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90929M



909295



NEW ZEALAND QUALIFICATIONS AUTHORITY
MANA TOHU MĀTAURANGA O AOTEAROA

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

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Tohua tēnei pouaka mēnā
KĀORE koe i tuhi kōrero ki
tēnei pukapuka

Mātai Koiora, Kaupae 1, 2022

90929M Te whakaatu māramatanga ki ngā ariā koiora e pā ana ki te whāngote hei kaikame

Ngā whiwhinga: E toru

Paetae	Kaiaka	Kairangi
Te whakaatu māramatanga ki ngā ariā koiora e pā ana ki te whāngote hei kaikame.	Te whakaatu i te hōhonu o te māramatanga ki ngā ariā koiora e pā ana ki te whāngote hei kaikame.	Te whakaatu i te tōtōpū o te māramatanga ki ngā ariā koiora e pā ana ki te whāngote hei kaikame.

Tirohia kia kitea ai 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 KATOĀ kei roto i tēnei pukapuka.

Mēnā ka hiahia whārangi atu anō mō ō tuhinga, whakamahia te wāhi wātea kei muri o tēnei pukapuka.

Tirohia kia kitea ai 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.

Kaua e tuhi ki tētahi wāhi e kitea ai te kauruku whakahāngai (X). Ka poroa pea taua wāhanga ka mākahia ana te pukapuka.

HOATU TE PUKAPUKA NEI KI TE KAIWHAKAHAERE HEI TE MUTUNGA O TE WHAKAMĀTAUTAU.

TE TŪMAHI TUATAHI: TE KOTĒPANA ME TE NAKUNAKU KAI

Ka whai wāhi ngā wāhanga rerekē o te pūnaha nakunaku kai ki ngā wāhanga rerekē o te tukanga nakunaku kai. He wāhi hirahira te kotēpana nō te tukanga nakunaku kai ka rere, puta noa i te pūnaha nakunaku kai.



Te Pūnaha Nakunaku Kai o te Tangata

Te mātāpuna: www.niddk.nih.gov/health-information/digestive-diseases/digestive-system-how-it-works

Whakatauritea te mahi a te kotēpana i ētahi wāhanga rerekē o te pūnaha nakunaku kai (i te pūkai, i te puku, i te kōpiro iti, i te kōpiro nui) e tika ai te nakunakua o te kai.

I tō tuhinga, me:

- whakaahua mai te tukanga o te kotēpana
- whakamārama mai te āhua o te putanga mai o te kotēpana
- matapaki te mahi a te kotēpana i ētahi wāhanga rerekē e RUA o te pūnaha nakunaku kai, me te āhua hoki o tā te kotēpana āwhina i te tukanga whānui o te nakunaku kai.

QUESTION ONE: PERISTALSIS AND DIGESTION

Different parts of the digestive system are involved in different stages of the digestion process. Peristalsis is an important part of the digestive process that occurs throughout the digestive system.



The Human Digestive System

Source: www.niddk.nih.gov/health-information/digestive-diseases/digestive-system-how-it-works

Compare and contrast the function of peristalsis in different parts of the digestive system (oesophagus, stomach, small intestine, large intestine) to ensure that food is digested efficiently.

In your answer:

- describe the process of peristalsis
- explain how peristalsis occurs
- discuss the function of peristalsis in TWO different parts of the digestive system, and how peristalsis helps the overall process of digestion.

Lined area for writing or drawing, consisting of horizontal lines.

Nā tētahi ākonga i tā tētahi hoahoa māmā hei whakaatu i ngā hanganga e kitea ana i roto i te tīngoi.

- whakaahua mai te tukanga o te mitinga o te kai kua nakunakua
- whakamārama he take i whai tīngoi ai ētahi wāhanga o te pūnaha nakunaku kai, engari kāore ētahi atu wāhanga e pērā
- matapaki te āhua o tā te tīngoi whakapiki i te whāomonga o te mitinga o te kai kua nakunakua, me ngā take e hirahira ana tēnei ki te oranga whānui o te kaikame.

QUESTION TWO: ABSORPTION

Once food has been digested, it needs to be absorbed into the bloodstream so that nutrients can be transported around the body to where they are needed. Digested food is absorbed through the villi, which are microscopic structures that line the wall of the small intestine.

A student drew a simple diagram to show the structures found inside villi.



Source: <https://socratic.org/questions/why-do-we-have-villi-in-the-small-intestine>

Discuss the process of absorption of digested food through the villi.

In your answer:

- describe the process of absorption of digested food
- explain why some parts of the digestive system have villi while other parts do not
- discuss how villi increase the efficiency of the absorption of digested food, and why this is important to the overall survival of a consumer.

Lined area for writing or drawing, consisting of horizontal lines.

Timata ai te nakunaku ā-matū me te nakunaku ā-tinana i te kai i te waha mā te mahi a ngā niho, a te arero, a te hūare, a ngā whākōkī nakunaku anō hoki.

Matapakina te āhua o te whai wāhitanga o te waha ki te tukanga o te nakunaku kai.

- whakaahua mai ngā momo nakunaku kai ka rere i te waha
- whakamārama te āhua o tā ngā whākōkī nakunaku, kei roto i te hūware, tīmata i te tukanga o te nakunaku kai i te waha
- matapaki te āhua o te mahi tahi a ngā niho, a te arero, a te hūware, a ngā whākōkī nakunaku hoki ki te whakaū i te tika o te kōkiritanga o te tukanga nakunaku kai.

Chemical and physical digestion of food begins in the mouth through the action of the teeth, tongue, saliva, and digestive enzymes.



In your answer:

**He whārangi anō ki te hiahiatia.
Tuhia te tau tūmahi mēnā e hāngai ana.**

TE TAU
TŪMAHI

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

QUESTION
NUMBER

English translation of the wording on the front cover

Level 1 Biology 2022

90929M Demonstrate understanding of biological ideas relating to a mammal(s) as a consumer(s)

Credits: Three

90929M

Achievement	Achievement with Merit	Achievement with Excellence
Demonstrate understanding of biological ideas relating to a mammal(s) as a consumer(s).	Demonstrate in-depth understanding of biological ideas relating to a mammal(s) as a consumer(s).	Demonstrate comprehensive understanding of biological ideas relating to a mammal(s) as a consumer(s).

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.

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

Do not write in any cross-hatched area (▨). This area may be cut off when the booklet is marked.

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