

# Grade **2** Lesson Package



heart healthy kids™  
volume 2

Jeunes coeurs en santé<sup>MC</sup>  
volume 2



# OVERVIEW OF LESSON PACKAGE FOR GRADE 2

## General Information

### STRUCTURE OF THE UNIT

This unit consists of an introduction and five student lessons (BLM 1-5).

### CONTENTS OF THIS PACKAGE

- Teacher Guide Pages, including Tips and Answers
- Photocopiable Student Lessons, BLM 1-BLM5
- Photocopiable Heart Facts BLM 6

### STRUCTURE OF STUDENT LESSONS

- 1 Each Student Lesson is provided in BLM format.
- 2 Each lesson is organized around the following headings:
  - Warm-up
  - Are you Ready?
  - Get Set
  - Go!
  - Cross the Finish Line
- 3 Each Go! section involves the student in an activity or in making something: a model, a picture, a chart. In most cases, what students make can be taken home to share with their families.
- 4 The unit is very much self-contained. Students should be able to progress through each lesson with minimal teacher guidance. It is suggested that a class discussion follow each lesson to wrap up any student questions.

### YOU DON'T NEED TO BE AN EXPERT

All the information you and your students really need is either in this package or in the box. There's no need for the teacher to do extra research. At the same time, there is plenty of opportunity for students to do extra research.

### YOU DON'T NEED SPECIAL MATERIALS

You won't have to prepare or scrounge for materials. Most activities don't require anything more than pens, pencils, paper and tape. Everything else you'd need at school is in the box. And there are numerous opportunities for children to share activities with family by taking the lesson page home and interacting with adults.

### YOU DECIDE HOW MUCH CLASS TIME TO USE

Children need not do the entire unit to benefit. It's well worth while to do, say, the introduction and one or two of the lessons you think your students would most enjoy. If you choose to do all five lessons, you might decide to do one a day for a week, or one a week for a month.

The time required will depend on your objectives. Each lesson can stand on its own, if necessary. Or, the unit can be enhanced to become the theme of a multidisciplinary study.

### YOU DON'T NEED A LOT OF PREPARATION TIME

We've tried to keep this teacher guideline as concise and concrete as possible, so you won't have to wade through page after page to get to the heart of the matter. We've avoided jargon, and chosen the simplest possible language and the tightest possible format. The same is true of the Student Lessons. Note that Tips and Answers are provided. To save space, the answers are written as simply as possible. You may want your students to answer in full sentences.

### THE LESSONS ARE MEANT FOR INDEPENDENT WORK

The five lessons are designed to help students learn how to learn from reference materials, from reading, from working together to answer questions, from connecting the learning that takes place in one lesson to the next. But children this young will likely need a lot of support.

# OVERVIEW OF LESSON PACKAGE FOR GRADE 2

<i>Student Lesson</i>	<i>BLM</i>	<i>Title</i>	<i>Topic</i>
Lesson 1	BLM 1	<i>Circulation Game: Rules</i>	Structure and Function of the heart
Lesson 2	BLM 2	<i>Rule 1: Eat Good Food</i>	Nutrition for a healthy heart
Lesson 3	BLM 3	<i>Rule 2: Breathe Clean Air</i>	Air (oxygen) for a healthy heart
Lesson 4	BLM 4	<i>Rule 3: Move Your Body</i>	Exercise/fitness for a healthy heart
Lesson 5	BLM 5	<i>Emergency! Help for an Unhealthy Heart</i>	Using the 911 Emergency Service
	BLM 6	<i>Heart Facts Sheet</i>	Goes with all Lessons

## Curriculum Expectations

Students will:

### LESSON 1.

- describe the parts of the human body and the functions of these parts (H & PE -- Healthy Living)

### LESSON 2.

- describe the importance of food to the body e.g. for energy and growth (H & PE -- Healthy Living)
- identify healthy eating practices (H & PE -- Healthy Living)

### LESSON 3.

- identify healthy alternatives to drug use e.g. fresh air and exercise can help relieve headaches (H & PE -- Healthy Living)

### LESSON 4.

- assess their degree of exertion in physical activities (H & PE -- Active Participation)
- recognize the body needs activity for sustained amounts of time to improve the strength of the heart and lungs (H & PE -- Active Participation)
- identify the reasons for participating in regular physical activity (H & PE -- Active Participation)

### LESSON 5.

- describe how to seek help (H & PE -- Healthy Living)

NOTE: Based on the Province of Ontario's Curriculum Expectations

H & PE: Health and Physical Education, The Ontario Curriculum Grades 1-8

Sc & Tech: Science and Technology, The Ontario Curriculum Grades 1-8

## Teacher's Guideline – Grade 2

### LESSON 1 *Instructions And Script For The Circulation Game*

This game is designed (i) to give students a concrete understanding of what circulation means, (ii) to help them learn how blood circulates in their own bodies; and (iii) to help them appreciate the complexity of the circulatory system, all without memorizing a lot of terms. As teacher, you will play the role of “tour guide.” That is, you will read the instructions out loud so students are free to take part in the game. Here are some of the ideas this model can convey:

1. Blood keeps you alive by bringing food and oxygen to your body parts.
2. Blood picks up oxygen from the lungs.
3. The heart muscle gives the blood a push.
4. Blood picks up food from (or near) the stomach.
5. Blood goes around the body, giving away food and oxygen to various body parts.
6. The drops run out of food and oxygen by the time they've made a complete trip around the body.
7. The drops also run out of “oomph.” They need a new push.
8. The blood has to come back to the heart for another push.

Like all models, this one is limited. It's something like the real thing, but not exactly alike. It's meant to help us understand, but it doesn't try to show every possible concept. That's fine. This is a good starting point, and it is enough for now. The rest can wait for Lessons 2-4.

#### TEACHER PREPARATION

- See the following page for detail of setting up and playing the game.
- Photocopy a class set of BLM 1 to give out after the game.

*READ* is your cue to read aloud from the text that follows.

*TEACHER* is your cue to DO without reading out loud.

#### INTRODUCTION

*READ* There's a miracle liquid inside your body! It's your blood, and it keeps you alive, but not all by itself. To discover how, we'll play the Circulation game. Instead of a game board, we'll use [the whole classroom, the hall, the gym] as a Circulation theme park. In the game, you'll play different roles. Some of you will play the part of blood drops. Some will play the part of hands, feet, stomach, lungs, heart.

#### WARM-UP

*TEACHER* Get students to help you set up the game

space, prepare tickets, put number tags on the engineers, and set up the tables. See next page for details.

#### ARE YOU READY?

I'm going to be your tour guide. Let's visit the various stops in this circulation theme park. I'll tell you what they are and what they can do.

**Lung Table** *READ*: Lungs are hollow, thin-walled pouches-like a pair of bags with only one opening. They bring air into your chest and let it out again. *TEACHER*: Get oxygen dispensers to take their place.

*READ*: Blood in the lung walls takes oxygen from air.

**Heart Table** *READ*: The heart is a strong muscle with four hollow cubicles. The muscle squeezes to push or pump blood out of the cubicles. *TEACHER*: Get engineers to take their place.

**Stomach Table** *READ*: The stomach is only one part of a long tube that passes all the way through your body. It breaks food into bits small enough for blood to carry. *TEACHER*: Get food dispensers to take their place.

*READ*: The lungs and the heart and the stomach stay in the same place at all times. But blood is a liquid. It moves all around your body. Where are the blood drops?

**Blood Drops** *READ*: Your job is to deliver useful materials. So you drops are going to move around this theme park, just like real blood moves around your body.

#### GET SET

*READ*: It's time for a trial run. I'll pretend to be a blood drop, so all you other blood drops can see the way to go.

*TEACHER*: Exaggerate the bounce and the gradual slowdown. When you get back, ask students what they think the blood drop would do now. Spend a minute or two eliciting the idea that it would keep on moving. The heart never stops, and neither does the blood.

#### GO!

*READ*: Okay blood drops, go! One at a time. No shoving, and hang onto your tickets.

*TEACHER*: When the first drop gets back to the lungs, say something like: Okay blood drop, you're back to the start. What are you going to do now?. Don't give up! Grab some oxygen tickets, go back to the heart, and CIRCULATE! Let the drops do 4-5 laps before stopping the game. If there's time, you might want to let drops swap roles with the fixed organs.

## Teacher's Guideline – Grade 2

### LESSON 1 How to Set Up and Play The Circulation Game

#### WHAT YOU'LL NEED

- 10 sheets of scrap paper (5 white, 5 in assorted colours)
- Get student volunteers to cut each sheets into 32 tickets
- 4 signs numbered 1-4 to pin to shirt fronts of engineers

#### WHERE TO PLAY THE GAME

Your classroom is likely ideal even though there may not be much room between desks. If kids have to wiggle in order to circulate, the model becomes all the more realistic.

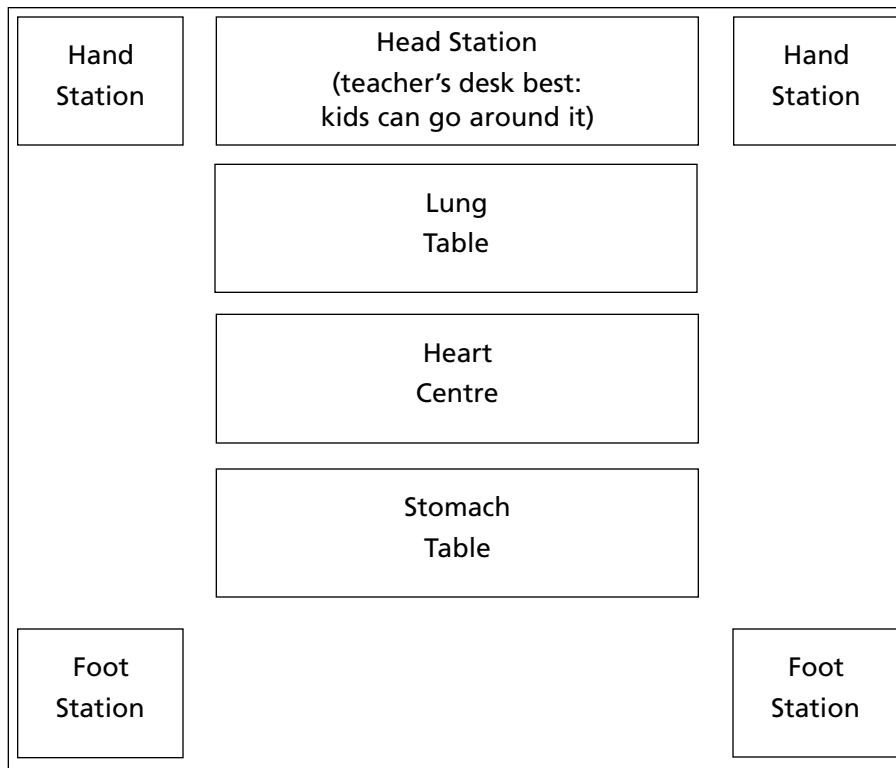
#### WHO WILL PLAY THE PARTS?

Most kids will play blood drops, but first, choose:

- 5 "ticket collectors" (see roles column below)
- 4 heart muscle engineers for the heart centre
- 2 fuel dispensers for the stomach table
- 2 oxygen dispensers for the lung table
- everyone else is a red blood drop

#### HOW TO ARRANGE THE WORK ROOM

Set up your classroom or other work space to represent a "pretend body." Only those parts that relate directly to the circulatory game are included here as the focus is on circulation



#### ROLES FOR STUDENTS

- 1 ticket collector at each hand, foot and head station
- 2 oxygen dispensers for lung table to give out white tickets
- 4 engineers for centre (see below for set-up)
- 2 fuel dispensers for stomach table to give out coloured tickets

What you need	What to do
4 chairs (with backs, without arms) 4 chair engineers wearing numbers	Arrange engineers and chairs to form 2 publics facing left, 2 facing right, with a wall between them
◀ = chair (stands for heart cubicle) # = engineer (stands for heart muscle)	3) # # ◀ 1 4) # # ◀ 2 Numbered engineers line up side to side and back to back, with hands resting on chair backs; chair seats facing out

#### READY FOR A TRIAL RUN?

Get the "staff" on duty and in position. Ask for a volunteer to demonstrate what the blood drops will be doing. The rest of the drops should stand aside.

- Go to the lung table. Pick up 5 white tickets.
- Go to heart centre. Sit in chair 1 until..
- Engineer 1 taps your shoulder. Slide into chair 2
- Engineer 2 taps your shoulder. Bounce up. You've just been pumped!

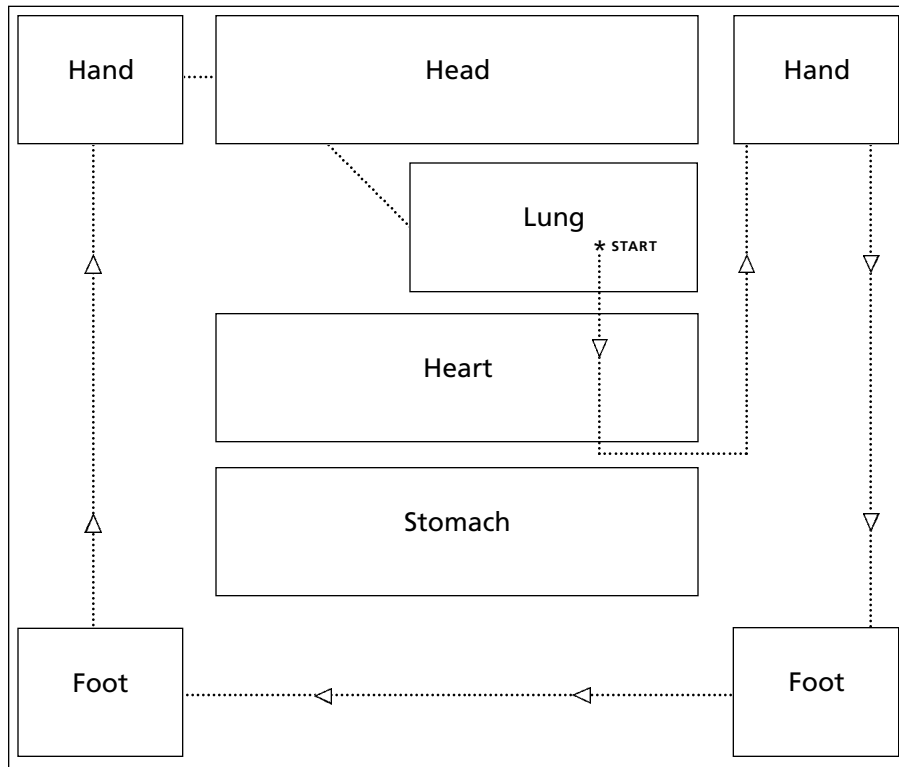
- Jog to stomach. Pick up 5 coloured tickets from clerk.
- Jog away from stomach to nearest hand station. Give collector 2 tickets: 1 white; 1 coloured.
- Jog to nearest foot station. Give collector 2 tickets.
- Jog to next foot station. Give away 2 more tickets.
- Walk to next hand station. Give away 2 tickets.
- Walk slowly to head. Give away rest of tickets.
- Walk very slowly back to lung table.

Tips and Answers to Questions for Grade 2 Lesson 1  
*Follow-up to The Circulation Game*

**HERE IS A MAP OF THE CIRCULATION GAME YOU PLAYED**

- Where did the blood start out? Draw a star \*on the spot.
- Where did the blood go?
  - Start at the star
  - Draw arrows
  - Show where the blood went

THE FOLLOWING IS AN ACCURATE PATH. DON'T EXPECT KIDS TO REALIZE THAT BLOOD GOES INTO THE HEART, BUT PAST THE STOMACH. Teacher may want to review the path with the kids and leave arrows on the ground so kids can visualize it.



- Look at the head box. What did the blood do there? Circle the answer.

The blood gave something.  
 The blood got something.

- What did the blood give or get? (Two things: write on the blank lines.)

(a) FOOD  
 (b) OXYGEN

- Think up a sentence to write in the head box.

The blood gave food and oxygen.

- Go to another box. Think up your own sentence. Write it in the box.

- Keep going until every box has a sentence in it.

FEET, HANDS: The blood GAVE food and oxygen.

LUNGS: The blood GOT oxygen.

STOMACH: The blood GOT food.

HEART: The blood got a PUSH. (Many kids may be unclear on this. Point it out.)

# STUDENT WORKSHEET GRADE 2 LESSON 1

## The Circulation Game

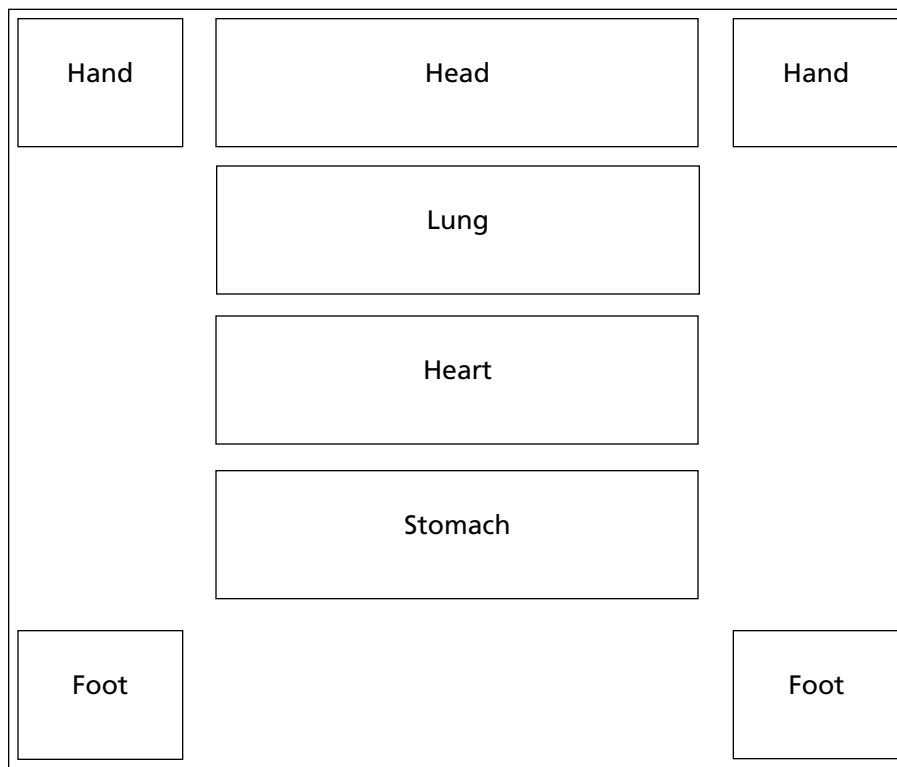
### HERE IS A MAP OF THE CIRCULATION GAME YOU PLAYED

1. Where did the blood start out?

- Draw a star \*on the spot.

2. Where did the blood go?

- Start at the star.
- Draw arrows
- Show where the blood went



3. Look at the head box. What did the blood do there? Circle the answer.

- (a) The blood gave something.  
(a) The blood got something.

4. What did the blood give or get? (Two things: write on the blank lines.)

- (a) \_\_\_\_\_  
(b) \_\_\_\_\_

5. Think up a sentence to write in the head box.

6. Go to another box. Think up your own sentence. Write it in the box.

7. Keep going until every box has a sentence in it.

## Answers to Questions for Grade 2 Lesson 2

### Three Big Rules for Heart Health. Rule: 1 Eat a Variety of Foods

#### WARM UP

The three “big rules” are easy to remember: eat, move, breathe.

1. Eat a variety of foods.
2. Breathe smoke-free air.
3. Move and be really active.

Start with Rule 1. You will need:

- a copy of student worksheet 2
- blank paper
- copy of Canada’s Food Guide to Healthy Eating

#### ARE YOU READY?

1. Start with what you already know. What is food?

Most students of this age will give an operational definition, such as “Food is the stuff I swallow when I eat.”

What does food do for your body?

Answers will vary. Look for “health” “energy” “body building” “growth”

What does food do for your heart?

Answers will vary. Look for “energy” “makes it strong,” “makes it healthy”

#### GET SET

2. There are so many different foods! Think about the kinds you know. Use Canada’s Food Guide to Healthy Eating.

- Draw a “plate” on your blank paper.
- Look at the Food Guide.
- Which Food Guide food do you like best? Draw it on your “plate.”

Answers will vary

- What is your absolute favourite food? Draw it on your “plate.”

Answers will vary

- Talk to your classmates about foods they like. Add one of their favourites to the meal on your “plate.”

Answers will vary. Encourage students to “try” someone else’s food, if only to draw it.

#### GO!

Use Canada’s Food Guide to Healthy Eating.

3.

- a) List the names of the four food groups.

Grain Products

Vegetables & Fruit

Milk Products

Meat & Alternatives

- b) List examples of foods from the four food groups.

milk, bread, apples, carrots, hamburger, etc.

- c) List examples of foods from the Other Foods category.

butter, jam, ketchup, etc.

4. List the foods from your “plate”.

Answers will vary

5. Sort your foods into the food groups and Other Foods category.

Refer to Canada’s Food Guide to Healthy Eating to assist with the classification. Foods that contain more than one food group are called combination foods.

Some common examples of combination foods are: casseroles, chili, pizza, sandwiches.

Example: pepperoni pizza

pizza crust: Grain Products

tomato sauce: Vegetables & Fruit

mozzarella cheese: Milk Products

pepperoni: Meat & Alternatives

#### CROSS THE FINISH LINE

6. A balanced meal needs foods from all four food groups. Why?

Different food groups provide different nutrients. To meet your nutrient needs, you need to select a variety of foods from each of the four food groups.

- Check the meal on your plate. Is it balanced?

The meal should include at least one food from each food group.

- If not, draw a food or foods on your plate to balance the meal.

7. Turn your “plate” page over and draw a line in the middle to split the page in half. On the top half of the page, draw a picture showing how you would feel after you ate the meal on your plate.

The picture should show a happy, energetic person.

8. On the bottom half of the page, draw a picture showing how you think your heart would feel after eating the meal on your plate.

The picture should show a happy heart.

# STUDENT WORKSHEET GRADE 2 LESSON 2

Three Big Rules for Heart Health. Rule 1: Eat a Variety of Foods

## WARM UP

The three “big rules” are easy to remember: eat, move, breathe.

1. Eat a variety of foods.
2. Breathe smoke-free air.
3. Move and be really active.

Start with Rule 1. You will need:

- a copy of this page
- blank paper
- copy of Canada’s Food Guide to Healthy Eating

## ARE YOU READY?

1. Start with what you already know.

- What is food?

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- What does food do for your body?

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- What does food do for your heart?

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## GET SET

2. There are so many different foods! Think about the kinds you know. Use Canada’s Food Guide to Healthy Eating.

- Draw a “plate” on your blank paper.
- Look at the Food Guide.
- Which Food Guide food do you like best? Draw it on your “plate.”
- What is your absolute favourite food? Draw it on your “plate.”
- Talk to your classmates about foods they like. Add one of their favourites to the meal on your “plate.”

## GO!

Use Canada’s Food Guide to Healthy Eating.

3. a) List the names of the four food groups.

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b) List examples of foods from the four food groups.

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c) List examples of foods from the Other Foods category.

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4. List the foods from your “plate”.

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5. Sort your foods into the four food groups.

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## CROSS THE FINISH LINE

6. A balanced meal needs foods from all four food groups. Why?

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- Check the meal on your plate. Is it balanced?
- If not, draw a food or foods on your plate to balance the meal.

7. Turn your ‘plate’ page over and draw a line in the middle to split the page in half. On the top half of the page, draw a picture showing how you would feel after you ate the meal on your plate.

8. On the bottom half of the page, draw a picture showing how you think your heart would feel after eating the meal on your plate.

**Answers to Questions for Grade 2 Lesson 3**  
*Three Big Rules for Heart Health. Rule 2: Breathe Clean Air*

**WARM UP**

Do you remember Big Rule 2?

Breathe smoke-free air

Stay in your group. You will need:

- copy of student worksheet 3
- a red pencil and a regular pencil
- a piece of blank paper
- a Heart Fact Page
- a Smoking poster

**ARE YOU READY?**

1. Where are your lungs?

chest

2. How does air get into them?

breathing

**GET SET**

3. Breathe in deeply. What does your chest do?

pushes out (expands)

• Breathe out. What does your chest do?

sinks in (contracts)

• Can you see when other people are breathing in and out?

If you watch carefully, you can see them breathe in. It's harder to see them breathe out.

**GO!**

4. Use the rules in the box below to make a paper lung.

This procedure is very simple and easy to do. Most grade 2 students can relate to it at some level. All will hear it breathe. Not all will be able to "see" the oxygen push through to the blood vessels, but that's okay. The experience of making air compartments (rooms) is still worthwhile.

**How to Make a Paper Lung**

- Scribble red lines on the paper.
- Fold the paper in half over and over again.
- Unfold it. Count the little "rooms."

**Explore a Paper Lung**

- The paper has rooms, like a real lung.
- But a real lung has millions of tiny "rooms" to trap air with.
- Paper is thin, like a real lung's walls.
- The paper is clean like a lung's inside.
- The red lines are like blood vessels.
- Blood collects oxygen from the lung.

**How to Make a Paper Lung Work**

- Hold it up, clean side facing you.
- Push the lung (paper) in. Listen to it breathe.
- Pull the lung out. Listen to it breathe.
- In a real lung, air pushes on the walls.
- And air is pushing on the paper lung.
- The air has oxygen. Picture oxygen pushing through the, paper right into the red lines. Can you see it in your mind?
- That's how blood collects oxygen. The oxygen pushes through the lung's thin walls, right into the vessels.

**Make a Smoker's Lung**

- X stands for sticky tar blobs. Make a black X in every second "room."

**Operate the smoker's lung**

- Count: How many "rooms" can let oxygen through? How many can't?

**CROSS THE FINISH LINE**

5. Why does your heart need oxygen?

for energy to pump blood

• How does your heart get oxygen?

blood carries it from lungs

• What could happen to your heart if the air you breathe is not clean?

Heart would get less oxygen.

6. Why should you try to stay smoke free?

Poster says tobacco kills people. And it has nicotine, which is addictive

7. What could you do if somebody tried to give you a cigarette. Write or draw on the back of this page.

Look for any sign of refusal.

# STUDENT WORKSHEET GRADE 2 LESSON 3

Three Big Rules for Heart Health. Rule 2: Breathe Clean Air

## WARM UP

Do you remember Big Rule 2?

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Stay in your group. You will need:

- a red pencil and a regular pencil
- a piece of blank paper
- a Heart Fact Page
- a Smoking poster

## ARE YOU READY?

1. Where are your lungs?

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2. How does air get into them?

---

## GET SET

3. Breathe in deeply. What does your chest do?

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• Breathe out. What does your chest do?

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• Can you see when other people are breathing in and out?

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## GO!

4. Use the rules in the box below to make a paper lung.

### **How to Make a Paper Lung**

- Scribble red lines on the paper.
- Fold the paper in half over and over again.
- Unfold it. Count the little "rooms."

### **Explore a Paper Lung**

- The paper has rooms, like a real lung.
- But a real lung has millions of tiny "rooms" to trap air with.
- Paper is thin, like a real lung's walls.
- The paper is clean like a lung's inside.
- The red lines are like blood vessels.
- Blood collects oxygen from the lung.

### **Make a Smoker's Lung**

- X stands for sticky tar blobs. Make a black X in every second "room."

### **How to Make a Paper Lung Work**

- Hold it up, clean side facing you.
- Push the lung (paper) in. Listen to it breathe.
- Pull the lung out. Listen to it breathe.
- In a real lung, air pushes on the walls.
- And air is pushing on the paper lung.
- The air has oxygen. Picture oxygen pushing through the, paper right into the red lines. Can you see it in your mind?
- That's how blood collects oxygen. The oxygen pushes through the lung's thin walls, right into the vessels.

### **Operate the smoker's lung**

- Count: How many "rooms" can let oxygen through? How many can't?

## CROSS THE FINISH LINE

5. Why does your heart need oxygen?

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• How does your heart get oxygen?

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• What could happen to your heart if the air you breathe is not clean?

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6. Why should you try to stay smoke free?

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7. What could you do if somebody tried to give you a cigarette. Write or draw on the back of this page.

**Answers to Questions for Grade 2 Lesson 4**  
*Three Big Rules for Heart Health. Rule 3: Move Your Body*

**WARM UP**

Do you remember Big Rule 3 ?

Move and be really active

Stay in your group. You will need:

- copies of student worksheet 4
- a clock with a second hand
- alcohol swabs
- stethoscope
- Heart Fact Sheet
- Physical Activity poster

**ARE YOU READY?**

1. What does the Heart Fact sheet say about fitness?

It means muscles are strong and can work a long time.  
 Joints bend freely.

2. Why are muscles important for fitness?

only muscles can make you move

3. What is your heartbeat?

lub dub sound of pumping heart

**GET SET**

4. What do you think happens to your heartbeat when you run?

goes faster

- when you sleep?

goes slower

Make a fist. Cup the other hand around the fist. That is about the shape and size of your heart.

Is it shaped like a valentine?

No

Is it as big as you expected?

Answers will vary, but probably not

**GO!**

5. Let your partner count your heartbeat. Then count your partner's heartbeat. The box tells you how.

There is a stethoscope in the kit. However, to maximize heartbeat counting, you may wish to have kids do the chart at home using the paper towel tube substitute.

Good family venture

<p><b>How to Use a Stethoscope</b></p> <ul style="list-style-type: none"> <li>• Clean the ear plugs. Let your partner listen.</li> <li>• Press the disc against your chest. Move it until your partner hears a lubDUB sound.</li> <li>• Partner: Count lubDUBs for 1 min. Write the number in the heartbeat chart.</li> </ul> <p><b>A Substitute Stethoscope</b></p> <ul style="list-style-type: none"> <li>• You can use a paper towel tube to listen to someone else's heartbeat.</li> <li>• Try the tube method at home, too.</li> </ul>	<p><b>My Heartbeat Chart</b></p> <p>In beats per minute:</p> <p>Heartbeat when I wake up _____</p> <p>Heartbeat when I'm sitting _____</p> <p>Heartbeat after 5 min walk _____</p> <p>Heartbeat after resting 5 min _____</p> <p>Heartbeat after running 1 min _____</p> <p>Heartbeat after resting 5 min _____</p> <p>Heartbeat after 30 min of TV _____</p>
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**CROSS THE FINISH LINE**

Use the Heart Fact Sheet for 5 and 6.

6. Do you have to tell your heart to beat faster when you run?

No

Why or why not?

heart has its own pacemaker

7. What will likely happen to your heartbeat as you get older?

slow down (based on heartbeat facts)

8. What is your favourite physical activity?

answers will vary

b) How many hours a week are you active?

They'll likely have to guess. Total exercise is seldom a contentious domestic issue.

c) How many hours a week do you spend watching TV?

They may know to the minute, as total TV time is often a contentious issue.

9. From the poster, list the advantages of being physically fit. Write on the back of this page.

More energy, heart gets stronger, fun, feel good, sleep better, healthy body weight.

Did you know about all of them?

Likely not.

# STUDENT WORKSHEET GRADE 2 LESSON 4

Three Big Rules for Heart Health. Rule 3: Move Your Body

## WARM UP

Do you remember Big Rule 3?

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Stay in your group. You will need:

- a clock with a second hand
- alcohol swabs
- stethoscope
- Heart Fact Sheet
- Physical Activity poster.

## ARE YOU READY?

1. What does the Heart Fact sheet say about fitness?

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2. Why are muscles important for fitness?

---

3. What is your heartbeat? \_\_\_\_\_

## GET SET

4. What do you think happens to your heartbeat when you run?

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- When you sleep? \_\_\_\_\_
- Make a fist. Cup the other hand around the fist. That is about the shape and size of your heart.
- Is it shaped like a valentine? \_\_\_\_\_
- Is it as big as you expected? \_\_\_\_\_

## GO!

5. Let your partner count your heartbeat. Then count your partner's heartbeat. The box tells you how.

### How to Use a Stethoscope

- Clean the ear plugs. Let your partner listen.
- Press the disc against your chest. Move it until your partner hears a lubDUB sound.
- Partner: Count lubDUBs for 1 min. Write the number in the heartbeat chart.

### A Substitute Stethoscope

- You can use a paper towel tube to listen to someone else's heartbeat.
- Try the tube method at home, too.

### My Heartbeat Chart

In beats per minute: \_\_\_\_\_

Heartbeat when I wake up \_\_\_\_\_

Heartbeat when I'm sitting \_\_\_\_\_

Heartbeat after 5 min walk \_\_\_\_\_

Heartbeat after resting 5 min \_\_\_\_\_

Heartbeat after running 1 min \_\_\_\_\_

Heartbeat after resting 5 min \_\_\_\_\_

Heartbeat after 30 min of TV \_\_\_\_\_

## CROSS THE FINISH LINE

Use the Heart Fact Sheet for 5 and 6.

6. Do you have to tell your heart to beat faster when you run? \_\_\_\_\_

- Why or why not?
- 

7. What will likely happen to your heartbeat as you get older?

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8. What is your favourite physical activity?

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b) How many hours a week?

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c) How many hours a week do you spend watching TV?

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9. From the poster, list the advantages of being physically fit. Write on the back of this page. Did you know about all of them?

## Answers to Questions for Grade 2 Lesson 5

### Emergency! Help an Unhealthy Heart – Call 911

#### WARM UP

Stay in your group. Use your thinking caps.

#### ARE YOU READY?

1. Look at the Heart Facts Sheet.

- What is a heart attack?

damage to heart muscle because blood got blocked

- What is a stroke?

Damage to brain because blood got blocked

#### GET SET

No one expects emergencies. But what if a heart or stroke happened to one of the adults at your home?

What if you were the only one there? Would you know what to do? A Personal Emergency Plan can help.

#### GO!

2. Read down... take home.

<i>What 911 Might Ask</i>	<i>How Would You Answer?</i>
What is your name? (First and last).	Your name:
Kids are often kept surprisingly ignorant of family health matters.	

#### CROSS THE FINISH LINE

It's a good idea to discuss these questions as a class.

This suggestion is made because a group of three may not have sufficient collective experience to make good suggestions. In an entire class, at least a few students are likely to have had some family experience with heart attacks or strokes, or other medical emergencies such as asthma.

3. a) Normally, you would not give personal information to a stranger over the phone. Why is it okay to give it to a 911 operator?

You have to trust somebody in an emergency, and your community has provided a service that works hand in hand with police, fire service and hospitals. If you can't trust 911...who can you trust?

b) What would you do if the operator asked you to unlock the front door, or leave the house?

You should always do what the operator says. The paramedics can't get in easily if the door is locked. If the operator thinks there is a gas leak in the house, anyone who can still move should get out promptly. But don't ever hang up the phone until the operator tells you to. The operator may want you to keep reporting on the patient's condition.

4. At first, the adults you live with might not want to give you the information you need for your Personal Emergency Chart.

Some adults have been brought up to think of their age as a kind of secret. Elderly folks especially think of some illnesses as shameful or embarrassing. But every responsible family member should be able to help all the others. Adults like to think they'll always be in control, but they are more likely to have a heart attack or stroke than kids are.

How could you convince them?

Make them watch an episode of '911' on TV. Discuss the importance as a family.

5. Sick or injured people who appear unconscious may still be able to hear. Why should you keep talking to the person until help arrives?

The sick person is probably frightened. In fact, a sense of doom is a common symptom of an oncoming heart attack. The sound of a familiar voice that says help is coming can keep the sick person from panicking.

# STUDENT WORKSHEET GRADE 2 LESSON 5

*Emergency! Help an Unhealthy Heart – Call 911*

## WARM UP

Stay in your group. Use your thinking caps.

### ARE YOU READY?

1. Look at the Heart Facts Sheet.

- What is a heart attack?

\_\_\_\_\_

- What is a stroke?

\_\_\_\_\_

## GET SET

Emergencies can be upsetting. But what if a heart or stroke happened to one of the adults at your home? Would you know what to do? A Personal Emergency Plan can help.

## GO!

2. Read down the left side of the box. Think about the questions 911 might ask.

- In the right side of the box, start a Personal Emergency Chart to take home.

<i>What 911 Might Ask</i>	<i>How Would You Answer?</i>
What is your name? (First and last).	Your name:
What is the street address?	My street address:
The nearest large intersection?	The nearest major intersection
Who is sick or hurt? (First and last name.)	Do you know the last names of all adults at your home?
How old is the sick or hurt person?	Do you know how old everyone is?
Is the person awake? Collapsed? Breathing?	Can you tell if a collapsed person is breathing?
How long has he or she been sick or hurt?	What if you weren't there at the start?
Has anything like this happened before?	Do your adults have any health problems?
Does the person take any kind of medicine?	Can you find out if your adults need medicine?

## CROSS THE FINISH LINE

3. Should you tell things to strangers on the phone?

- Why is it okay to talk to 911?
- What would you do if 911 asked you to open the door, or leave the house?

4. At first, the adults you live with might not want to tell you about their health problems or medicine. How could you explain why you need to know?

5. Sick or injured people who appear unconscious may still be able to hear. Why should you keep talking to the person until help arrives?

# GRADE 2 HEART FACT SHEET

## **active play**

Makes you breathe deeply. Any game that makes you take in extra air.

## **blood vessels**

Long, thin, stretchy tubes. They carry blood around your body. If all your blood vessels were stretched out, they could go around the world nearly four times!

## **blood**

Body liquid that holds oxygen and food. Your blood could fill a big milk jug.

## **circulatory system**

A set of parts that move blood through the body. This system has a pump (heart) and tubes (blood vessels).

## **cubicle**

Room-like hollow in the heart. Its two door-like openings let blood in and out.

## **energy**

Makes things move. Your body gets energy from a sugary fuel in your blood. But oxygen is needed to burn the fuel.

## **fatty food**

Stores a lot of energy in a small space. Sunflower oil and butter are fatty.

## **fitness**

Means muscles are strong and can work a long time. The joints bend freely.

## **food**

Eatable "stuff" that your body can use.

## **healthier fat**

Fat from plant foods. It is less likely to form a crust inside blood vessels. Sunflower oil is a healthier fat.

## **heart attack**

Damage to heart so it can't pump blood to rest of body. It happens when crusted blood vessels stop food and oxygen from getting to the heart muscle.

## **heart**

Muscle with four hollow chambers; they let blood in and push blood out

## **heartbeat**

The lub dub sound made by a pumping heart. Here are some sample heartbeat numbers in beats per minute:

- mouse – 850
- elephant – 35
- baby – 140
- adult – 60 to 100
- average at your age – 70 to 100

## **hidden fat**

Found in foods that don't taste like pure butter, oil,

or margarine, but still contain a lot of fat. Chocolate is over half hidden fat. Potato chips have even more.

## **less healthy fat**

Fat from animal foods. Eating too much of it can form a crust inside blood vessels. Butter is a less healthy fat.

## **lungs**

Hollow, thin-walled pouches inside chest; They absorb oxygen from air.

## **muscle food**

Food that builds body parts such as muscle (e.g., beans, milk).

## **muscle**

Body part that can exert force to make things move. You can move your arm bones by squeezing your arm muscle tight.

## **nicotine**

Nerve poison found in tobacco.

## **oxygen**

Material found in air. Your body uses it to "burn" food (fuel) and get energy.

## **pacemaker**

Electric switch in heart. It speeds up or slows down your heartbeat.

## **plaque**

Crust that sticks inside blood vessels. It slows down or stops blood.

## **power food**

The body's main source of sugary fuel. Rice is a power food.

## **second-hand smoke**

Gets into room air from burning cigarettes or from what smokers breathe out.

## **stomach**

Helps the body by breaking food into small bits. Other body parts help the stomach. Food must be in small bits to get into blood vessels.

## **stroke**

Damage to brain so it can't send orders to rest of body. It happens when crusted blood vessels stop food and oxygen from getting to the brain.

## **tar**

Sticky stuff in hot tobacco smoke. It forms gummy brown blobs in the lungs.

## **tobacco**

A kind of plant. Some people burn the leaves and breathe in the smoke.

