


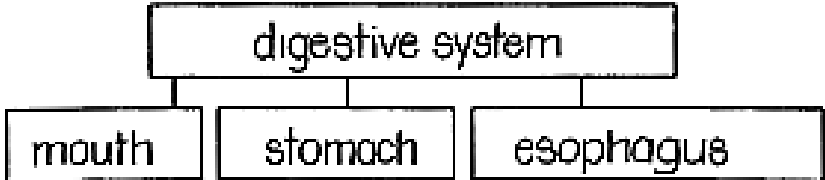
**GRADE 4**

---

**GROWTH AND DEVELOPMENT**

---

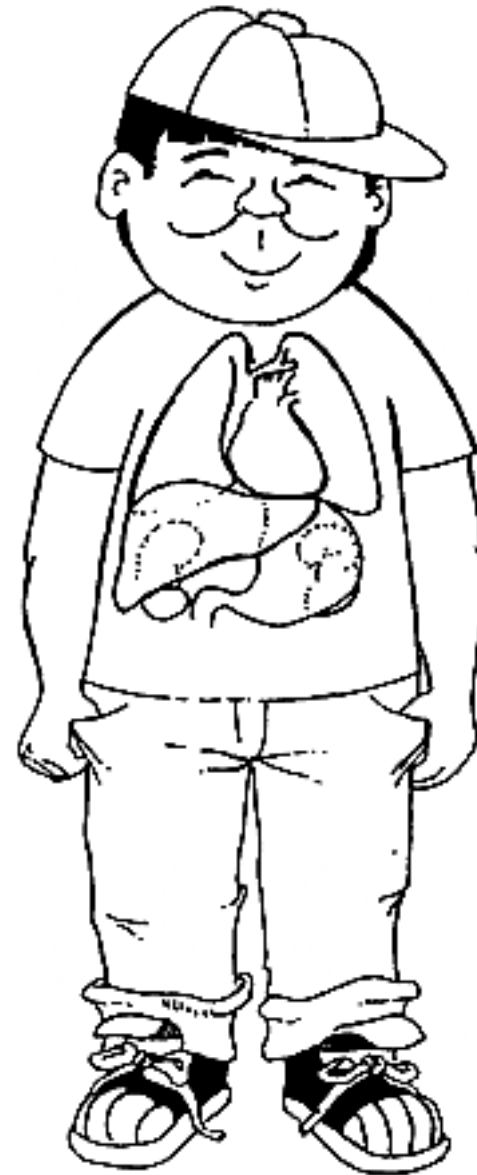


OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
	<p>3. List words related to the digestive system.</p> <p>4. Use the child size body outline and detachable digestive parts to name and locate the main parts of the digestive system.</p> <p>5. Make a mobile using the names of the digestive system parts.</p> <p>6. Observe the digestive parts of an animal.</p> <p>7. Complete the My Digestive System worksheet.</p>	 <p>Refer to Activity Sheets GD32A to 32E.</p> <p>Put the child size body outline on the board. Have students name and place the following digestive parts on the outline:</p> <ul style="list-style-type: none"> <li>- mouth</li> <li>- esophagus</li> <li>- stomach</li> <li>- small intestine</li> <li>- large intestine</li> <li>- anus</li> </ul>  <p>Say the words over, so that students remember them.</p> <p>Ask a hunter or a butcher to provide the class with the digestive parts of an animal. Or take the class to observe a hunter cutting up an animal. Have the students name the digestive parts.</p> <p>Refer to Activity Sheet GD33.</p> <p>Have students draw a line linking each label to the correct body part.</p>

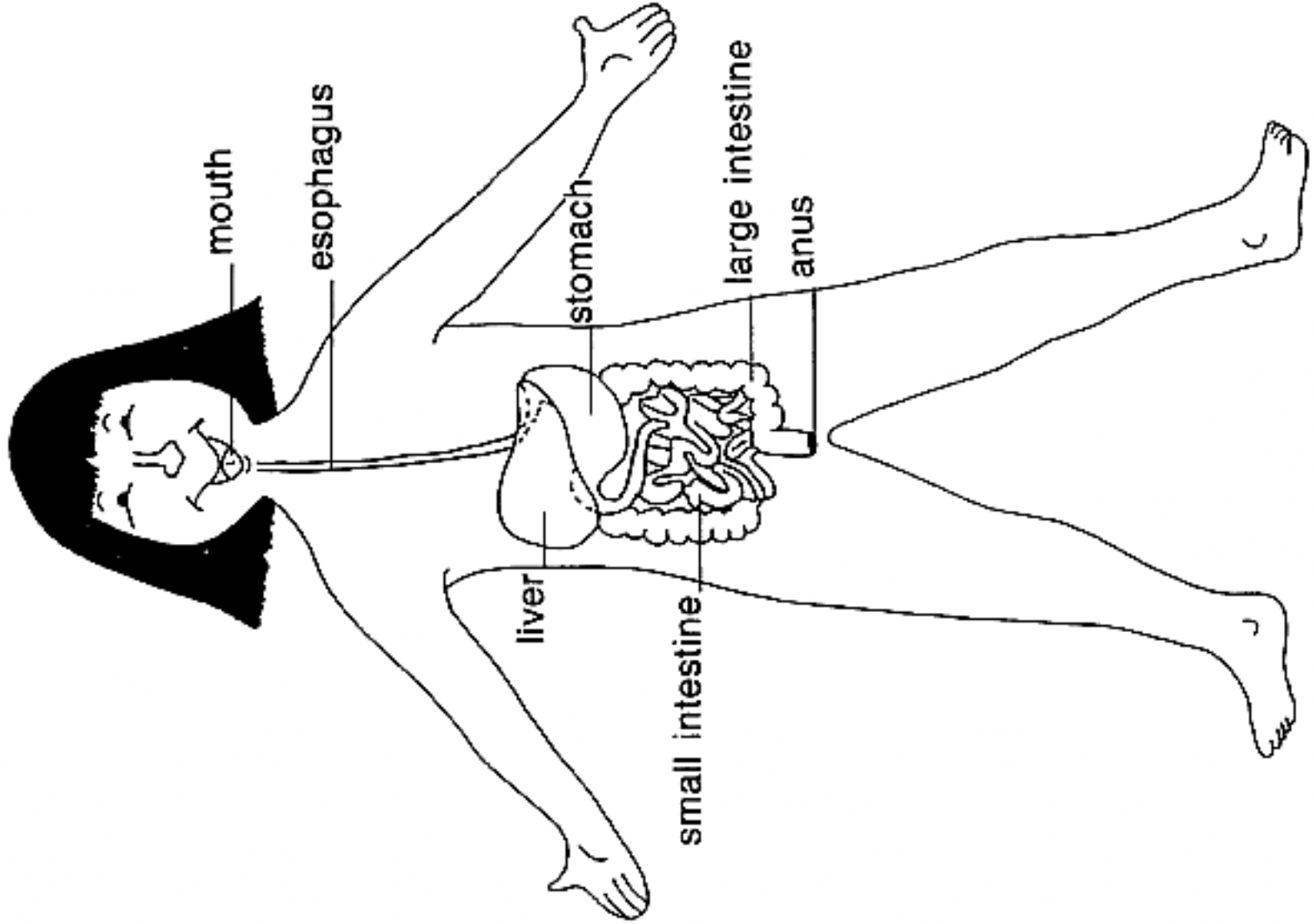
## THE INSIDE STORY

There are parts of me  
You cannot see.  
They're there.  
There is no doubt.  
If I were magic  
You could see them.  
'Cause I'd turn  
My insides out.

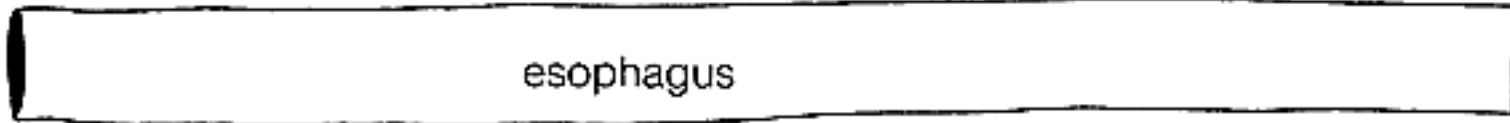
(Source Unknown)



# THE DIGESTIVE SYSTEM

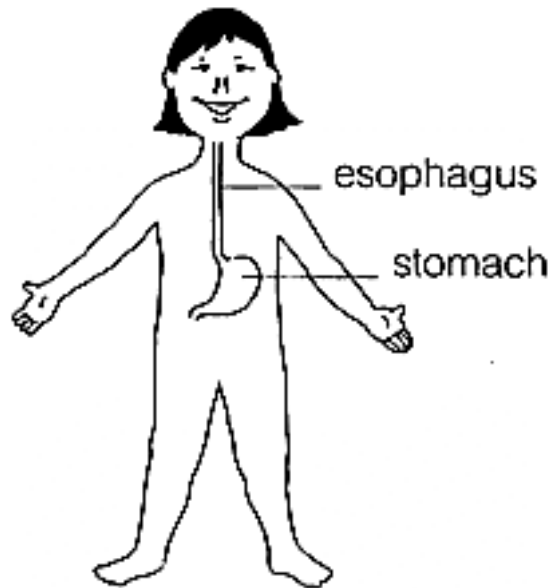
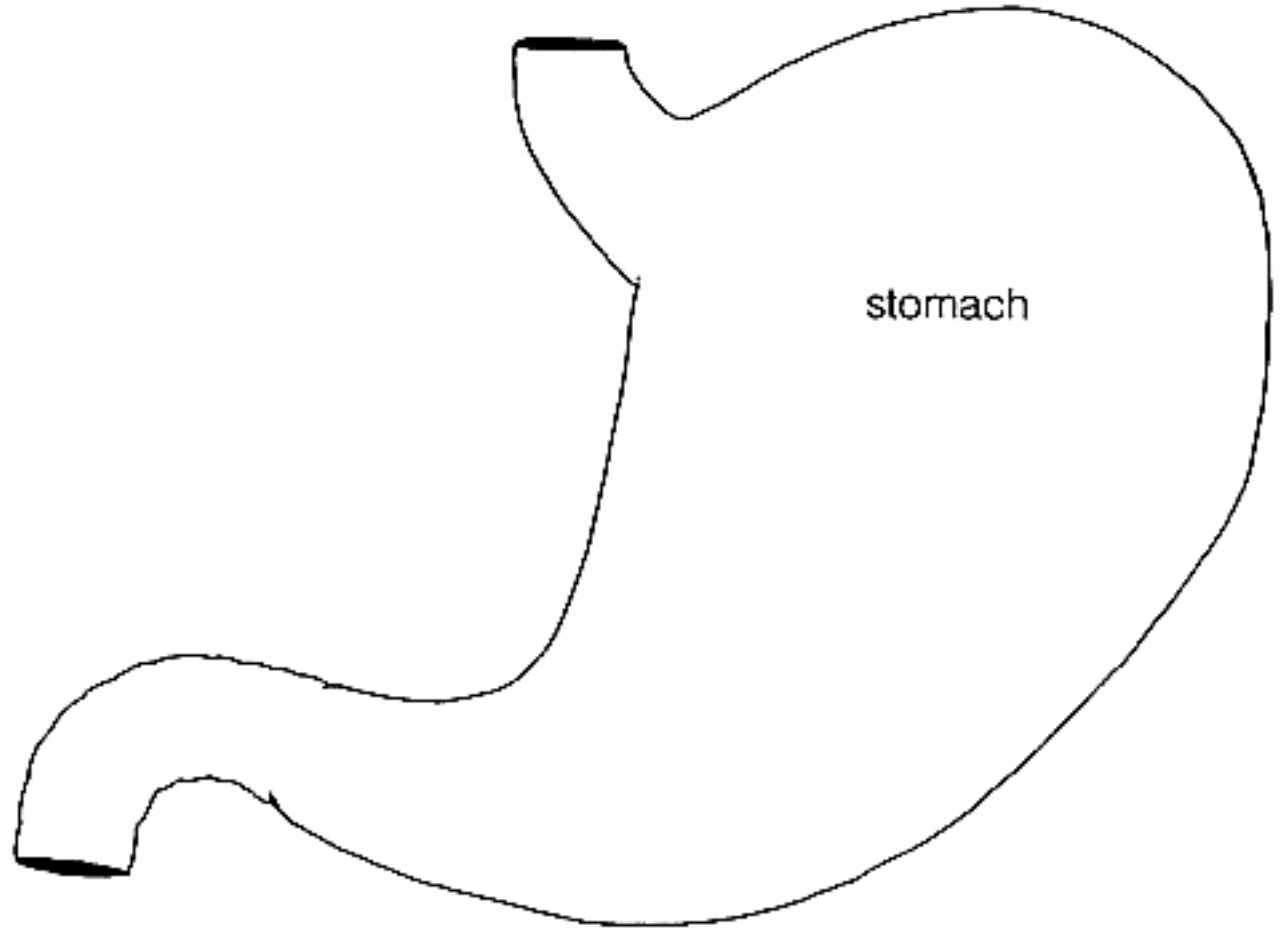


# ESOPHAGUS AND STOMACH



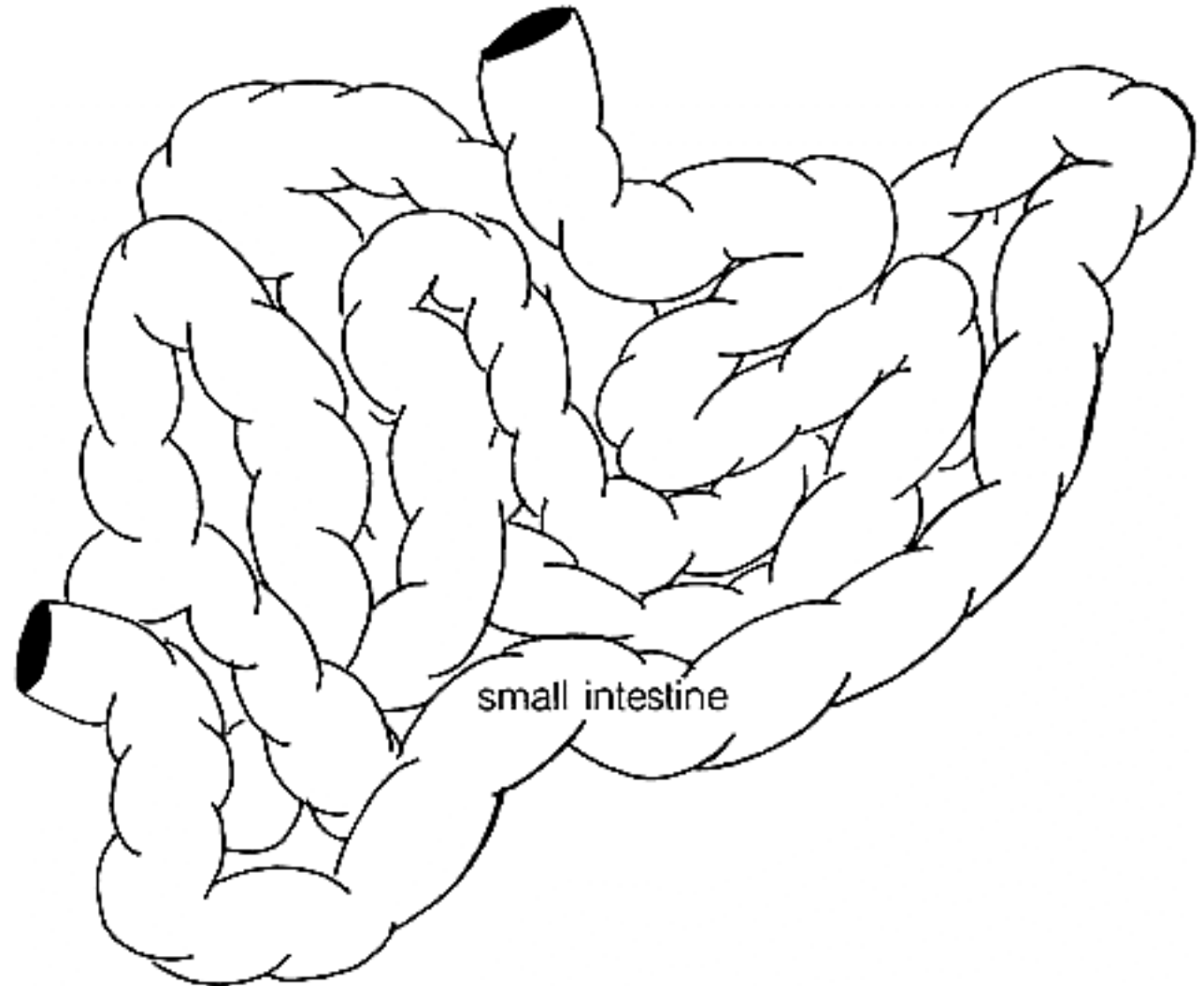
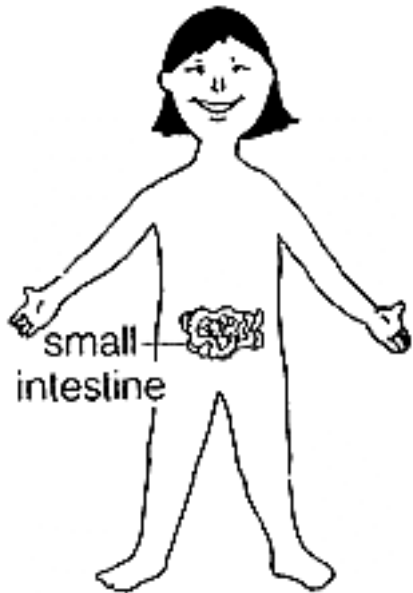
Colour the esophagus pink. Cut it out.  
Position between mouth and stomach

Colour the stomach orange. Cut it out.  
Position so that upper tube connects to the esophagus.

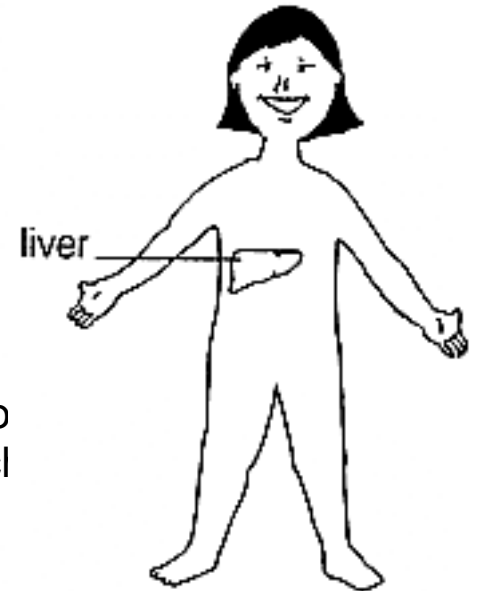
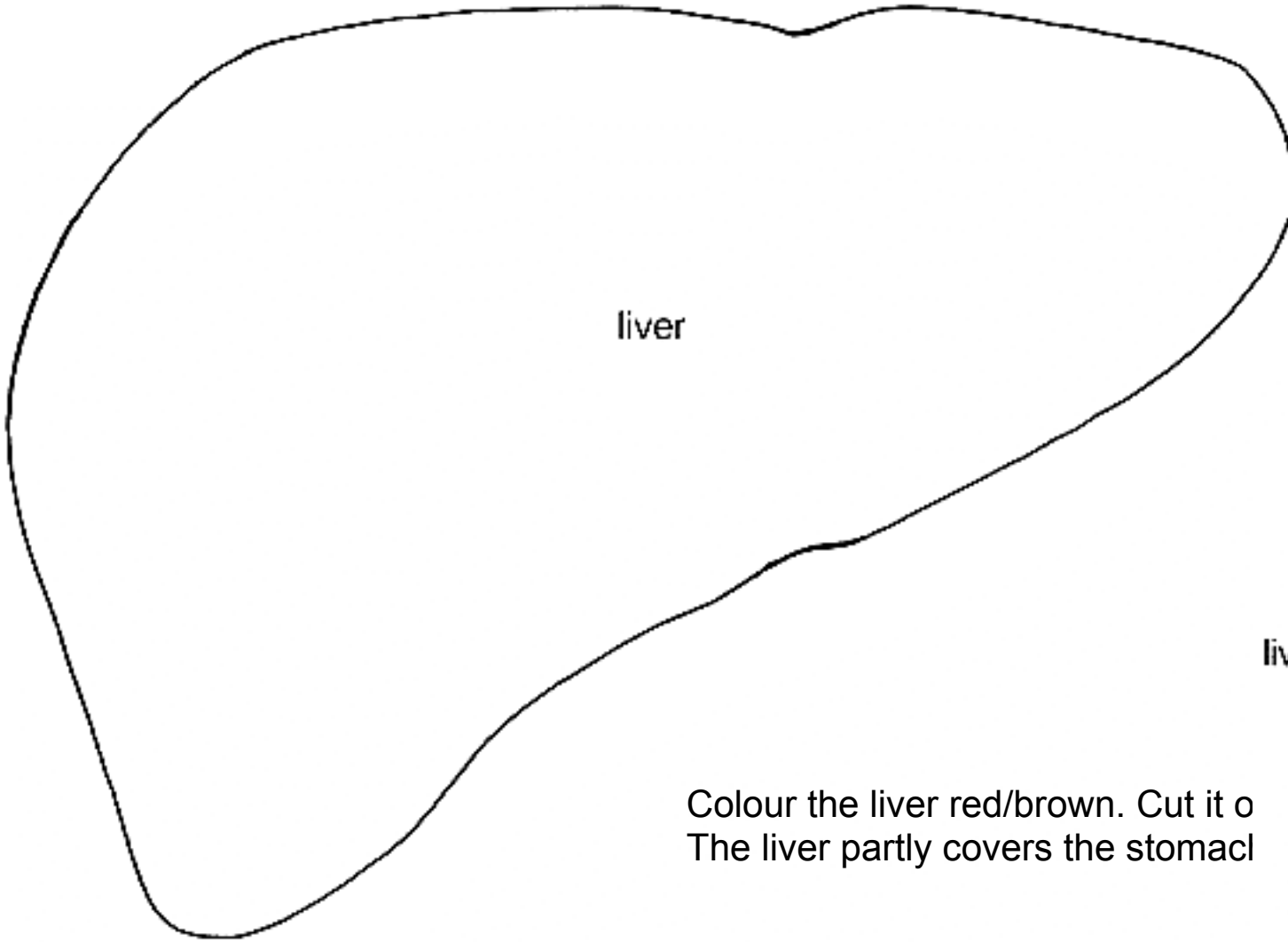


## SMALL INTESTINE

Colour the intestine light orange. Cut it out. Position on the body so the upper tube connects to the lower tube of the stomach.



# LIVER



Colour the liver red/brown. Cut it o  
The liver partly covers the stomacl

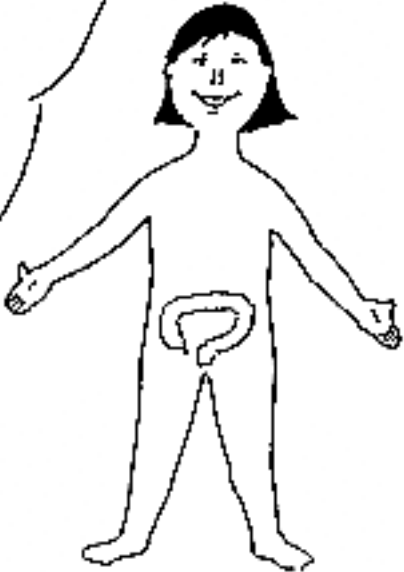
# LARGE INTESTINE

Colour the large intestine dark orange. Cut it out.  
Position on body outline so that the  
anus is between the legs. Large intestine  
partly covers small intestine. Left end of  
small intestine fits to hole above appendix.

appendix

large intestine

anus



# MY DIGESTIVE SYSTEM

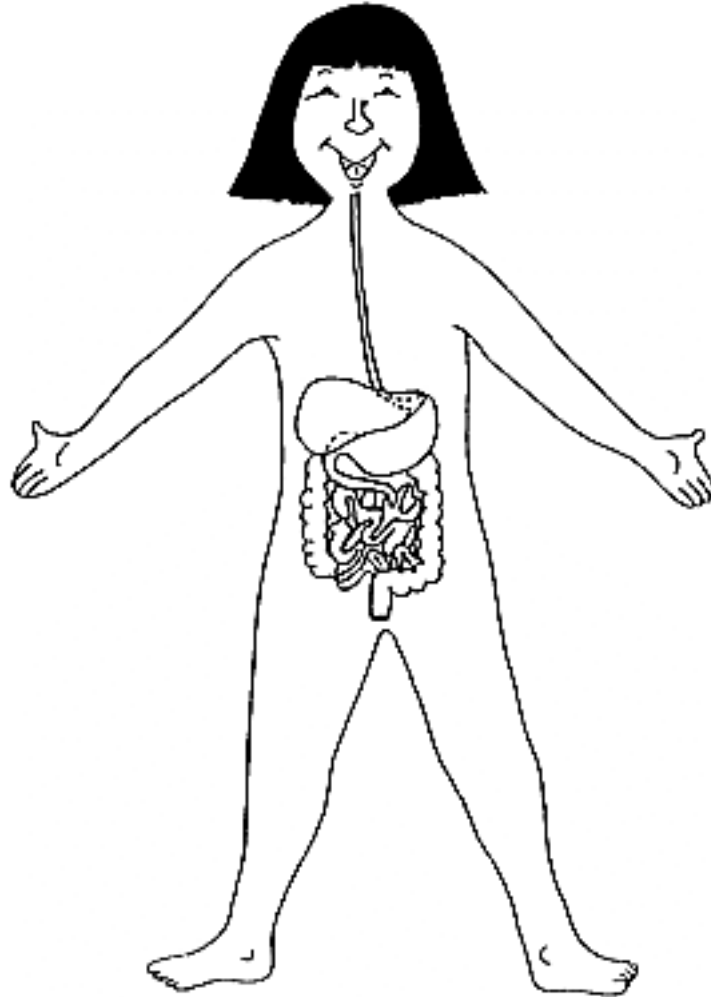
Draw a line to join the label with the correct body part.

liver

mouth

large intestine

small intestine



anus

esophagus

stomach

---

**GROWTH AND DEVELOPMENT****GRADE: 4****LESSON: 2****THEME: BODY SYSTEMS**

---

**CONCEPT: THE DIGESTIVE SYSTEM PROVIDES THE FUEL THE BODY NEEDS**

---

- PREPARATION:**
1. A muffin, a blender some milk, rubber tubing, marble, oil, meat tenderizer, hamburger, water, soap, small bone, lemon juice, hydrochloric acid measuring spoons, glass jars
  2. Pocket chart with Function cards copied onto sentence strips (Activity Sheet GD34)
  3. Prepare a class set (enough for 1 between 2 people) of functions cards (Activity Sheet GD34) and rings for a flip book
  4. Prepare a class set of Word Find (Activity Sheet GD35A)
- 

**VOCABULARY:** grind, squeeze, churn, juices, chemicals, waste

---

<b>OBJECTIVES</b>	<b>STUDENT ACTIVITIES</b>	<b>TEACHER NOTES</b>
Students will be able to:  i) describe the functions of the digestive system	Students:  1. Observe a simulation of the teeth's role in the digestive system.  2. Observe a simulation of the digestive process in the esophagus.	Background Information Page GD47 to GD49 Throughout this lesson, teachers should keep reinforcing the words 'digestive', 'digestion', etc.  Put a muffin into a blender. Switch the blender on for a few seconds so that the muffin is coarsely chopped.  Use a piece of rubber tubing. Have students push a marble lubricated with jelly or oil through the tube. The tubing represents the esophagus. The marble represents the food and the jelly or oil represents the saliva.

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES		
	3. Observe a simulation of the digestive process in the stomach.	<b>Physical Process</b>		<b>Chemical Process</b>
		Add milk or water to the muffin in the blender. Process until it is liquid.		Dissolve one teaspoonful of meat tenderizer in 100 cc of water. Add one teaspoon of hamburger. In another far, do the same without meat tenderizer. Check results the following day.
	4. Observe a simulation of the digestive process in the small intestine.	<b>On Fats</b>	<b>On Minerals</b>	<b>On Proteins</b>
		Half fill a far with water. Half fill another with a mixture of soap and water (1/2 & 1/2). Add 1 tbsp oil to each far. Watch what happens.	Place a small bone (e.g., a bird bone) in DILUTE hydrochloric acid*. Predict what will happen to the bone. After 3 days remove the bone and observe.	Add 30 ml of lemon juice to 240 ml of milk. Observe after one hour, then after three hours.
		<b>Observations and conclusions should include:</b>		
		The soap and water break down the fat.	The bone is soft and bendable, showing the breakdown of bone minerals.	The milk curdles showing the breakdown of the proteins.
	* For this experiment teachers may prefer to handle the dilute hydrochloric acid.			

**OBJECTIVES****STUDENT ACTIVITIES****TEACHER NOTES**

5. Describe the functions of the different parts of the digestive system.

Record student responses using a pocket chart and sentence strips as illustrated.

The mouth
-----------

tastes, moistens and mixes the food
-------------------------------------

The teeth
-----------

cut and grind the food
------------------------

The esophagus
---------------

squeezes the food into the stomach
------------------------------------

The liver
-----------

makes chemicals to break down the food
--

The stomach
-------------

churns and mixes the food
---------------------------

The small intestine
---------------------

moves food nutrients into the blood
-------------------------------------

The large intestine
---------------------

collects wastes
-----------------

The anus
----------

gets rid of wastes
--------------------

6. Match name and function cards to the appropriate digestive parts on the child size body outline.

Refer to Activity Sheet GD34.

Prepare these cards with the name of a digestive part on one side and its function on the reverse side.

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
<p>ii) state the importance of the digestive system</p>	<p>7. Match digestive part names to the function.</p> <p>8. Discuss the importance of the digestive system.</p> <p>9. Complete the Word Find.</p>	<p>Use Activity Sheet GD34. The teacher should cut each card into two -the name and the function.</p> <p>In pairs have the students make the cards into flip books. Have students match name and function.</p> <div data-bbox="1331 488 1881 656" style="text-align: center;"> </div> <p>Ask students:</p> <ul style="list-style-type: none"> <li>- what happens if they swallow something without chewing</li> <li>- why babies and older people may need blended food</li> <li>- what happens if food is not digestible</li> </ul> <p>The digestive process reduces food into small particles that the body uses for fuel. The fuel is necessary for growth, energy and regularity.</p> <p>Refer to Activity Sheet GD35A.</p> <p>Answers are given on GD35B.</p>

**DIGESTIVE FUNCTION CARDS**

mouth	tastes, moistens and mixes the food
teeth	cut and grind the food
esophagus	squeezes the food into the stomach
liver	makes chemicals to break down the food
stomach	churns and mixes the food
small intestine	moves food nutrients into the blood
large intestine	collects wastes
anus	gets rid of wastes

# WORD FIND

Find these words and circle them:

- stomach
- intestine
- liver
- teeth
- anus
- grind
- mix
- waste
- food
- juice
- blood
- cut

n	y	o	w	a	s	t	e	f
s	h	v	e	x	u	r	m	o
o	b	g	r	i	n	d	l	o
r	s	t	o	m	a	c	h	d
e	f	e	n	j	o	p	t	w
v	x	e	s	c	u	t	d	f
i	n	t	e	s	t	i	n	e
l	o	h	c	k	a	s	c	b
m	o	n	b	l	o	o	d	e

They may be found up ↑ , down ↓ , across → or diagonal ↘ .

# WORD FIND

(Answer guide)

n	y	o	w	a	s	t	e	f
s	h	v	e	x	u	r	m	o
o	b	g	r	i	n	d	l	o
r	s	t	o	m	a	c	h	d
e	f	e	n	d	o	p	t	w
v	x	e	s	c	u	t	d	f
i	n	t	e	s	l	i	n	e
l	o	h	c	k	a	s	c	b
m	o	n	b	l	o	o	d	e

---

**GROWTH AND DEVELOPMENT**

---

**GRADE: 4****LESSON: 3****THEME: BODY SYSTEMS**

---

**CONCEPT: THE DIGESTIVE SYSTEM PROVIDES THE FUEL THE BODY NEEDS**

---

**PREPARATION:** 1. Collect a number of products used for digestive system problems  
2. Materials to make posters

---

**VOCABULARY:** problem

---

<b>OBJECTIVES</b>	<b>STUDENT ACTIVITIES</b>	<b>TEACHER NOTES</b>
Students will be able to:  i) name common problem conditions of the digestive system	Students:  1. Name common problem conditions related to the digestive system. Briefly discuss.	Background Information Page GD47 to GD49 Throughout this lesson, teachers should keep reinforcing the words 'digestive', 'digestion', etc.  Collect a number of products designed to give relief from problems related to the digestive system, e.g., Tums, Alka Seltzer, Ora-gel and Preparation H. Choose products with which students are likely to be familiar.  Ask students  - why these products are used - if they have ever had a problem with a part of the digestive system, e g stomach - to name problems related to the digestive system

---

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
<p>ii) describe ways to care for the digestive system</p>	<p>2. Identify what to do if a problem with any part of the digestive system occurs.</p> <p>3. List ways to take care of the digestive system. Discuss.</p>	<p>Make a list Students may be familiar with</p> <ul style="list-style-type: none"> <li>- stomach-ache</li> <li>- constipation, diarrhea</li> <li>- nausea, vomiting</li> <li>- food poisoning</li> <li>- appendicitis</li> <li>- ulcers</li> <li>- haemorrhoids</li> <li>- worms</li> <li>- gallstones</li> <li>- heartburn</li> </ul> <p>Emphasize that if students have a problem they should tell an adult they trust.</p> <p>Ask students how they take care of their digestive system. Have students respond using the sentence pattern:</p> <p>I take care of my digestive system by _____.</p>

**OBJECTIVES****STUDENT ACTIVITIES****TEACHER NOTES**

		Record student responses using an experience chart as illustrated:		
		<b>What you eat</b>	<b>How you eat it</b>	<b>Food preparation</b>
		<ul style="list-style-type: none"> <li>- eating fresh meat or fish</li> <li>- eating from the 4 food groups</li> <li>- eating breakfast every day</li> <li>- eating only a little sugar, salt and fat</li> <li>- not eating junk food</li> <li>- drinking lots of liquids</li> <li>- putting only food in the mouth</li> </ul>	<ul style="list-style-type: none"> <li>- not rushing meals</li> <li>- not talking or laughing while eating</li> <li>- chewing food thoroughly, especially hard foods</li> </ul>	<ul style="list-style-type: none"> <li>- washing hands before eating or preparing food</li> <li>- washing pots and pans after cooking food</li> <li>- washing berries before eating them</li> </ul>
	4. Make posters indicating ways of caring for the digestive system.	Have students select one item from the experience chart. Make it into a poster with a slogan. Display them in prominent places around the school.		

---

**GROWTH AND DEVELOPMENT****GRADE: 4****LESSON: 4****THEME: DISEASE PREVENTION**

---

**CONCEPT: DISEASES ARE CAUSED BY A VARIETY OF FACTORS**

---

**PREPARATION:** 1. Prepare a class set of What A Mix Up' worksheet (Activity Sheet GD35)  
2. Materials for mobiles  
3. Prior to the lesson, arrange for the nurse to visit the class

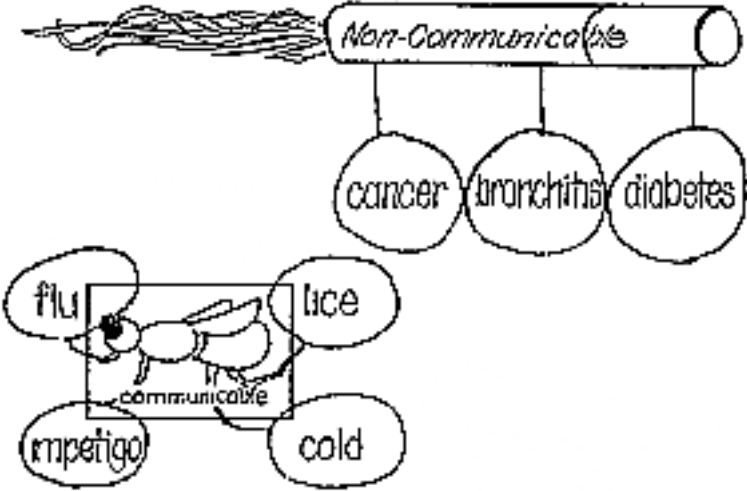
---

**VOCABULARY:** causes

<b>OBJECTIVES</b>	<b>STUDENT ACTIVITIES</b>	<b>TEACHER NOTES</b>
Students will be able to:  i) explain what communicable diseases are	Students:  1. Learn the term communicable.  2. Define the term communicable disease.	Background Information Page GD50 to GD51  Review with students what a disease is. Ask if they know what a communicable disease is. Brainstorm what they think the definition might be. It might help them to think of another word that has a similar root – communicate.  Explain that it is a disease which can be given to other people.



OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES																				
ii) explain what non-communicable diseases are	5. Describe causes of communicable diseases.  6. Describe non-communicable diseases.  7. List common non-communicable diseases.	<p>Ask students what they think causes diseases. Record student responses using an experience chart as illustrated.</p> <table border="1" data-bbox="1241 407 1430 558"> <tr> <td><b>Causes</b></td> </tr> <tr> <td>- germs</td> </tr> <tr> <td>- insects</td> </tr> <tr> <td>- worms</td> </tr> </table> <p>Explain to students that some diseases cannot be given to other people. Ask students if they know anyone who has had lung cancer.</p> <p>Ask students to name diseases which are not communicable. Have students respond using the sentence pattern(s).</p> <p>You cannot get _____ from other people            You cannot give _____ to other people</p> <p>List student responses in column 1 of a 2 column experience chart as illustrated.</p> <table border="1" data-bbox="1184 1070 2020 1440"> <thead> <tr> <th><b>Common Diseases</b></th> <th><b>Causes</b></th> </tr> </thead> <tbody> <tr> <td>- cancer</td> <td><b><i>Environmental factors</i></b></td> </tr> <tr> <td>- emphysema</td> <td>- smoking</td> </tr> <tr> <td>- malnutrition</td> <td>- pollution</td> </tr> <tr> <td>- bronchitis</td> <td><b><i>Poor health habits</i></b></td> </tr> <tr> <td>- diabetes</td> <td>- poor diet</td> </tr> <tr> <td>- heart disease</td> <td>- lack of exercise</td> </tr> <tr> <td>- arthritis</td> <td><b><i>Heredity</i></b></td> </tr> </tbody> </table>	<b>Causes</b>	- germs	- insects	- worms	<b>Common Diseases</b>	<b>Causes</b>	- cancer	<b><i>Environmental factors</i></b>	- emphysema	- smoking	- malnutrition	- pollution	- bronchitis	<b><i>Poor health habits</i></b>	- diabetes	- poor diet	- heart disease	- lack of exercise	- arthritis	<b><i>Heredity</i></b>
		<b>Causes</b>																				
- germs																						
- insects																						
- worms																						
<b>Common Diseases</b>	<b>Causes</b>																					
- cancer	<b><i>Environmental factors</i></b>																					
- emphysema	- smoking																					
- malnutrition	- pollution																					
- bronchitis	<b><i>Poor health habits</i></b>																					
- diabetes	- poor diet																					
- heart disease	- lack of exercise																					
- arthritis	<b><i>Heredity</i></b>																					

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES
<p>iii) distinguish between communicable and non-communicable diseases</p>	<p>8. Describe causes of non-communicable diseases.</p> <p>9. Complete the What A Mix Up worksheet.</p> <p>10. Make 2 class mobiles - one for communicable, the other for non-communicable diseases.</p>	<p>Ask students to identify what might have caused each non-communicable disease. (E.g., teachers may need to lead students to suggest that smoking may cause cancer.)</p> <p>Record student responses in the second column of the experience chart started in Student Activity 7.</p> <p>Refer to Activity Sheet GD35.</p> <p>Have students make a large model fly with sticky feet made out of masking tape loops. Write the names of communicable diseases on circles and hang them from the fly's feet.</p> <p>Have students make a large cigarette with smoke. Hang non-communicable diseases from the cigarette E.g.,</p> 



---

**GROWTH AND DEVELOPMENT****GRADE: 4****LESSON: 5****THEME: ENVIRONMENTAL HEALTH**

---

**CONCEPT: SAFE DRINKING WATER IS ESSENTIAL FOR MAINTAINING HEALTH**

---

- PREPARATION:**
1. Jars for collecting water samples
  2. Microscopes
  2. Arrange for students to visit places associated with the community water supply
  2. Polaroid camera, tape recorder
  2. Materials for mural
  6. Invite an elder or wildlife officer to describe how to choose safe drinking water
- 

**VOCABULARY:** pollution, safe, sewage

---

<b>OBJECTIVES</b>	<b>STUDENT ACTIVITIES</b>	<b>TEACHER NOTES</b>														
Students will be able to:  i) identify sources of polluted water	Students:  1. Collect samples of water from different places.  2. Observe the samples of water and indicate which are safe to drink and why.	Background Information Page – This lesson relates to Science, Grade 3  Have students collect a number of jars of water from different sources a tap, a puddle on the road that vehicles drive through, a stagnant pond, a river, etc. Number the samples so that students do not know the sources.  Have students look at the samples and decide which they would prefer to drink. Ask them to describe each sample by colour, content, smell, etc.  Record student responses using an experience chart <table border="1" data-bbox="808 1344 2022 1456"><thead><tr><th data-bbox="808 1344 1035 1385">Sample #</th><th data-bbox="1035 1344 1241 1385">Colour</th><th data-bbox="1241 1344 1478 1385">Content</th><th data-bbox="1478 1344 1692 1385">Smell</th><th data-bbox="1692 1344 2022 1385">Would you drink it?</th></tr></thead><tbody><tr><td data-bbox="808 1385 1035 1456"><b>1</b></td><td data-bbox="1035 1385 1241 1456"></td><td data-bbox="1241 1385 1478 1456"></td><td data-bbox="1478 1385 1692 1456"></td><td data-bbox="1692 1385 2022 1456"></td></tr></tbody></table>					Sample #	Colour	Content	Smell	Would you drink it?	<b>1</b>				
Sample #	Colour	Content	Smell	Would you drink it?												
<b>1</b>																

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES				
ii) name health problems caused by unsafe drinking water	3. After finding out the sources of each sample, indicate which water they would drink.  4. Observe the samples of water under a microscope. 5. List sources of pollutants in rivers, lakes, streams and oceans.	Reveal the sources of the water and have students identify which they would rather drink. Have students give reasons for their choices. These should include: <ul style="list-style-type: none"> <li>- absence of obvious pollution</li> <li>- no smell</li> <li>- where it is found</li> <li>- how it looks, etc</li> </ul> Discuss what students see that indicates the water is polluted.  Ask students how water gets polluted. Have students respond using the sentence pattern: _____ cause(s) water pollution  Record student responses using an experience chart as illustrated: <table border="1" data-bbox="800 922 2020 1109"> <thead> <tr> <th data-bbox="800 922 1503 959">Caused by people</th> <th data-bbox="1503 922 2020 959">Natural</th> </tr> </thead> <tbody> <tr> <td data-bbox="800 959 1503 1109"> <ul style="list-style-type: none"> <li>- raw sewage</li> <li>- oil spills</li> <li>- smoke from fires</li> <li>- litter</li> </ul> </td> <td data-bbox="1503 959 2020 1109"> <ul style="list-style-type: none"> <li>- animal waste</li> <li>- dust from storms</li> <li>- smoke from fires</li> </ul> </td> </tr> </tbody> </table>	Caused by people	Natural	<ul style="list-style-type: none"> <li>- raw sewage</li> <li>- oil spills</li> <li>- smoke from fires</li> <li>- litter</li> </ul>	<ul style="list-style-type: none"> <li>- animal waste</li> <li>- dust from storms</li> <li>- smoke from fires</li> </ul>
	Caused by people	Natural				
<ul style="list-style-type: none"> <li>- raw sewage</li> <li>- oil spills</li> <li>- smoke from fires</li> <li>- litter</li> </ul>	<ul style="list-style-type: none"> <li>- animal waste</li> <li>- dust from storms</li> <li>- smoke from fires</li> </ul>					
6. List examples of diseases caused by drinking unsafe water.	Ask students what they think would happen if they drank polluted water. (Some students may know about visiting countries where it is easy to get sick from the water and where it is best to drink bottled water.) Health problems include: <ul style="list-style-type: none"> <li>- diarrhea</li> <li>- polio</li> <li>- hepatitis</li> <li>- dysentery (diarrhea, nausea, vomiting)</li> <li>- typhoid</li> <li>- cholera</li> </ul> Where clean water is scarce, diseases related to dirty water are more common.					





---

**GROWTH AND DEVELOPMENT****GRADE: 4****LESSON: 6****THEME: HEALTH CARE SYSTEM**

---

**CONCEPT:** HEALTH CARE SUPPORTS ARE AVAILABLE TO PROMOTE INDIVIDUAL AND COMMUNITY HEALTH

---

**PREPARATION:** 1. Arrange for a number of health professionals to take part in a panel discussion

---

**VOCABULARY:** agency, organization, promote, supports

---

<b>OBJECTIVES</b>	<b>STUDENT ACTIVITIES</b>	<b>TEACHER NOTES</b>		
Students will be able to:  i) identify all health care supports available	Students:  1. Identify all health care supports available in their community.	Background Information Page –  Ask students to name the health care workers in their community.  Record student responses in column one of a three column experience chart as illustrated:		
		<b>Available in community</b>	<b>Located in another community</b>	<b>What do they do?</b>
		- nurse - dental therapist		
		Have students respond using the sentence pattern:  A _____ is available in our community.		

**OBJECTIVES****STUDENT ACTIVITIES****TEACHER NOTES**

2. Identify health care supports that are located in another community, but available to people in their community.

Health care support should include agencies and organizations such as Alcoholics Anonymous, St John Ambulance, etc.

Ask students what other health care supports come in to their community, or are available elsewhere for them to use. Have students respond using the sentence patterns:

The \_\_\_\_\_ has to come from \_\_\_\_\_

We have to go to \_\_\_\_\_ to see a \_\_\_\_\_

Record student responses in column two of the experience chart started in Student Activity 1.

<b>Available in community</b>	<b>Located in another community</b>	<b>What do they do?</b>
nurse		
dental therapist		
	doctor	

OBJECTIVES	STUDENT ACTIVITIES	TEACHER NOTES														
ii) describe the services provided by health care supports	3. Describe the functions of each health care support person.	<p>Add the function of each person to the third column of the experience chart started in Student Activity 1. Have students respond using the sentence pattern:</p> <p>The (nurse) _____</p> <table border="1" data-bbox="892 443 2018 899"> <thead> <tr> <th data-bbox="892 443 1417 521">Available in community</th> <th data-bbox="1417 443 1717 521">Located in another community</th> <th data-bbox="1717 443 2018 521">What do they do?</th> </tr> </thead> <tbody> <tr> <td data-bbox="892 521 1417 672">nurse</td> <td data-bbox="1417 521 1717 672"></td> <td data-bbox="1717 521 2018 672">treatment clinics information education</td> </tr> <tr> <td data-bbox="892 672 1417 750">dental therapist</td> <td data-bbox="1417 672 1717 750"></td> <td data-bbox="1717 672 2018 750">cleaning treatment</td> </tr> <tr> <td data-bbox="892 750 1417 899"></td> <td data-bbox="1417 750 1717 899">doctor</td> <td data-bbox="1717 750 2018 899">information testing clinics emergency</td> </tr> </tbody> </table>			Available in community	Located in another community	What do they do?	nurse		treatment clinics information education	dental therapist		cleaning treatment		doctor	information testing clinics emergency
Available in community	Located in another community	What do they do?														
nurse		treatment clinics information education														
dental therapist		cleaning treatment														
	doctor	information testing clinics emergency														
iii) describe how to contact the health care supports available	<p>4. Prepare a class directory of health care supports.</p> <p>5. Listen to various health professionals discuss their agencies/organizations and the services they provide.</p>	<p>Divide students into groups. Have each group research a health care support person. Information should include:</p> <ul style="list-style-type: none"> <li>- who the person is</li> <li>- who s/he works for (Health &amp; Welfare Canada, GNWT Health)</li> <li>- what s/he does</li> <li>- hours of work</li> <li>- his/her location and phone number</li> </ul> <p>Compile all the information into one directory.</p> <p>Prior to the lesson, arrange for a number of health professionals to take part in a panel discussion on services available to promote health. Have students ask questions about the support services offered.</p>														