

# Independent Study Pack 10.4



Please work through this booklet so that it can be marked and feedback given.

✓ Use your own workbook to complete the tasks.

✓ Use the booklet to complete the tasks.

**Name**

**VMG**

**Maths:**

Complete 1 hour on Hegarty maths. Your teacher will be able to see what you have completed and give you feedback.



hegartymaths

**This extract is from the opening of the novel called *Jaws* by Peter Benchley. It was written in 1974. In this section, a great white shark prepares for its first attack upon an unsuspecting town.**

The great fish moved silently through the night water, propelled by short sweeps of its crescent tail. The mouth was open just enough to permit a rush of water over the gills. There was little other motion: an occasional correction of the apparently aimless course by the slight raising or lowering of a pectoral fin — as a bird changes direction by dipping one wing and lifting the other. The eyes were sightless in the black, and the other senses transmitted nothing extraordinary to the small, primitive brain. The fish might have been asleep, save for the movement dictated by countless millions of years of instinctive continuity: lacking the flotation bladder common to other fish and the fluttering flaps to push oxygen-bearing water through its gills, it survived only by moving. Once stopped, it would sink to the bottom and die of anoxia.

The land seemed almost as dark as the water; for there was no moon. All that separated sea from shore was a long, straight stretch of beach - so white that it shone. From a house behind the grass-splotched dunes, lights cast yellow glimmers on the sand.

The front door to the house opened, and a man and a woman stepped out on to the wooden porch. They stood for a moment staring at the sea, embraced quickly, and scampered down the few steps on to the sand. The man was drunk, and he stumbled on the bottom step. The woman laughed and took his hand, and together they ran to the beach.

\*First a swim,' said the woman, 'to clear your head.'

\*Forget my head,' said the man. Giggling, he fell backward on to the sand, pulling the woman down with him. They fumbled with each other's clothing, twined limbs around limbs, and thrashed with urgent ardour on the cold sand.

Afterward, the man lay back and closed his eyes. The woman looked at him and smiled. 'Now, how about that swim?' she said.

'You go ahead. I'll wait for you here.'

The woman rose and walked to where the gentle surf washed over her ankles. The water was colder than the night air, for it was only mid-June. The woman called back, 'You're sure you don't want to come?' But there was no answer from the sleeping man.

She backed up a few steps, then ran at the water. At first her strides were long and graceful, but then a small wave crashed into her knees. She faltered, regained her footing, and flung herself over the next waist-high wave. The water was only up to her hips, so she stood, pushed the hair out of her eyes, and continued walking until the water covered her shoulders. There she began to swim — with the jerky, head-above-water stroke of the untutored.

A hundred yards offshore, the fish sensed a change in the sea's rhythm. It did not see the woman, nor yet did it smell her. Running within the length of its body were a series of thin canals, filled with mucus and dotted with nerve endings, and these nerves detected vibrations and signalled the brain. The fish turned towards shore.

### Checking understanding

#### Circle the correct answers.

1. On line 1, the writer uses the verb **propel**. Which definition best matches the word?

[a] to chop	[b] to spin	[c] to drive or push something forwards	[d] to move mechanically
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2. On line 6, the writer uses the adjective **primitive**. Which definition best matches the word?

[a] relating to the early development of an animal or tool	[b] old-fashioned	[c] relating to the age of something or someone	[d] unintelligent
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3. On line 23, the writer uses the noun **ardour**. Which definition best matches the word?

[a] aggression	[b] energy	[c] great enthusiasm or passion	[d] love
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4. The fish is motionless at the beginning of the extract.

True	False
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5. The people are drunk.

True	False
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6. The fish detects the woman through smell.

True	False
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7. Which words sum up the tone of the extract? Select three words.

aggressive	optimistic	tense
joyful	ominous	foreboding

### **Improving analysis**

The following are extracts from the text. Decide which analysis of the extract is the best one.

8. The fish might have been asleep, save for the movement dictated by countless millions of years of instinctive continuity

The verb 'dictated' implies that the fish is not in control and cannot make decisions for itself; instead, it is driven purely through instinct, which makes it even more threatening.	The verb 'dictated' shows that the fish is simply doing as it is told and cannot make any choices itself.	The phrase 'countless millions' implies that the fish is preceded by many ancestors and it has been behaving this way for a very long time.
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9. ...with the jerky, head-above-water swim of the untutored.

The adjective 'untutored' suggests the woman is an inexperienced swimmer, which makes her more vulnerable, increasing the tension of the extract as the fish sense her movements.	The adjective 'jerky' makes the woman seem messy when she swims.	The use of the adjective 'untutored' implies that the woman has not learnt very much and she would be safer with the man near her.
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## How do we digest food?

Our digestive systems have to break down our food into small molecules so that we can absorb them. This takes several days.

### Why are your intestines so long?

Think of the intestines as a tube passing through your body. Food moves through this tube, but it doesn't really enter your body until it is absorbed.

- 1 About how long is the human digestive system from the mouth to the anus?
- 2 Why do you think it has to be this long?

### Enzymes digest our food

Our digestive systems contain glands. These glands produce substances called **enzymes**. Enzymes are catalysts. Catalysts make chemical reactions happen quickly and easily. Digestive enzymes help us to break down food more easily. Our bodies make lots of different digestive enzymes. Each enzyme breaks down a particular food. When an enzyme has broken down one food molecule, it can then break down another molecule of the same kind. It can do this over and over again. It makes the reaction happen without being used up.

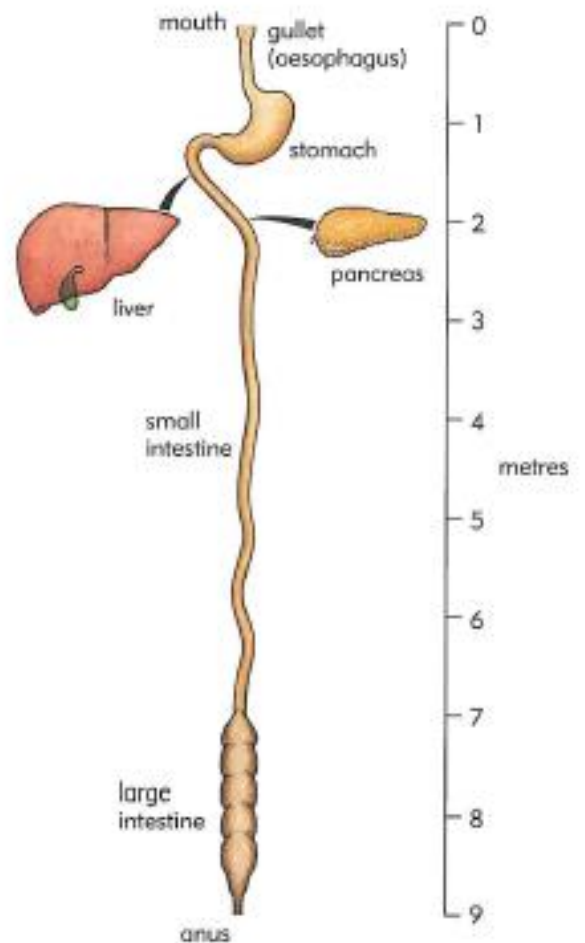
- 3 Copy and complete the sentences to explain how enzymes break down fat.

First the enzyme snips off a \_\_\_\_\_ molecule.

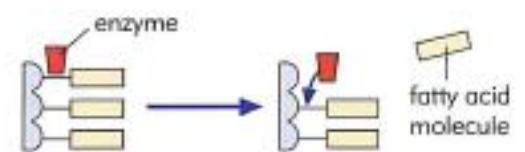
Then it does this \_\_\_\_\_ more times.

The fat molecule has then been digested into three \_\_\_\_\_ molecules and a \_\_\_\_\_ molecule.

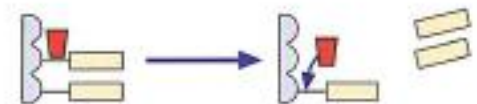
- 4 Why can a small amount of enzyme break down a large amount of food?



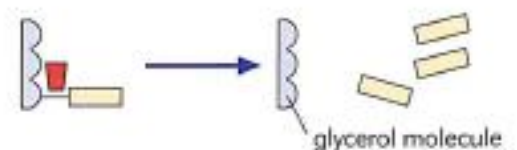
How you digest fat.



The enzyme snips off a fatty acid molecule.



Then it snips off another two.



The same enzyme molecule can do this over and over again to more fat molecules.

It makes the reaction happen without being used up. We say it is a **catalyst**.

