mātauranga o Aotearoa.

MĀ TE KAIMĀKA ANAKE

TŪMAHI TUATAHI

Ko tētahi āhuatanga tino rerekē o tēnei mea te tangata ko te tū matika. I roto i ngā whakatauritenga ki ngā āhuatanga anga kōiwi o ngā tāngata onāianei me ngā "hominid" e ora tonu ana, pēnei i te makinui, makiriki rānei, ka kitea he maha ngā āhuatanga matua e hāngai ana ki te whakawhitinga mai i te momo haere waewhā ki te momo haere waerua.

E whakaaturia ana ētahi o ngā āhuatanga matua i raro nei.

I runga i ngā here manatārua, kāore e whakaaetia te whakaaturanga o tēnei rauemi i konei.

I runga i ngā here manatārua, kāore e whakaaetia te whakaaturanga o tēnei rauemi i konei.

I runga i ngā here manatārua, kāore e whakaaetia te whakaaturanga o tēnei rauemi i konei.

I runga i ngā here manatārua, kāore e whakaaetia te whakaaturanga o tēnei rauemi i konei.

He mea urutau mai i: Anna Roberts & Maria Sinclair, *ESA Study Guide: Level 3 Biology* (Tāmaki Makaurau: ESA Publications (NZ) Ltd, 2013), wh 275–277

Matapakitia te hiranga o te haere waerua i roto i te whanaketanga o ngā tāngata onamata mā te hono i ngā āhuatanga anga kōiwi ki tō rātou hiranga urutau.

I tō tuhinga, me:

- whakaahua mai te tikanga o ngā kupu haere waewhā me te haere waerua
- whakamārama he pēhea te tuku taunakitanga o ētahi āhuatanga anga kōiwi e toru (i runga ake) mō te huri o te nekehanga ki te haere waerua
- parahau te take e tino hira ai te haere waerua ki te kunenga o ngā tāngata onamata.

He wāhi anō mō tō tuhinga mō tēnei tūmahi kei te whārangi 4 kei te whārangi 5.

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QUESTION ONE

A distinguishing feature of hominins is habitual bipedalism. Comparisons of skeletal features of modern humans and extant (living) hominids such as the gorilla or chimpanzee, reveal several key features that are associated with the transition from quadrupedal species to bipedal species.

Some of the most important features are shown below.

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Adapted from: Anna Roberts & Maria Sinclair, *ESA Study Guide: Level 3 Biology* (Auckland: ESA Publications (NZ) Ltd, 2013), pp 275–277

Discuss the importance of bipedalism in the development of hominins by linking the skeletal features to their adaptive significance.

In your answer:

- describe what is meant by the terms quadruped and biped
- explain how any three of the skeletal features (shown above) provide evidence for the form of locomotion changing to bipedalism
- justify why bipedalism was so significant to the evolution of hominins.

There is more space for your answer to this question on pages 4 and 5.

MĀ TE KAIMĀKA ANAKE

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MĀ TE KAIMĀKA ANAKE

TŪMAHI TUARUA

Hoahoa 1: Ahurea Utauta	Hoahoa 2: Ahurea Utauta	Hoahoa 3: Ahurea Utauta
I runga i ngā here manatārua, kāore e whakaaetia te whakaaturanga o tēnei rauemi i konei.	*I runga i ngā here manatārua, kāore e whakaaetia te whakaaturanga o tēnei rauemi i konei.*	*I runga i ngā here manatārua, kāore e whakaaetia te whakaaturanga o tēnei rauemi i konei.*
http://zinken.typepad.com/palaeo/images	https://en.wikipedia.org/wiki/Stone_tool#/media	https://upload.wikimedia.org/wikipedia/commons/8/89

He nui ngā pānga o te kauneke o te whakamahi utauta me te ahi ki te kunenga mai o ngā tāngata onamata.

Matapakitia ngā tino pānga pea o ngā utauta rerekē me te ahi ki ngā momo tāngata onamata rerekē, me ngā ia kunenga ka taea te tūhono ki ēnei whanaketanga.

I tō tuhinga, me:

- tautohu ngā ahurea utauta e toru e whakaaturia ana ki ngā hoahoa i runga ake, ā, me tūhono tētahi momo tāngata onamata ki ia momo utauta
- whakamārama ngā ia e whakaaturia ana ki te whanaketanga o ngā ahurea utauta i runga ake, ā, he pēhea te whakaatu a tēnei i te anga whakamua o te kunenga ahurea o ngā tāngata onamata
- matapaki ngā tino pānga pea o te ahi me te whakamahi, te whanaketanga hoki o ngā utauta ki te kunenga koiora o ngā tāngata onamata.

He wāhi anō mō tō tuhinga mō tēnei tūmahi kei te whārangi 8.

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QUESTION TWO

Tool Culture Figure 1	Tool Culture Figure 2	Tool Culture Figure 3
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http://zinken.typepad.com/palaeo/images	https://en.wikipedia.org/wiki/Stone_tool#/media	https://upload.wikimedia.org/wikipedia/commons/8/89

The advance of the use of tools and fire had many effects on the evolution of hominins.

Discuss the likely impacts that the different tools and fire had on the different hominin species, and the evolutionary trends that can be linked to these developments.

In your answer:

- identify the three tool cultures as shown in the diagrams above, and link a species of hominin to each tool type
- explain the trends shown in the development of the tool cultures above, and how this shows a progression in the cultural evolution of the hominins
- discuss the likely effects that fire and the use and development of tools had on the biological evolution of the hominins.

There is more space for your answer to this question on page 9.

MĀ TE KAIMĀKA ANAKE

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MĀ TE KAIMĀKA ANAKE

TŪMAHI TUATORU

I runga i ngā here manatārua, kāore e whakaaetia te whakaaturanga o tēnei rauemi i konei.

http://madamepickwickartblog.com/wp-content/uploads/2012/01/cannibal4.jpg

I runga i ngā here manatārua, kāore e whakaaetia te whakaaturanga o tēnei rauemi i konei.

http://io9.com/how-farming-almost-destroyed-human-civilization-1659734601

Ko tētahi o ngā tino tohu nui rawa i roto i te kunenga mai o te tangata ko te whakawhiti mai i te ahurea kaiaruaru-kaikohikohi ki te ahuwhenua, mahi pāmu rānei. Ko te whakatau a ngā tohunga pūtaiao ko te āhua nei i whakawhiti ki te mahi pāmu nā te hekenga me te whakakapi taupori, ehara nā te tuku ā-ahurea mai i ngā taupori kaipāmu ki ngā kaiaruaru-kaikohikohi.

Matapakitia ngā ia ahurea me ngā painga me ngā kino o te whakawhiti mai i te ahurea kaiaruaru-kaikohikohi ki te ahuwhenua.

I tō whakautu me:

- whakaahua te āhua noho o tētahi kaiaruaru-kaikohikohi me te āhua noho o tētahi kaipāmu onamata
- whakamārama ngā ia ahurea i roto i te whakawhiti mai i te ahurea kaiaruaru-kaikohikohi ki te ahuwhenua
- matapaki ngā painga me ngā kino i roto i te whakawhititanga ki te āhuwhenua mai i te ahurea kaiaruaru-kaikohikohi.

He wāhi anō mō tō tuhinga mō tēnei tūmahi kei te whārangi 12.

QUESTION THREE

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http://madamepickwickartblog.com/wp-content/uploads/2012/01/cannibal4.jpg

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http://io9.com/how-farming-almost-destroyed-human-civilization-1659734601

One of the most important milestones in human evolution was the transition from hunter-gatherer to agriculture or farming. Scientists have concluded that it is likely that the transition to farming was due to migration and replacement of existing populations, and not due to cultural transmission from farmers to hunter-gatherer populations.

Discuss the cultural trends and any advantages and disadvantages a transition from hunter-gatherer to agriculture involved.

In your answer you should:

- describe the lifestyle of a hunter-gatherer and the lifestyle of an early farmer
- explain the cultural trends involved in the transition from hunter-gatherer to agriculture
- discuss any advantages and disadvantages a transition to agriculture from hunter-gatherer involved.

There is more space for your answer to this question on page 13.

MĀ TE KAIMĀKA ANAKE

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He whārangi anō ki te hiahiatia.
Tuhia te (ngā) tau tūmahi mēnā e tika ana.

TAU TŪMAHI

MĀ TE KAIMĀKA ANAKE

Extra paper if required.
Write the question number(s) if applicable.

QUESTION NUMBER

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English translation of the wording on the front cover

Level 3 Biology, 2015

91606M Demonstrate understanding of trends in human evolution

2.00 p.m. Monday 23 November 2015
Credits: Four

91606M

Achievement	Achievement with Merit	Achievement with Excellence
Demonstrate understanding of trends in human evolution.	Demonstrate in-depth understanding of trends in human evolution.	Demonstrate comprehensive understanding of trends in human evolution.

Check that the National Student Number (NSN) on your admission slip is the same as the number at the top of this page.

You should attempt ALL the questions in this booklet.

If you need more room for any answer, use the extra space provided at the back of this booklet and clearly number the question.

Check that this booklet has pages 2–15 in the correct order and that none of these pages is blank.

YOU MUST HAND THIS BOOKLET TO THE SUPERVISOR AT THE END OF THE EXAMINATION.