90929M

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NEW ZEALAND QUALIFICATIONS AUTHORITY
MANA TOHU MĀTAURANGA O AOTEAROA

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

Koiora, Kaupae 1, 2018

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

9.30 i te ata Rātū 27 Whiringa-ā-rangi 2018
Whiwhinga: Toru

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

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 koe mō ō tuhinga, whakamahia ngā whārangi wātea kei muri o tēnei pukapuka, ka āta tohu ai i te tau tūmahi.

Tirohia mēnā e tika ana te raupapatanga o ngā whārangi 2–19 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

TŪMAHI TUATAHI: NGĀ PŪMUA WHĀKŌKĪ ME TE NAKUNAKU I ROTO I NGĀ KAIOTA, NGĀ KAIKIOTA, ME NGĀ KAIKIKO

Kei roto ngā pūmua whākōkī i te nakunaku o ngā kai i roto i ngā kaiota, ngā kaikiota me ngā kaikiko. Whakamahia te rauemi i raro hei āwhina ki te whakatutuki i ngā mahinga.

Ngā pūnaha nakunaku

Kaiota

www.mnn.com/earth-matters/animals/stories/20-things-you-didnt-know-about-cows

http://slideplayer.com/

Kaikiota

https://blogs.fco.gov.uk/leighturner/2017/05/15/an-encounter-with-a-viennese-wild-boar-wildschwein/

http://slideplayer.com/slide/4687656/

Kaikiko

http://globalpetfoodsnb.ca/2015/02/cat-obligate-carnivore/

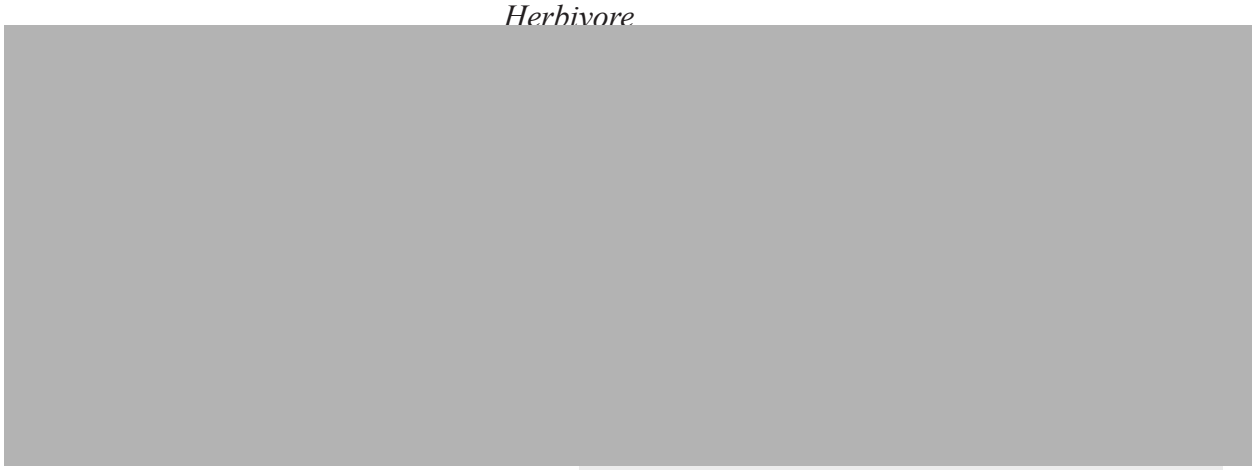
www.123rf.com/photo_46796459_stock-vector-digestive-system-of-the-cat-medical-veterinary-vector-illustration.html

QUESTION ONE: ENZYMES AND DIGESTION IN HERBIVORES, OMNIVORES, AND CARNIVORES

Enzymes are involved in digestion of food in herbivores, omnivores, and carnivores. Use the resource material below to help you answer the questions.

Digestive systems

Herbivore



www.mnn.com/earth-matters/animals/stories/20-things-you-didnt-know-about-cows

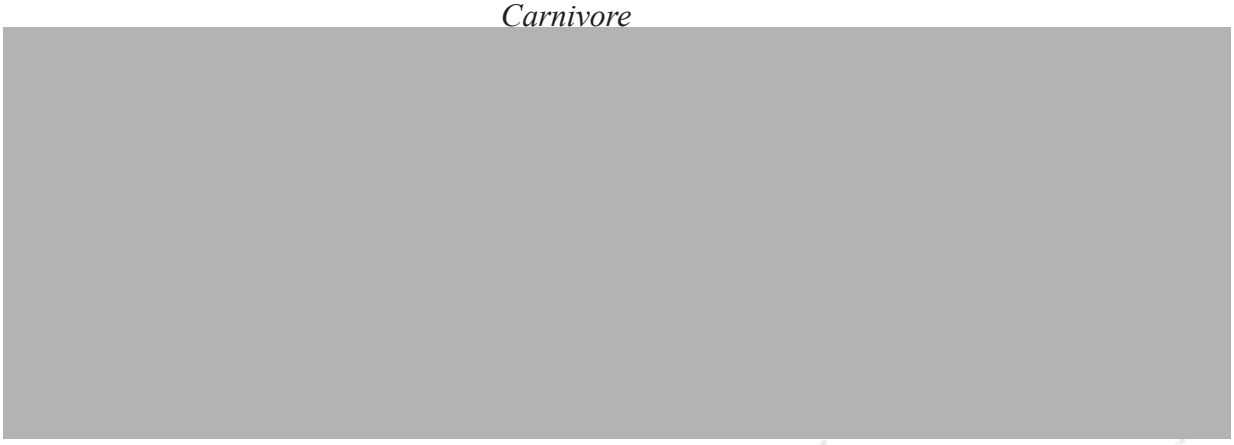
http://slideplayer.com/

Omnivore

https://blogs.fco.gov.uk/leighturner/2017/05/15/an-encounter-with-a-viennese-wild-boar-wildschwein/

http://slideplayer.com/slide/4687656/

Carnivore



http://globalpetfoodsnb.ca/2015/02/cat-obligate-carnivore/

www.123rf.com/photo_46796459_stock-vector-digestive-system-of-the-cat-medical-veterinary-vector-illustration.html

Whakatauritehia ngā pūmua whākōkī kei roto i te tukanga o te nakunaku i roto i te puku o ngā kaiota, kaikiota, me ngā kaikiko.

MĀ TE KAIMĀKA ANAKE

I tō tuhinga, me:

- whakaahua te hanganga me te mahinga a ngā pūmua whākōkī e whakamahia ana i roto i te nakunaku kai
- whakamārama ka pēhea pea te whakaawe i te hanganga me te mahinga a ngā pūmua whākōkī e ngā take rerekē i roto i te puku o ngā kaiota, kaikiota, me ngā kaikiko
- matapaki he aha i rerekē ai ngā momo me ngā wāhi o ngā pūmua whākōkī i roto i te puku o ngā kaiota, kaikiota, me ngā kaikiko.

He wāhi anō mō tō tuhinga mō tēnei tūmahi kei te whārangi 6.

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Compare and contrast the enzymes involved in the process of digestion in the gut of herbivores, omnivores, and carnivores.

In your answer:

- describe the structure and function of enzymes used in food digestion
- explain how the structure and function of enzymes may be affected by different conditions in the gut of herbivores, omnivores, and carnivores
- discuss why there are differences in type and location of enzymes in the gut of herbivores, omnivores, and carnivores.

There is more space for your answer to this question on page 7.

MĀ TE KAIMĀKA ANAKE

ASSESSOR'S USE ONLY

TŪMAHI TUARUA: TE MIMITITANGA ME TE WHAKAWAIMEHATANGA O NGĀ KAI NAKUNAKU

MĀ TE KAIMĀKA ANAKE

Ina nakunakutia te kai, me mimiti atu ki roto i te ia toto. He hanganga ngā tīngoingoi e mimiti ana i ngā kai nakunaku. E whakaatu ana ngā hoahoa i raro i te tīngoingoi me ētahi hanganga hāngai.

www.slideshare.net/mbregar/the-digestive-system-2010pptm

Matapakihia te hiranga o ngā tīngoingoi ki ngā tukanga whānui o te mimititanga me te whakawaimehatanga.

I tō tuhinga, me:

- whakaahua ngā tukanga o te mimititanga me te whakawaimehatanga
- whakamārama te take he aha e nui ake ai ngā tīngoingoi i ētahi wāhanga o te pūnaha nakunaku i ētahi atu
- matapaki he pēhea te tuku a te hanganga me te mahinga a te tīngoingoi i ngā kai nakunaku kia tōtika ake te mimiti, te whaiwaimeha hoki e te tinana.

He wāhi anō mō tō tuhinga mō tēnei tūmahi kei te whārangi 10.

QUESTION TWO: ABSORPTION AND ASSIMILATION OF DIGESTED FOOD

ASSESSOR'S USE ONLY

Once food is digested, it needs to be absorbed into the bloodstream. Villi are structures that absorb digested food. The diagrams below show villi and some associated structures.

www.slideshare.net/mbregar/the-digestive-system-2010pptm

Discuss the importance of villi to the overall processes of absorption and assimilation.

In your answer:

- describe the processes of absorption and assimilation
- explain why some parts of the digestive system have more villi than other parts
- discuss how the structure and function of the villi allow digested food to be efficiently absorbed and assimilated by the body.

There is more space for your answer to this question on page 11.

MĀ TE KAIMĀKA ANAKE

ASSESSOR'S USE ONLY

TŪMAHI TUATORU: TE KAWE ME TE WHAKAMAHINGA O NGĀ KAI NAKUNAKU

MĀ TE KAIMĀKA ANAKE

Ina oti ana te nakunaku me te mimititanga o te kai, me kawe haere e te tinana ki ngā wāhi ka whakamahia.

Ngā wāhi e whakamahia ana te pūngao i roto i te tinana

www.saskwellness.com/fatigue-and-vitality/

Matapakihia te āhua o te mahi tahi a te pūnaha nakunaku me te pūnaha toto kia mātua whakarite ai ka whiwhi ngā pūtau tinana i ngā taiora e hiahiatia ana.

I tō tuhinga, me:

- whakaahua te tukanga o te tukupūngao ā-pūtau
- whakamārama he pēhea te kawe haere a te pūnaha toto i ngā hua o te nakunaku, pērā i te kūhuka, puta noa i te tinana
- matapaki he aha ngā pūtau i ētahi wāhanga o te tinana i hiahia i ngā kūhuka nui ake i ētahi atu, ā, he pēhea te kawe i te kūhuka kia kakama ake.

He wāhi anō mō tō tuhinga mō tēnei tūmahi kei te whārangi 14.

QUESTION THREE: TRANSPORT AND USE OF DIGESTED FOOD

ASSESSOR'S USE ONLY

Once food has been digested and absorbed, it needs to be transported around the body to the places where it is used.

Where energy is used in the body

www.saskwellness.com/fatigue-and-vitality/

Discuss how the digestive system and circulatory system work together to ensure body cells have the nutrients they require.

In your answer:

- describe the process of cellular respiration
- explain how the circulatory system transports the products of digestion, such as glucose, around the body
- discuss why cells in some parts of the body require more glucose than others, and how this glucose is delivered efficiently.

There is more space for your answer to this question on page 15.

MĀ TE KAIMĀKA ANAKE

ASSESSOR'S USE ONLY

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

ASSESSOR'S USE ONLY

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

ASSESSOR'S USE ONLY

English translation of the wording on the front cover

Level 1 Biology, 2018

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

9.30 a.m. Tuesday 27 November 2018
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 space for any answer, use the space provided at the back of this booklet and clearly number the question.

Check that this booklet has pages 2–19 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.