

Our Changing World (Reading): Unit Standard 17363

Marine worms: The Weird and the Wonderful

Adapted from the text 'Marine worms: The Weird and the Wonderful' by Raymond Huber, pp10-17, in *Connected, 3, 2006*. Wellington: Learning Media.

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NCEA LEVEL 3	
Unit Standard	Performance Criteria
<p>Unit standard 17363, version 3</p> <p>Read independently information texts (ESOL)</p> <p>Range: at least three complete texts, each from a separate context.</p>	<p>1.1 The topic of each text is identified from the layout, headings, and graphics.</p> <p>1.2 Specific sections of each text are located.</p> <p>1.3 Any abbreviations used are interpreted to demonstrate understanding of their meaning.</p> <p>1.4 Main ideas in each text are identified and linked to subordinate ideas.</p> <p>1.5 Understanding is demonstrated of essential vocabulary within each text.</p> <p>Range: at least ten vocabulary items – meaning and grammatical form.</p> <p>1.6 The effect on meaning of at least three cohesive devices is demonstrated.</p> <p>Range: cohesive devices may include but are not limited to – conjunctions, personal pronouns, demonstrative pronouns, articles.</p>

RESOURCES

Other assessment activities for unit standard 17363:

- 'Our Changing World' (Reading): The Secret Life of Estuaries
- 'Our Changing World' (Reading): Controlling Animal Pests in New Zealand

Assessment activities, for other unit standards, that could be used in conjunction with unit standard 17363:

- Listening: 'Our Changing World' (unit standard 15009)
- Speaking: 'Our Changing World' (unit standard 17142)
- Writing: 'Our Changing World' (unit standard 17144)

Teacher Sheet: Task 1

Marine worms: The Weird and the Wonderful by *Raymond Huber*

Unit standard 17363, version 3	
Read independently information texts (ESOL)	
Level 3	5 Credits
<p>This unit standard has one element: Element 1 - Students must show that they can read at least three complete information texts, each from a separate context.</p>	
<p>This is ONE of three reading assessments needed to complete the standard.</p>	
<p>Conditions</p> <ul style="list-style-type: none">• Student responses may be oral or written.• Written responses need not be grammatically correct, but errors must not interfere with meaning.• Assistance may be given to understand the requirements of the task.• Students may use an English dictionary but not an electronic translator.	
<p>Learning contexts</p> <p>The <i>English Language Intensive Programme</i> (ELIP) Stage 3, has suggested teaching components, strategies, language features and sample texts on information report genre: 'Weta' (2c); The Planets (2d); 'Athens' (13c) and 'The Walrus' (13d).</p>	
<p>Notes for Assessors</p> <ul style="list-style-type: none">• It is important to be aware of the special notes in the standard.• Each of the three texts should be assessed at a different time as part of a wider area of study.• This assessment activity should follow class activities in which the students have had the opportunity to become familiar with the topic through a range of listening, speaking, reading and writing activities. The context and vocabulary should be familiar to the students.• The question types should also be familiar to the students and this can be achieved by including similar question types in the formative work.• Students should not have seen the text before the assessment activity.• If resubmission takes place, the assessor should ensure that the correct answers are not inadvertently indicated when scripts are returned. For example, in a true or false exercise, it would be inappropriate to indicate which ones were correct on the student's script.• Question 1 is a prediction exercise that must be completed before the students see the text. It cannot therefore be resubmitted once students have read the complete text.	

Student Sheet: Task 1

Unit standard 17363 Version 3 Read independently information texts (ESOL)	
Level 3	5 Credits
<p>Element 1: Task 1</p> <p>Name: _____</p> <p>Date: _____</p>	
<ul style="list-style-type: none"> • Do this activity in class. • You may ask the teacher to explain the instructions. • You may use an English dictionary but not an electronic translator. • Your spelling and grammar do not need to be perfect but your teacher needs to be able to understand what you mean. 	

Student checklist

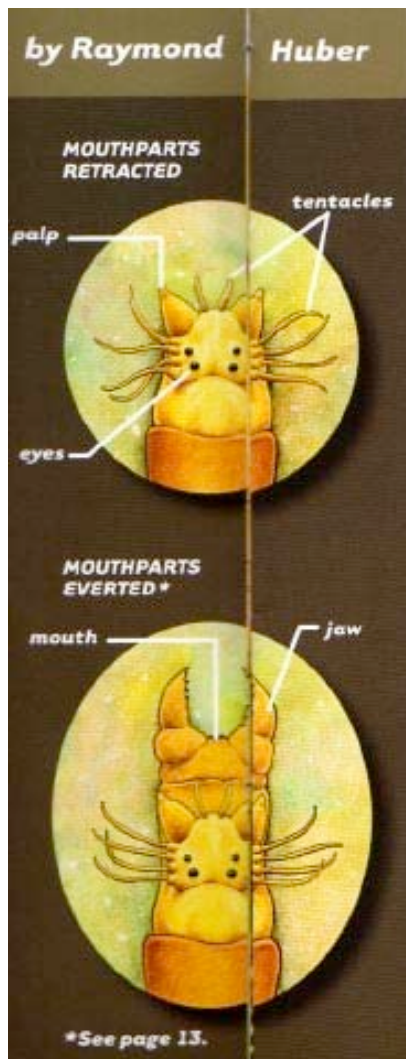
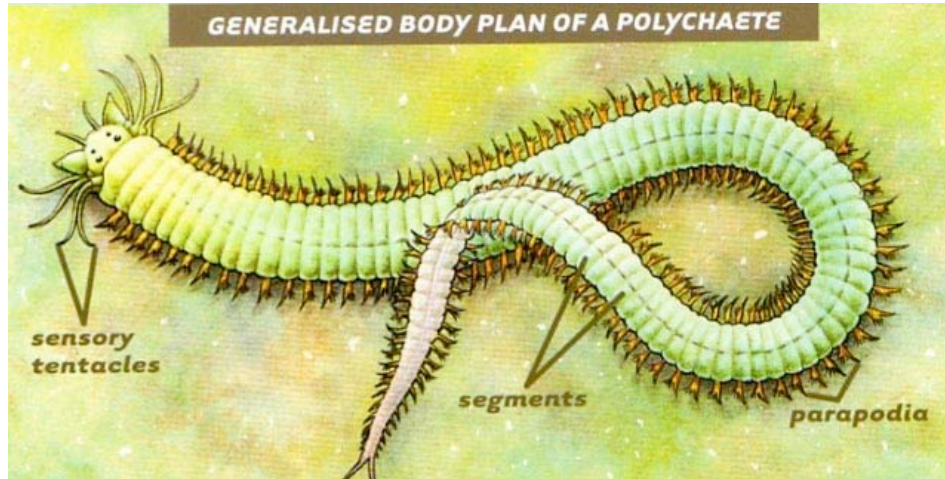
In this assessment task you will need to show that you can do the following.

Say what you think the topic of the text is by using the layout, headings and graphics to help you predict.	1.1
Find specific parts of the text and know what they will be about.	1.2
Understand what the abbreviations in the text mean.	1.3
Find the main ideas in the text and link them with supporting ideas.	1.4
Understand the meaning and grammatical form of ten important words in the text.	1.5
Show that you understand how cohesive devices (such as conjunctions, pronouns and articles) affect meaning in the text. Conjunctions e.g. However , <i>it once had a very bad rat problem</i> . Pronouns e.g. It <i>is a very beautiful place</i> . Word chains e.g. Glaciers are found in..... These frozen rivers	1.6

Text for question 1a and b

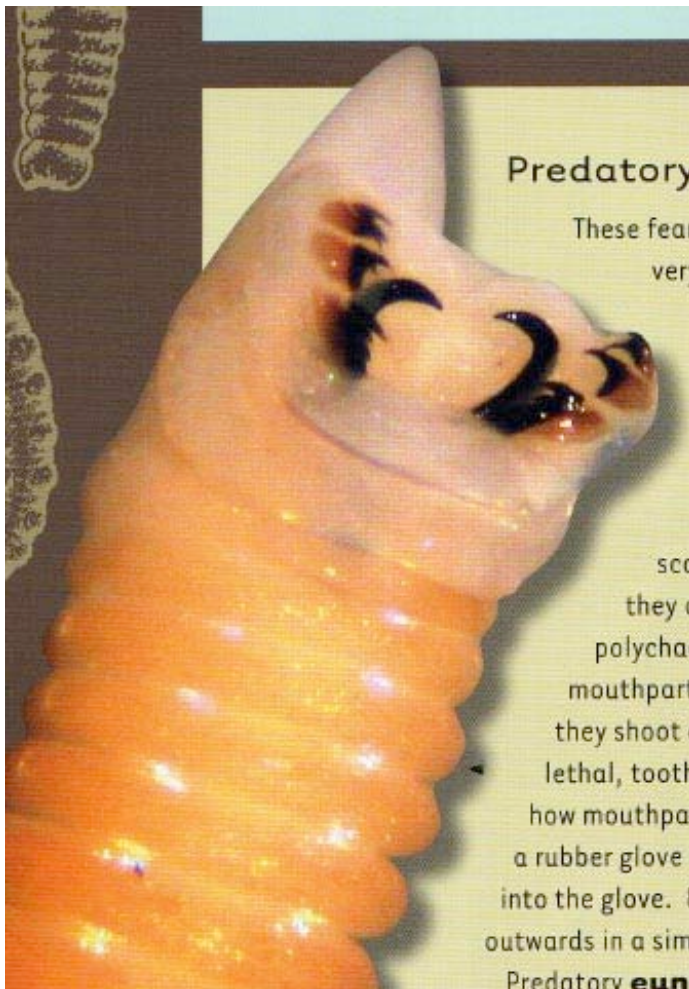
What is a Polychaete?

Generalised body plan of a polychaete



What do polychaetes look like?

Burrowing recyclers



Predatory polychaetes

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-
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Predatory

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Predatory **euni**

**Filter-feeding
tubeworms**

Tubeworms

Feather duster worms
Christmas tree worms
Tubeworms



Student sheet: Task 1

Assessment for unit standard 17363, version 3		
Read independently information texts (ESOL)		
Level 3		5 credits

Name Date.....

1. Identifying the topic of the text and predicting the content (1.1)

Before you read the text, look at the layout, headings and graphics or pictures. Do not read the text.

Complete the sentence to show what you think the text will be about.

1a. I think the text will be about

.....

1b. Identify the headings, layout features and graphics that you used to predict the topic:

Headings

Layout features

Graphics

When you have finished, give this first page to your teacher so that you can receive the rest of the assessment.
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Marine worms: The Weird and the Wonderful'

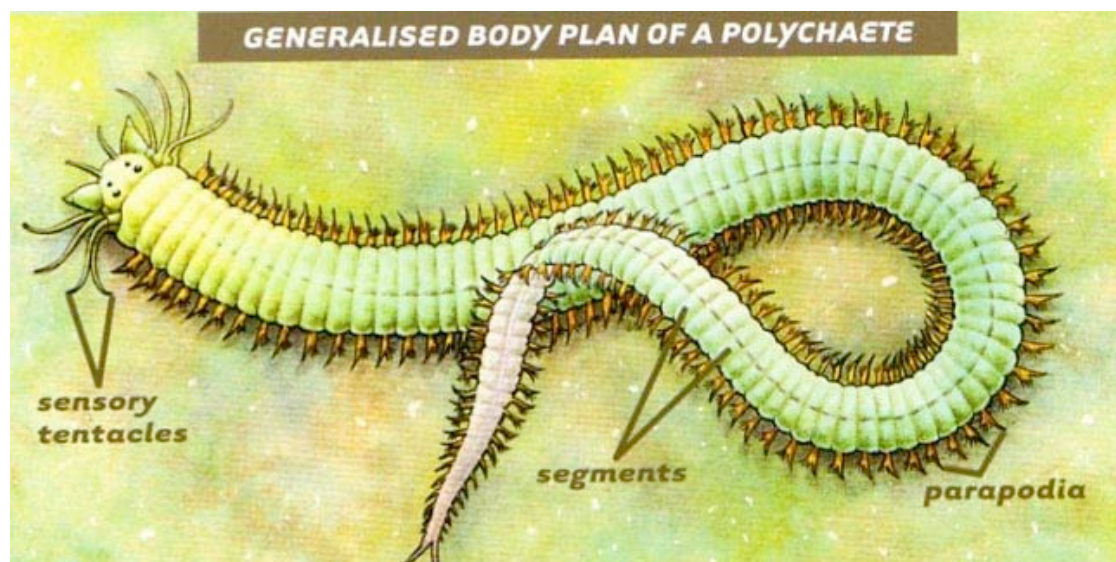
Adapted from a text by Raymond Huber, Connected 3, 2006

1 What is a Polychaete?

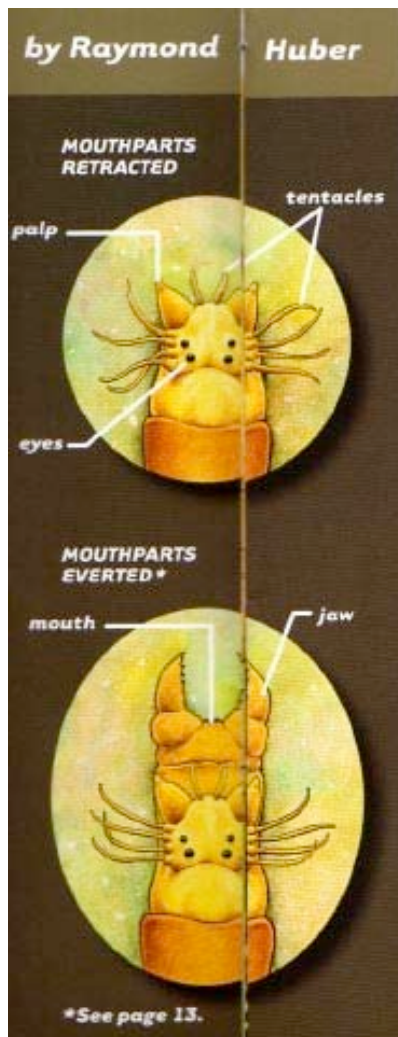
The ocean has lots of worms, in fact, some New Zealand beaches have 50,000 marine worms per square metre! This article looks at marine polychaetes (pronounced polly-keets).

2 What do polychaetes look like?

In this single group, there are an amazing variety of body forms and lifestyles. In fact polychaetes can range in length from 0.04mm up to a huge 6 metres!



- 3 However all polychaetes have some similar characteristics. They belong to the annelid group – worms whose bodies are divided into segments that can stretch and contract. Unlike most worms, polychaetes are hairy. Polychaete hairs can be many different shapes and grow from the worms' tiny parapodia (feet). Polychaetes have two parapodia per segment. The front end of a polychaete has many sense organs, including eyes, tentacles and palps. Palps are probing structures, which are used to find and handle food. A polychaete's mouth parts are often hidden inside its throat.



- 4 There are three main groups of polychaetes.

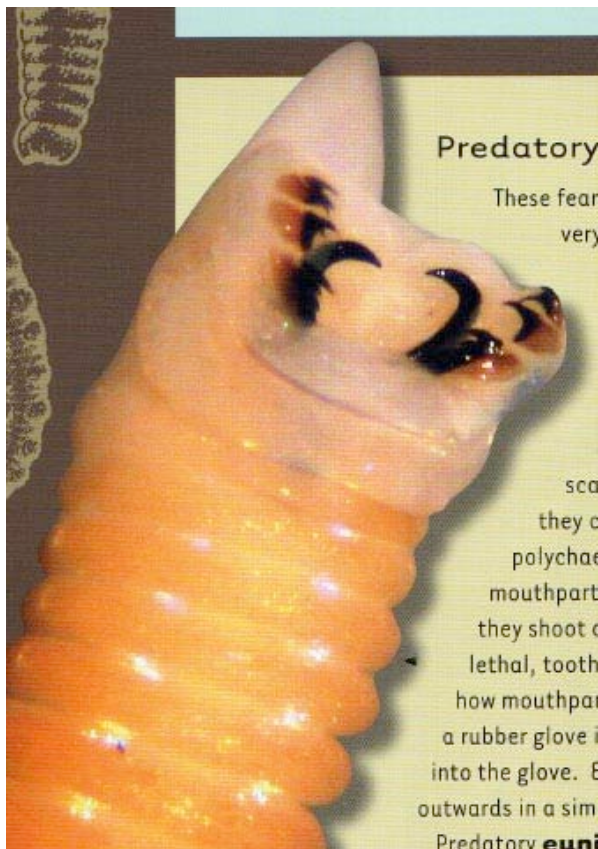
Burrowing recyclers

- 5 Burrowing worms help keep the oceans healthy. Lugworms are an example of a burrowing worm that is very common in New Zealand. When they burrow on the sea floor they swallow lots of mud and sand. Because of this their parapodia and bristles are small. They digest the remains of plants, animals and microscopic life and excrete clean sand! These worms are eaten by all sorts of other animals and so the nutrients the worms have extracted from the mud are recycled through the food web. Another way burrowing polychaetes are useful to the environment is that, while polychaetes burrow, they mix oxygen rich water through the mud, keeping it fresh and healthy for other ocean life.



6 **Predatory polychaetes**

Predatory worms are fierce hunters and are very different from their mud eating relatives. They hunt live animals, such as snails, sea urchins, shrimps, other worms and even fish. They also scavenge on dead flesh if they find it. Many polychaete predators have mouth parts that **'evert'**. That is, they shoot out and grab prey with lethal, toothy jaws.



7 Predatory eunicid worms include the largest polychaetes in the world. They reach a length of 6 metres in Australia. Predatory polychaetes have different adaptations. For example:

- **Eunicids** hunt in the water, in sand, and in rocky crevices. They have very sensitive tentacles to help them find their prey.
- **Bloodworms** have four fangs and inject poison into their prey.
- **Paddleworms** have very sensitive palps and tentacles to help them hunt.
- **Trompterids** have see-through bodies to camouflage themselves so that their prey can't see them
- **Fireworms** have furry bristles that give a nasty sting.

8 **Filter-feeding tubeworms**

Filter-feeding worms usually live in tubes, sometimes in groups that are large enough to form reefs. Worm reefs provide homes for hundreds of other animals, protecting their fragile environment from hurricane-force waves. They are also large enough to cause shipwrecks. The tubes can be chalky, like shell or bone, or else papery and flexible. The worm's head comes out to feed but instantly retracts when there is danger.

9 **Tubeworms** are beautiful, feathery looking creatures that feed by passing sea water through their crown of tentacles. Some filter out only live bacteria or phytoplankton. Others consume both living and dead particles. They grab everything, wrap it in a coat of mucus and then eat it.



- 10 There are many different types of tubeworm. **Feather duster worms** create water currents within their crown of tentacles. These currents move food particles towards the sticky mucus that sorts the particles by size. The tentacles also work as gills, and many have dozens of eyes! **Christmas tree worms** have two feeding crowns each. Their tube has a trapdoor that closes when they hide. The bristles of most tubeworms are adapted to act like brakes, holding them tightly in their tubes if a hungry crab or fish tries to pull them out.
- 11 **Tubeworms** live in an amazing range of places. The Pompeii worm is the world's hottest animal. It lives on deep sea hydrothermal vents where the water is over 300 °C. It's a 'bacteria farmer' – within its body it has bacteria that convert volcanic minerals into usable food.

There are all sorts of weird and wonderful polychaetes in the sea!

706 words

Student sheet: Task 1

Assessment for unit standard 17363, version 3 Read independently information texts (ESOL)	
Level 3	5 credits

Name Date.....

Now read the text and answer the following questions.

2. Locating specific sections of text (1.2)

Skim the article to find the paragraph that has the following information. Write the paragraph number in the table.

	Paragraph number
i) Information about polychaete sense organs.	
ii) Information about the size of polychaetes.	
iii) Where tubeworms live.	
iv) How to pronounce the word 'polychaetes'.	
v) What predatory polychaetes eat.	

3. Interpreting abbreviations in the text (1.3)

What do the following abbreviations mean?

- i) mm.
- ii) °C.

4. Identifying main ideas and linking to supporting ideas (1.4)

4a. There are six main ideas in the list below. One has been done already for you. Find **five** more and tick them.

A. Burrowing polychaetes help keep oceans healthy.	
B. Filter-feeding worms usually live in tubes, that can form reefs.	
C. There are lots of worms in the ocean.	√
D. Because of this the parapodia and bristles of the lugworm are small	
E. Predatory polychaetes are fierce hunters.	
F. There are lots of different types of tubeworms.	
G. Eunicids hunt in water, sand and rocky crevices.	
H. Polychaetes have some similar body features.	

4b. Now put the five main ideas you choose in Question 4a into the correct places in the table below

Main Idea	Supporting ideas
i) C There are lots of worms in the ocean	<ul style="list-style-type: none"> • Some New Zealand beaches have 50,000 marine worms per square metre.
i)	<ul style="list-style-type: none"> • They are segmented • They are hairy • They have two parapodia per segment • They have sense organs
ii)	<ul style="list-style-type: none"> • These provide homes for other animals • They give protection from strong waves • They can cause shipwrecks
iii)	<ul style="list-style-type: none"> • They eat the remains of plants and animals • They excrete clean sand • They put oxygen back into the mud
iv)	They catch and eat <ul style="list-style-type: none"> • snails • sea urchins • shrimps • other worms • fish
v)	<ul style="list-style-type: none"> • Feather duster worms • Christmas tree worms

5. Understanding the vocabulary in the text (1.5).

5a. **Meaning** - Match the words with the meanings below.

a tentacle	excretion	to scavenge
a segment	variety	a characteristic
to evolve	an annelid	to filter
a particle	to extract	camouflage

i)	a range of different things; not all the same
ii)	a part of something, some worms are divided into parts
iii)	a fact about what an animal or a plant looks like or the way it behaves
iv)	a very small piece of something, usually too small to see with the human eye
v)	to expel waste matter from the body
vi)	a segmented worm
vii)	to take one thing out of another, for example, burrowing polychaetes take the nutrients out of the mud
viii)	to eat food that has already been killed by another animal
ix)	a process where a feature or body part changes over a very long time so that the animal can live in its environment
x)	to remove solid matter from a liquid
xi)	a long thin arm, often found on sea creatures
xii)	the use of colour to hide

5b. Grammatical form - Put the correct word in the sentence. You must choose a word with the correct meaning and the correct grammatical form.

(i) (Annelid, Annelids) are marine worms.

There are many different (ii) (variety, varieties) of marine worms.

However they all have some similar (iii) (character, chracteristic, characteristics)

The bodies of marine worms are divided into (iv)..... (segment, segments)

Marine worms have (v)(evolve, evolved, evolving) into many different types of worm.

Some polychaetes use (vi) (camouflage, camouflaged) to help them hide from predators.

Tubeworms eat very small (vii)..... (particle, particles) of food that they find in sea water.

Tubeworms have (viii) (tentacle, tentacles).

They use these to (ix) (filter, filtered, filtering) food from the sea water.

A burrowing polychaete (x)..... (extract, extracts, extracting) detritus and microscopic plants and animals from the mud and sand.

Burrowing polychaetes (xi).....(excrete, excretes, excreting) clean sand.

Predatory polychaetes hunt prey or (xii) (scavenge, scavenged, scavenging) for food.

6. Understanding the effect on meaning of cohesive links in the text (1.6)

Read this section of the text.

	Burrowing recyclers
1	Burrowing worms help keep the oceans healthy. Lugworms are an
2	example of a burrowing worm that is very common in New Zealand.
3	<u>When they</u> burrow on the sea floor they swallow lots of mud and sand.
4	<u>Because of this their</u> parapodia and bristles are small. They digest the
5	remains of plants, animals and microscopic life and excrete clean sand!
6	These worms are eaten by all sorts of other animals and so the
7	nutrients the worms have extracted from the mud are recycled through
8	the food web. <u>Another</u> way burrowing polychaetes are useful to the
9	environment is that, <u>while</u> polychaetes burrow, they mix oxygen rich
10	water through the mud, keeping it fresh and healthy for other ocean life.

6a. Grammatical cohesion: Linking words

The words underlined in the text above link pieces of information together.

Replace the underlined word or words in the text with a suitable item from the box below. You must make sure that it will fit into the sentence in the text.

Giving a reason	Adding more information	Telling us about the time things are happening
for this reason so	one more additionally	as during

- i) When (line 3)
- ii) Because of this (line 4).....
- iii) Another (line 8)
- iv) while (line 9)

6b. Grammatical cohesion: Pronouns

Find the pronouns in the text above and write the noun or phrase they refer to.

- i) they (line 3)
- ii) their (line 4)
- iii) they (line 9)
- iv) it (line 10)

6c. Lexical cohesion: Word sets

Word sets are groups of words in a text that are linked. They can help us to identify a class and the members, or parts, of the class (sub-sets).

Use paragraphs 7, 8, 9 and 10 of the text to complete the chart below. Fill in the class or the members of the sub-class that are missing.

Class	Sub-class
i) Predatory polychaetes	e.g. Eunicids i) ii) iii)

Class	Sub-class
iv)	Feather duster worms Christmas tree worms Pompeii worms

Assessment schedule: Task 1 - Marine Worms

Unit standard 17363, version 3			
Read independently information texts (ESOL)			
Level 3		5 credits	
Element 1: This task assesses one of three texts			
PC	Question	Evidence	Judgement
1.1	1	<p>1a) Answers similar to: Information on / description of polychaetes, worms, sea worms, marine worms, types of (sea / marine) worms</p> <p>1b) Answers similar to: <u>Headings:</u> P1 the word 'polychaete' is in five headings P2 the word 'worm' is used eight times <u>Layout features:</u> P2 there are words in bold that give the names of different types of worms. Bullet points mean that there will be a list of polychaetes. <u>Graphics:</u> P1 there are diagrams of polychaete body parts P2 there are pictures of different types of polychaetes / worms</p>	<p>Topic is identified and content predicted from layout, headings and graphics.</p> <p>1a. One correct. 1b. At least two correct.</p>
1.2	2	<p>i) 3 ii) 2 iii) 11 iv) 1 v) 6</p>	<p>Specific sections of text are located. 4 out of 5 correct.</p>
1.3	3	<p>Correct answers are i) millimetres ii) degrees celsius</p>	<p>Abbreviations are interpreted to show understanding of meaning. Both correct.</p>
1.4	4a 4b	<p>Correct answers are A, B, E, F, H</p> <p>Correct answers are i) H ii) B iii) A iv) E v) F</p>	<p>Main ideas in each text are identified and linked to subordinate ideas.</p> <p>4a. 4 out of 5 correct. 4b. 4 out of 5 correct.</p>

1.5	5a	<p>Meaning</p> <ul style="list-style-type: none"> i) variety ii) a segment iii) a characteristic iv) a particle v) excretion vi) an annelid vii) to extract viii) to scavenge ix) to evolve x) to filter xi) a tentacle xii) camouflage 	<p>Understanding is demonstrated of essential vocabulary within each text.</p> <p>5a. Meaning – 10 out of 12 correct</p>
	5b	<p>Grammatical form</p> <ul style="list-style-type: none"> i) annelids ii) varieties iii) characteristics iv) segments v) evolved vi) camouflage vii) particles viii) tentacles ix) filter x) extracts xi) excrete xii) scavenge 	<p>5b. Grammatical form – 10 out of 12 correct</p>
1.6	6a	<p>Linking words</p> <ul style="list-style-type: none"> i) as ii) for this reason, so iii) one more iv) as 	<p>The effect of meaning of at least three cohesive devices is demonstrated.</p> <p>6a. Linking words: 3 out of 4 correct.</p>
	6b	<p>Pronouns</p> <ul style="list-style-type: none"> i) lugworms ii) lugworms iii) (burrowing) polychaetes iv) (the) mud 	<p>6b. Pronouns: 3 out of 4 correct.</p>
	6c	<p>Lexical cohesion</p> <p>i), ii) and iii) Any three of blood worms, paddle worms, tromopterids, fireworms</p> <p>iv) Tube worms or filter feeding tubeworms</p>	<p>6c. Lexical cohesion: 3 out of 4 correct.</p>