

INTEGRATED

All Systems Are GO!

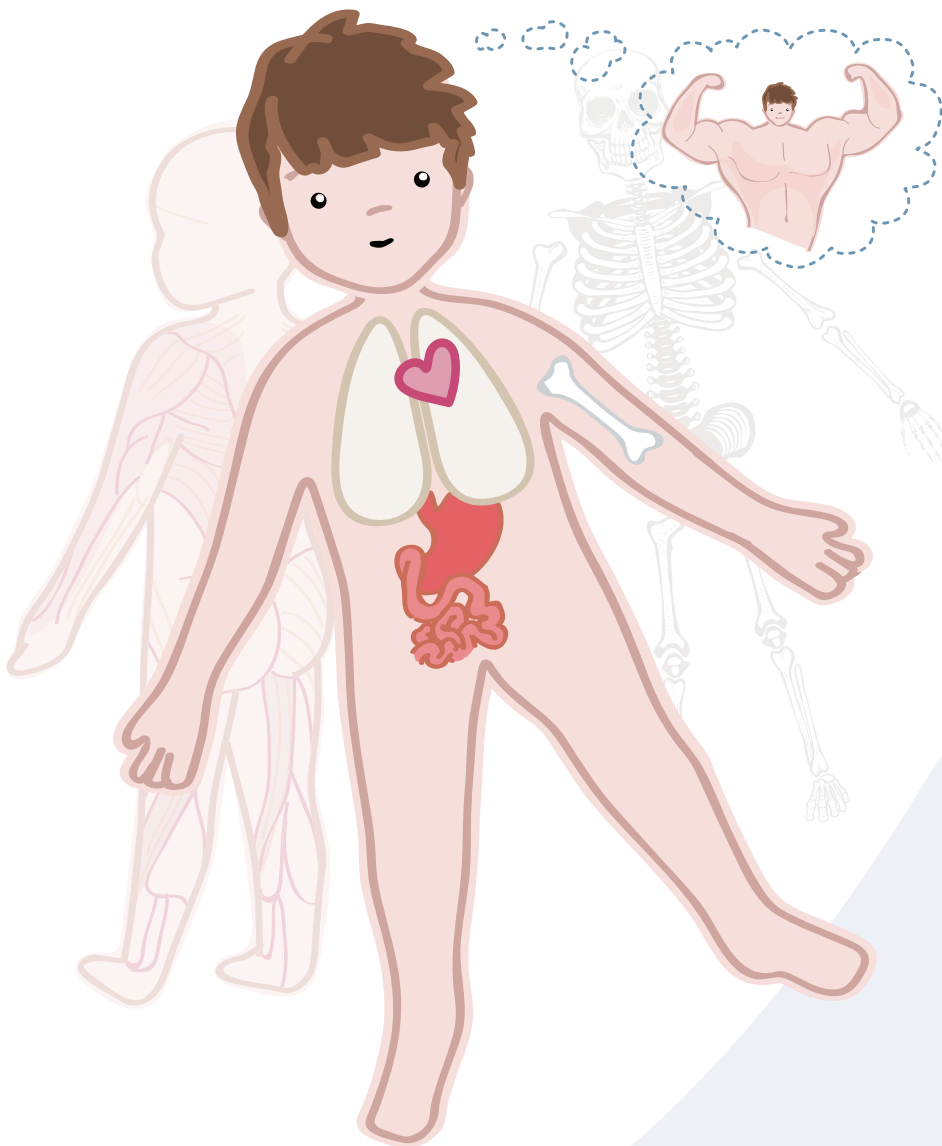
Setting the scene

Middle Childhood 4–7

Learning Resource



ALL SYSTEMS ARE GO! SETTING THE SCENE

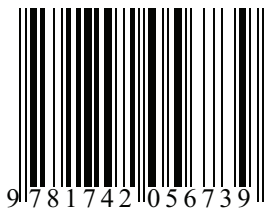




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SETTING THE SCENE
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Integrated

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Middle Childhood

Learning Resource

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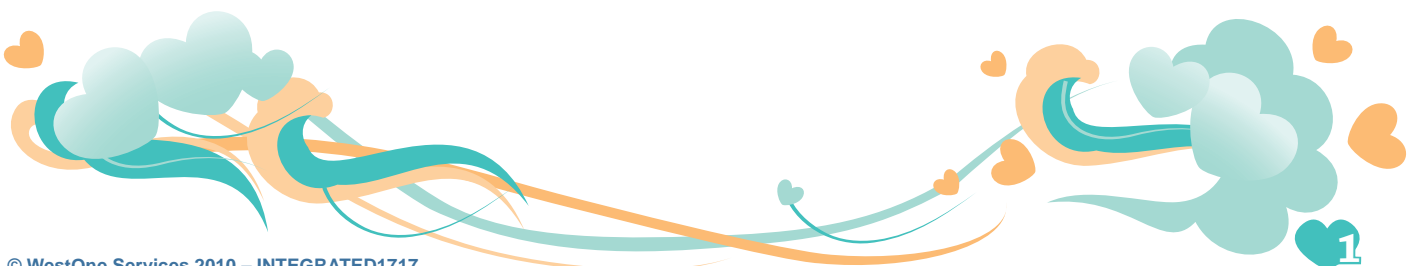
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Overview of All Systems Are GO!

All Systems Are GO! consists of three modules and a Teacher overview.

Module	Outcomes focus
1 Setting the scene	<p>The Arts</p> <ul style="list-style-type: none"> 1. ARTS IDEAS 3. ARTS RESPONSES <p>English</p> <ul style="list-style-type: none"> 8. READING <p>Health and Physical Education</p> <ul style="list-style-type: none"> 1. KNOWLEDGE AND UNDERSTANDING <p>Technology and Enterprise</p> <ul style="list-style-type: none"> 1. TECHNOLOGY PROCESS
2 Body systems	<p>The Arts</p> <ul style="list-style-type: none"> 1. ARTS IDEAS 3. ARTS RESPONSES <p>English</p> <ul style="list-style-type: none"> 5. LISTENING 6. SPEAKING 8. READING 9. WRITING <p>Health and Physical Education</p> <ul style="list-style-type: none"> 1. KNOWLEDGE AND UNDERSTANDING <p>Technology and Enterprise</p> <ul style="list-style-type: none"> 1. TECHNOLOGY PROCESS <p>Mathematics</p> <ul style="list-style-type: none"> 14. CHANCE AND DATA



All Systems Are GO!

Module	Outcomes focus
3 Reproductive system	The Arts 1. ARTS IDEAS 3. ARTS RESPONSES English 5. LISTENING 6. SPEAKING 8. READING 9. WRITING Health and Physical Education 1. KNOWLEDGE AND UNDERSTANDING 4. SELF-MANAGEMENT SKILLS 5. INTERPERSONAL SKILLS Technology and Enterprise 1. TECHNOLOGY PROCESS

Each module has a:

- ♥ student work plan
- ♥ learning activities section
- ♥ feedback and solutions section.

The resources and materials you will need for *All Systems Are GO!* are:

- ♥ paperclip for portfolio
- ♥ *Lockie Leonard, Human Torpedo* novel
- ♥ two strips of thick paper to make a bookmark
- ♥ two drinking straws
- ♥ *Boys and puberty*
- ♥ *Girls and puberty*
- ♥ *Where did I come from?*
- ♥ two round balloons
- ♥ two long balloons
- ♥ ten blank A4 sheets of paper
- ♥ INTEGRATED1721 *All Systems Are GO!* CD-ROM.





Student work plan

Learning activity	Description of learning activity	Learning focus
1. Setting the scene		
1.1 Portfolio	Create a folder to store completed work	Development of organisational skills
1.2 Contents page	Create a table to record information included in the portfolio	Development of organisational skills
1.3 Logbook	Record completed activities	Development of organisational skills
1.4 Creating bodies	Provide information sheet on four key body systems	To determine student's prior knowledge
1.5 A poet in the making	Create a banner for poetry section of portfolio	Development of creative skills
1.6 Reading <i>Lockie Leonard, Human Torpedo</i>	Read the first two chapters	Development of reading skills
1.7 Bookmark	Design and create a bookmark for Lockie Leonard novel	Development of creative skills and preparation for novel study
1.8 Keywords	List of keywords that will be found throughout the modules	To provide meaning for commonly used words

Signposts

Look for signposts throughout the modules. They give instructions to help you with the learning activities.



Portfolio – This signpost tells you to present your work in your portfolio.



Reading – The reading signpost tells you to read from the suggested book.



Multimedia – The multimedia signpost tells you to use an audio CD, CD-ROM, video or DVD.



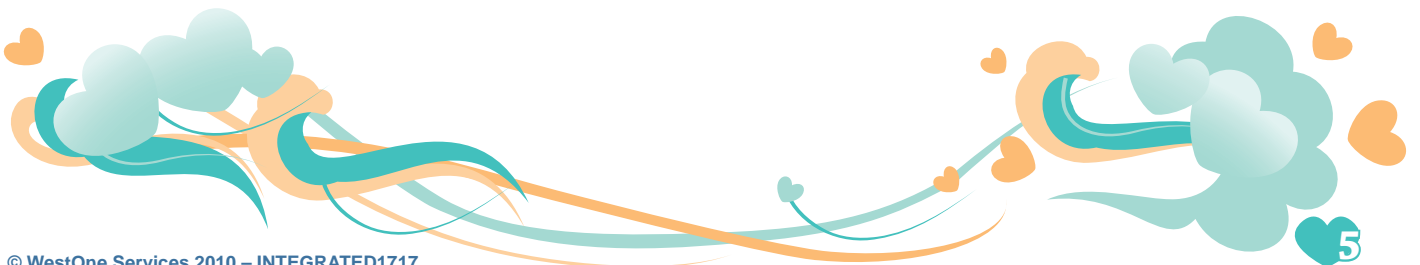
Computer – The computer signpost tells you to use a computer or the internet.



Feedback and solutions – The feedback and solutions signpost tells you to check your work by comparing it with the information provided.



Scissors – The scissors signpost tells you to cut out a page from the book.



All Systems Are GO!



1

Setting the scene

Have you noticed any changes in yourself lately? It may not feel like it, but your body and your way of thinking are constantly changing. Don't worry! It is all OK! You have been changing since before you were even born.

And there is more to come!

In the next few years you will experience some changes that are both exciting and, at times, a little confusing.

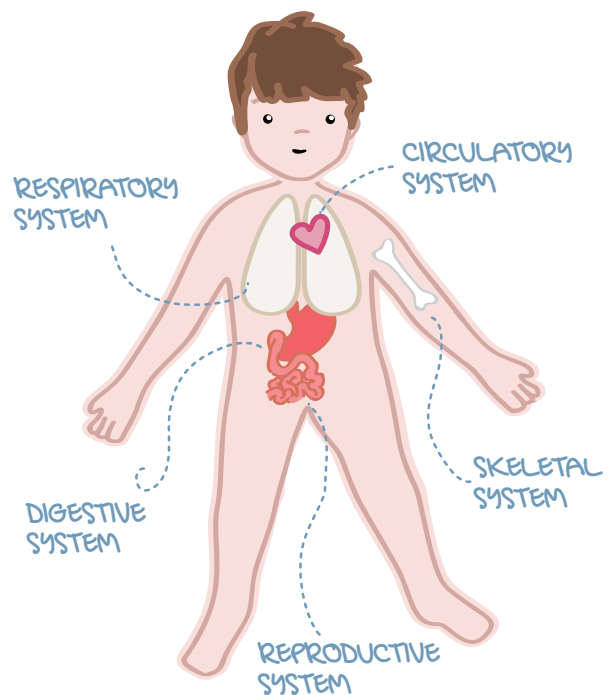
Everyone goes through the same thing, but it would be nice to know what changes to expect.

This module will help answer some of the questions you may have, and will hopefully make you feel more confident as you head into your teenage years.

Your body consists of a number of systems that change throughout the course of your life. This module will look closely at five main systems. It will provide information and activities to help you to understand how these systems work and the changes that take place as you grow.

Before you start looking at each system in more detail, there are a few things you need to complete first.

The five systems are:



1.1 Portfolio

You will be required to complete different activities. You may wish to use your computer skills to complete some of the activities, or simply put pen to paper to complete them. However, some of the completed activities will need to be placed in a folder.

This folder is known as a portfolio and it provides a record of your work. Looking through the material in your portfolio is a good way to check whether you have a good understanding of the information discussed in the module.

The work to be included in the portfolio will be clearly marked with the following symbol:



Follow the steps below to organise your portfolio.

- ♥ Use a folder or perhaps a paperclip to keep your pages together.
- ♥ Create a cover sheet that includes the following:
 - title – you can make up a name that reflects the topic of this module (the main emphasis will be on the reproductive system but the other systems will be covered as well)
 - your name
 - a picture or drawing of yourself attached to the front cover.

1.2 Contents page



On an A4 piece of paper design a 'contents' table to indicate what is inside your portfolio. This will be the first page in your portfolio. The table should show the title of the activity and what page it can be found on.

For example:

Title of the activity	Page
Portfolio cover sheet	1
Logbook	2
and so on ...	

The following is a list of the activities that should be included in your portfolio from this module:

Title of the activity	Tick
1.1 Portfolio	
1.2 Contents page	
1.3 Logbook	
1.4 Creating bodies	
1.8 Keywords	

At the start of each module you will find a table similar to this one to show you what should be included in your portfolio.

IMPORTANT
Completing your contents page will be the last thing that you do. Wait until all of your work is completed, arrange all your activities in order, number them and fill in your contents page.

1.3 Logbook



Keeping track of your progress is an important part of your responsibilities. Your logbook will help you do this by providing a record of the activities you have completed.

To set up your logbook:

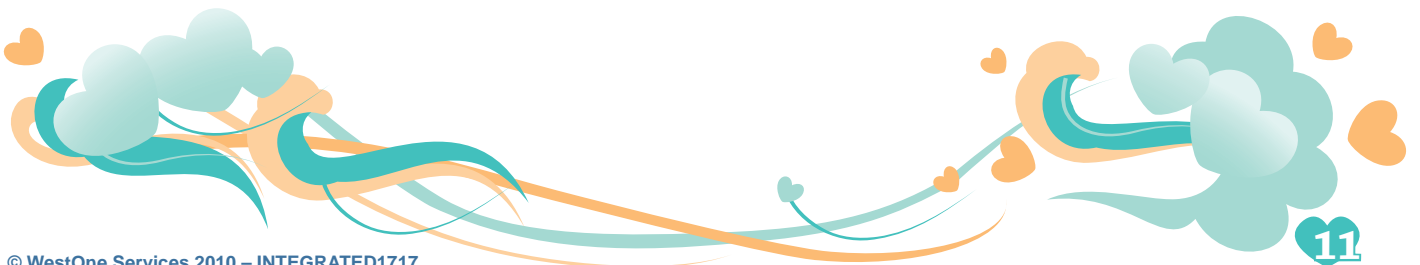
- ♥ cut out the following pages and include them in your portfolio
- ♥ as you complete each activity write your initials and the date each activity is completed in the spaces provided.



**All
Systems
Are GO!**

Name

The frame features a light teal background with white hearts, dotted lines, and abstract shapes. A central white box with rounded corners contains the text 'All Systems Are GO!' in a bold, orange, sans-serif font. To the right of this box is a white rectangular field for a name, with the word 'Name' written in orange above it. The entire frame is decorated with various white and teal elements, including hearts, dotted lines, and abstract shapes.



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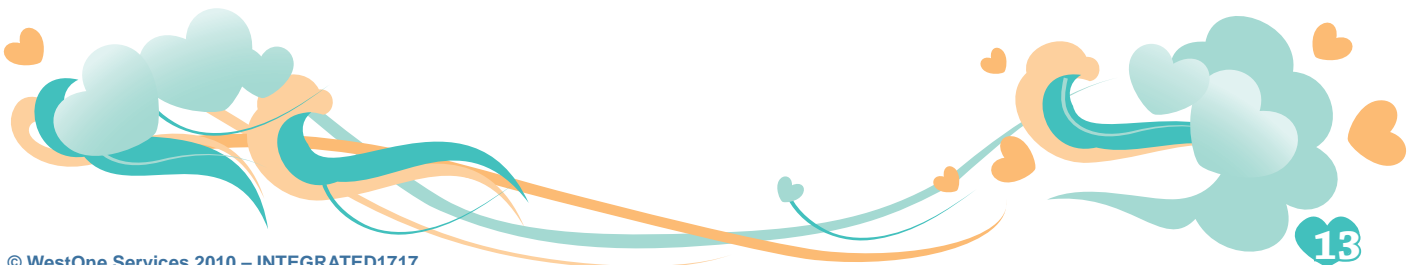




Activity	Date & sign
1 Setting the scene	
1.1 Portfolio	
1.2 Contents page	
1.3 Logbook	
1.4 Creating bodies	
1.5 A poet in the making	
1.6 Reading <i>Lockie Leonard, Human Torpedo</i>	
1.7 Bookmark	
1.8 Keywords	
2 Skeletal system	
2.1 Contents page	
2.2 Keywords	
2.3 How many bones?	
2.4 What's a bone?	
2.5 Name that bone	
2.6 Types of bone	
2.7 What do bones do?	
2.8 Time to talk osteoporosis	
2.9 Promote healthy bones	
2.10 Reading <i>Lockie Leonard, Human Torpedo</i>	
3 120 days in the life of a red blood cell	
3.1 Contents page	

Fold line

Activity	Date & sign
5.13 Reading <i>Lockie Leonard, Human Torpedo</i>	
5.14 Lockie's emotional roller-coaster – pages 43–73	
5.15 Which came first?	
5.16 Diorama	
5.17 Sociogram	
5.18 Who am I?	
5.19 Reading <i>Lockie Leonard, Human Torpedo</i>	
5.20 Lockie's emotional roller-coaster – pages 74–88	
5.21 Baby beginnings	
5.22 Making a baby	
5.23 Happy birthday!	
5.24 Spreading the virus message	
5.25 Reading <i>Lockie Leonard, Human Torpedo</i>	
5.26 Lockie's emotional roller-coaster – pages 89–132	
5.27 Stereotypes	
5.28 Feelings	
5.29 Making decisions	
5.30 Setting goals	
5.31 Keywords	



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Activity	Date & sign
3.2 A tour of the body	
3.3 Circulatory system	
3.4 The hardest working muscle	
3.5 Clench your fist	
3.6 Parts of the heart	
3.7 The ultimate flow chart	
3.8 Make a stethoscope	
3.9 A tour of the body	
3.10 Heart of love	
3.11 Breathe in and out – the respiratory system	
3.12 Illustrated word poems	
3.13 Breathing rate	
3.14 A tour of the body	
3.15 Bypass for a healthy heart	
3.16 A tour of the body	
3.17 Pulsating	
3.18 A tour of the body	
3.19 Keywords	
3.20 Reading <i>Lockie Leonard, Human Torpedo</i>	
4 In one end and out the other	
4.1 Contents page	

Fold line

Activity	Date & sign
4.2 The digestive system	
4.3 How much energy is that?	
4.4 How much exercise is that?	
4.5 A poem about digestion	
4.6 A healthier diet	
4.7 Keywords	
4.8 Creating bodies	
4.9 Reading <i>Lockie Leonard, Human Torpedo</i>	
5 Reproductive system	
5.1 Contents page	
5.2 Storyboard	
5.3 Emotional roller-coaster	
5.4 The talk	
5.5 Male parts of the puzzle	
5.6 Female parts of the puzzle	
5.7 The reproduction puzzle	
5.8 Reading <i>Lockie Leonard, Human Torpedo</i>	
5.9 Lockie's emotional roller-coaster – pages 21–40	
5.10 Changes for boys	
5.11 Sex characteristics timeline	
5.12 A menstrual time clock	

1.4 Creating bodies

How much do you know about the different body systems?

Your task is to record as much information as you can about each system. At the end of the module you will be able to compare what you know now with what you have learnt.

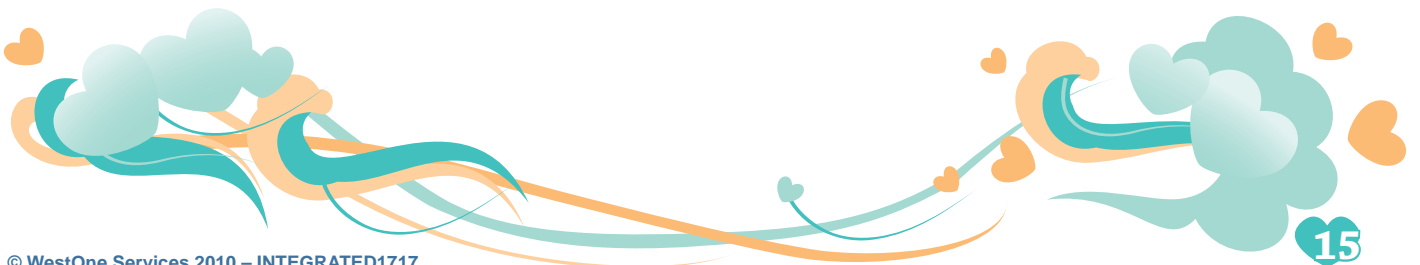
The four body systems that you will work with here are:

- ♥ **the skeletal system**
(think of your bones)
- ♥ **the respiratory system**
(think of your lungs and how the body gets oxygen)
- ♥ **the circulatory system**
(think of your heart and how the body gets blood)
- ♥ **the digestive system**
(think of your stomach and how the body gets food).

The reproductive system will be covered later in a separate module.

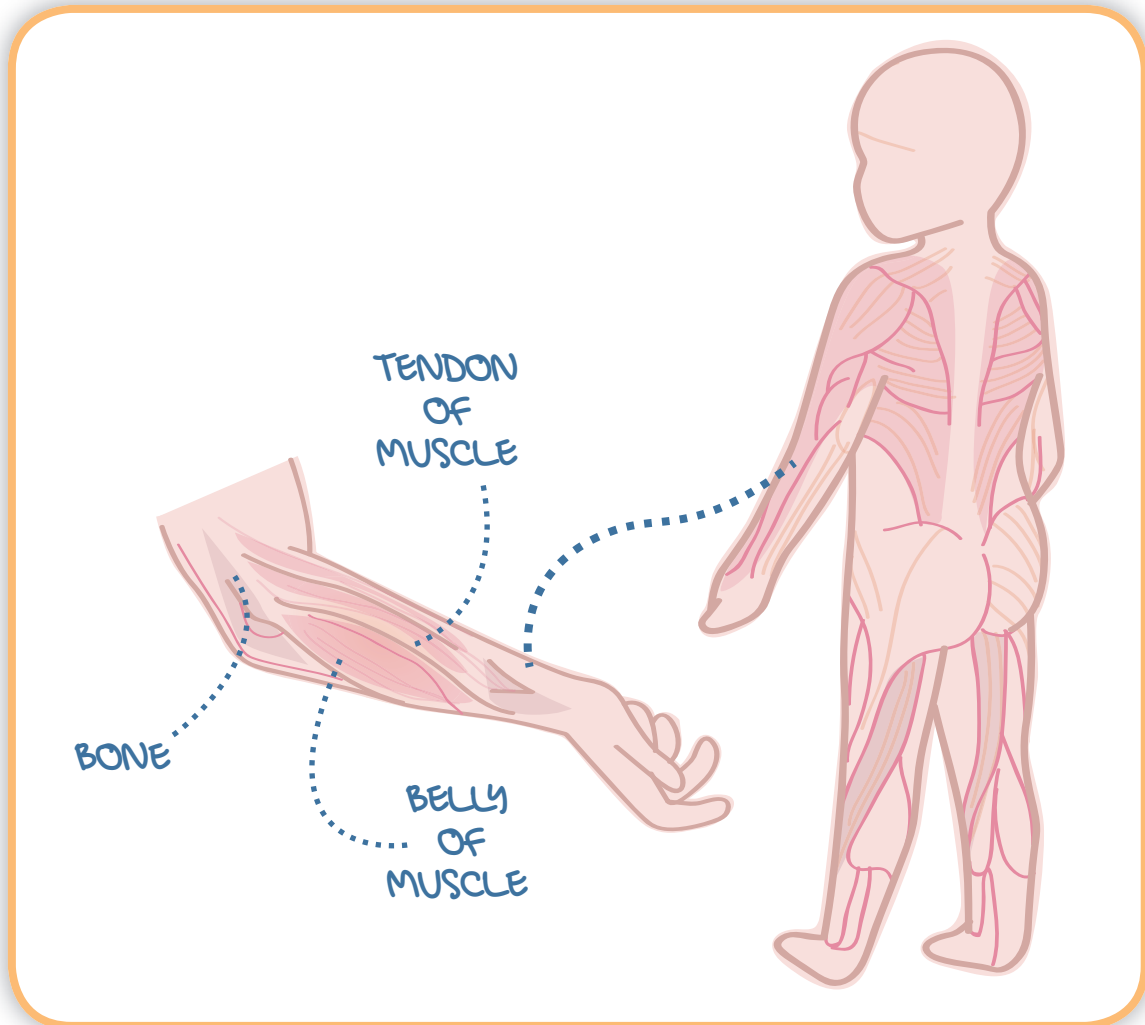
For each body system complete the following.

- ♥ Draw a diagram of the various parts involved.
- ♥ Explain the purpose (function) of the body system.
- ♥ Describe how the system works to achieve the purpose of the body system.
- ♥ Provide as much other information as you can.



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For example, for the muscular system, your answer might look something like this:



Don't worry, your diagrams don't have to be as detailed as these.

Muscles

Purpose

- ♥ Muscles provide movement for the body as well as strength, balance and posture.

How the system works

- ♥ Muscles are attached to the bones by tendons. Messages from the brain are sent through the nervous system telling the muscles to work to provide movement, strength, balance and posture.
- ♥ Muscles shorten in length to help the bones to move.

Other information

- ♥ Muscles consist of fibres that control the speed at which the muscle moves.
- ♥ The largest muscles in the body are in the upper leg.
- ♥ All muscles can be moved voluntarily except for the heart muscle.

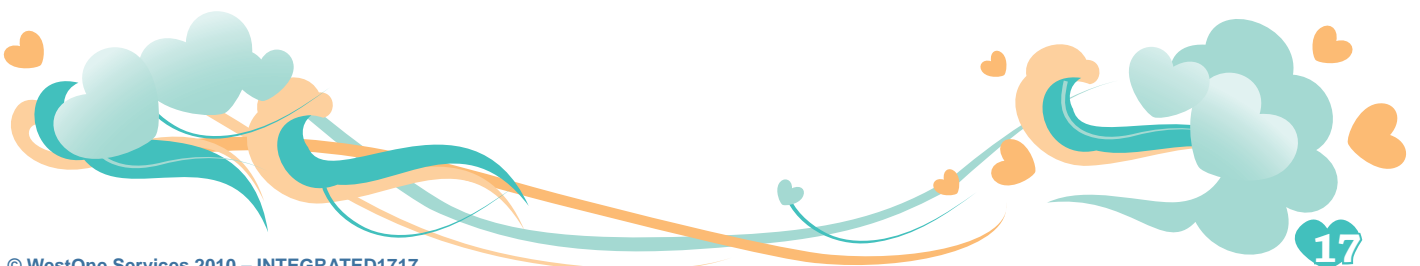
Have some fun creating your pages of information.

Like in the 'muscles' example, you can use some drawings that represent the system as you provide your information.

Remember! The purpose of this activity is to show how much you know now. Therefore, your information needs to come from you, not from a textbook, the internet or from an adult.

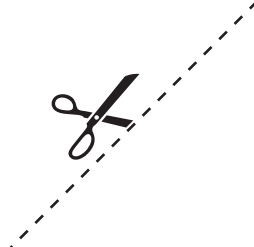


The following four pages have been left blank for this activity. Put the title of a body system at the top of each page, complete the tasks, then cut them out and place them into your portfolio.



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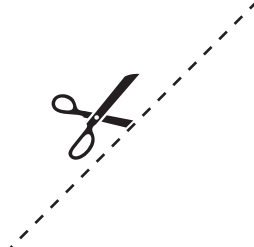


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1.5 A poet in the making

Writing poetry is a great way to express your thoughts and feelings. Throughout this module you will be shown different forms of poetry, and will be given the opportunity to write some as well.

The poems that you write will need to be placed into your portfolio. To prepare for your writing, design a banner at the top of an A4 sheet of paper that will highlight the section in your portfolio reserved for poetry.

For example, you might design a banner like the one below.



To keep all of your poetry together, place any poetry you are asked to write into your portfolio under this banner.

1.6 Reading *Lockie Leonard, Human Torpedo*

Included in this module is a great novel by well-known Western Australian author, Tim Winton. The book title is *Lockie Leonard, Human Torpedo*.

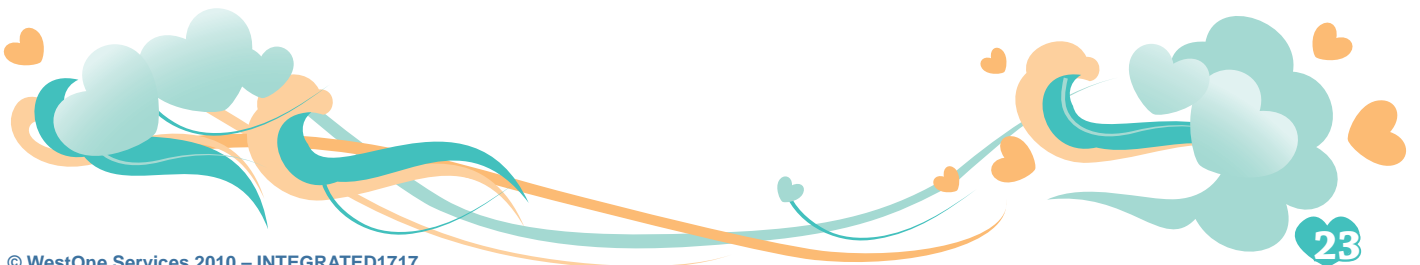
Many of the topics and issues that will be discussed later in this module are covered in this novel.

You will be required to have a particular number of chapters of the novel finished on certain days so that you can complete activities relating to the topic.



Everyone reads at different speeds, so if you feel that you need to do some reading to get ahead, you might like to begin reading now.

Some time will be provided during class to read. During this time read the first two chapters to give you an idea of what the novel is about.



1.7 Bookmark

Now that you have read the first two chapters, you need to remember what page you are up to. A bookmark will help with that.

You will need two strips of thick paper. Use one of these to make a bookmark for your novel. The other strip is there in case you make a mistake or don't like your design.

Complete the following instructions:

- ♥ Punch a hole towards the bottom of one of the strips of thick paper.
- ♥ Tie some coloured ribbon or string through the hole.
- ♥ Divide your bookmark into a few sections.
- ♥ Write your name in the top section.
- ♥ Use the rest of the sections to decorate your bookmark with things you know about the novel, *Lockie Leonard*, *Human Torpedo*.

You should be able to think of some excellent ideas either from your reading, or from the television series. If you haven't heard of Lockie Leonard before, look at the front and back covers of the book to get some ideas.

Place your bookmark in your novel ready to use later.

1.8 Keywords

There are lots of words relating to the body systems that are sometimes a bit hard to understand. To help you with these words, you can create a glossary. A glossary is a list of words and their meanings, and you can refer to it if you forget what a word means.

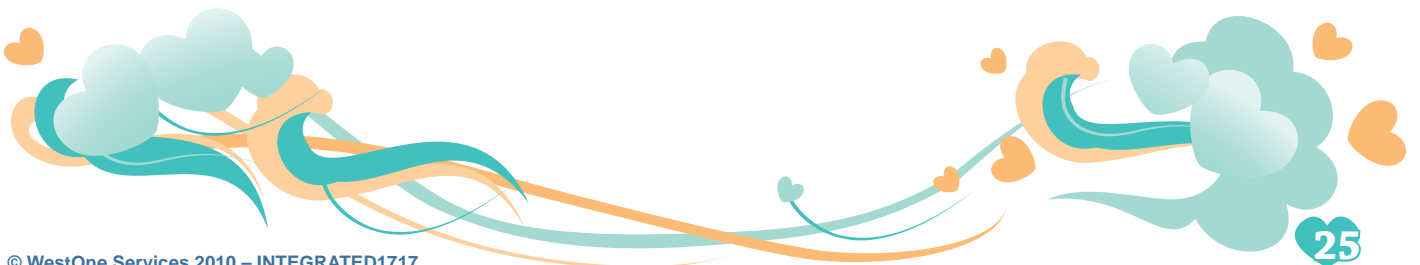
But wait!

You don't need to find the meaning of each word yourself. Most of them will be provided for you throughout each of the modules. When you come across the 'Keywords' activities, copy either the keyword or the meaning of the keyword into the following tables.



To begin with, find 'muscular system' in the keywords column, and then complete the meaning. You will find the answer in activity 1.4 'Creating bodies' in this module.

Keywords	Meaning
	an illness that is able to affect the body because the body's immune system, which fights illnesses, has been weakened by a virus known as HIV
	a describing word that often relates to a noun
	a poem that follows one point of view on one line, followed by a different point of view on the next line
	vessel responsible for carrying oxygen-rich blood away from the heart and into the body
	part of the bone that makes blood cells
	layers within the compact bone that contain the bone marrow
	vessel responsible for exchanging water, oxygen and nutrients with the waste products within the body tissue
	a five line poem based on the number of syllables used in each line
	the system responsible for transporting oxygen and nutrients to the cells of the body, and for taking away the waste products
	the part you can see when you look at a skeleton
	name given to the time from when the sperm enters the vagina until the fertilised egg is embedded in the uterus ready for pregnancy to take place
	artery that supplies the heart muscle with blood



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Keywords	Meaning
digestive system	
	feelings you have inside
	a type of lung disease where the alveoli are damaged
energy	
haiku	
	acts as a pump to assist blood flow around the body
	a virus that is transmitted through contact with infected blood
kilojoule	
	organ of the body where gases are exchanged
	the process of shedding the lining of the uterus to release the unfertilised egg
muscular system	
	a word used to name a person, animal, place, thing or abstract idea
	when the bones become fragile and brittle because they lose minerals

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Keywords	Meaning
	the outer surface of bone
	the physical and emotional changes that occur during adolescence
	indicates how fast or slow the heart is beating
	system responsible for the sexual maturity of the body
	system responsible for the process of exchanging gases
	signs that a boy or girl has reached puberty
	the bones in the body
	a word given to describe standard ideas or images
	joints where bones are fused together
	how a word is broken down when you pronounce it
	vessel that carries blood back towards the heart

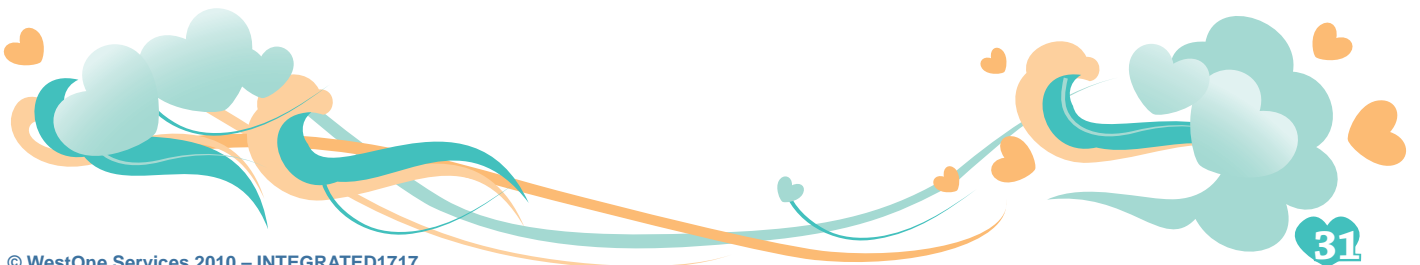


All Systems Are GO!



Setting the scene

**Feedback
and
solutions**



1 Setting the scene

1.1 Portfolio

Looking through the material in your portfolio is a good way to check whether you have a good understanding of the information discussed.

Make sure that your cover sheet reflects the topic 'Body systems'.

1.2 Contents page

At the completion of this book, check that you have the following activities included in your portfolio.

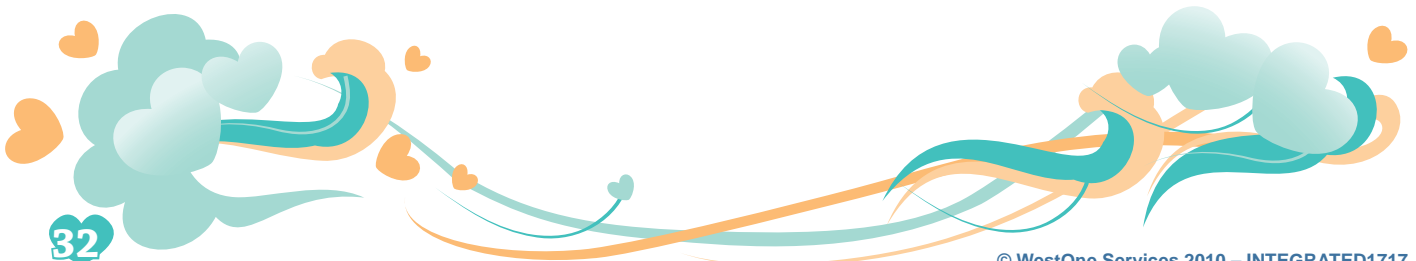
Title of the activity
1.1 Portfolio
1.2 Contents page
1.3 Logbook
1.4 Creating bodies
1.8 Keywords

1.3 Logbook

Make sure you write your initials and the date that you complete each activity in your logbook.

1.4 Creating bodies

Your task is to record as much information as you can about each system.



For each body system complete the following.

- ♥ Draw a diagram of the various parts involved.
- ♥ Explain the purpose (function) of the body system.
- ♥ Describe how the system works to achieve the purpose of the body system.
- ♥ Provide as much other information as you can.

Plan and practise your diagram before your final attempt. List all the different parts you need to include, and then work out how they join together.

The purpose or function is like a definition. As best you can, describe what the system does and how it works.

List as many relevant pieces of information as you can think of. You will probably see them mentioned in the next module.

1.5 A poet in the making

Design a banner at the top of an A4 sheet of paper that will highlight the section in your portfolio reserved for poetry.

There will be a number of poems included under this section, so you need to wait until the end of the unit before finalising the page numbers of your contents page.

1.6 Reading *Lockie Leonard, Human Torpedo*

Read the first two chapters of *Lockie Leonard, Human Torpedo* now to give you an idea of what the novel is about.

Topics included in these chapters will be covered later in the module. You may need to skim back over the pages later to refresh your memory when the related activities begin.



1.7 Bookmark

Make a bookmark to use in your novel.

Make sure that you include your name, and have information about the novel on your bookmark.

1.8 Keywords

Throughout the modules you will find the keywords or meanings to the keywords to be included in this table. They are important to remember.

Make sure your list of keywords is included in your portfolio.

