

Learning Guide



The Heart

We hope you enjoyed learning all about how the human heart works and how we can keep it healthy. Extend your learning with this print-ready Learning Guide!



What's in this Learning Guide?

Get Set to Listen

Answer TRUE or FALSE statements before and after listening to the episode.

Vocabulary

Discussion Questions

CCSS.ELA-Literacy.SL.3-8.1, SL.3-8.3

Writing Prompts

CCSS.ELA-Literacy.W.3-8.1, W.3-8.2, W.3-8.3, W.3-8.4, W.3-8.7, W.3-8.8

Build-a-Heart: Activity

CCSS.ELA-LITERACY.RI.3-8.7, RI.3-8.1; NGSS 4-LS1-1, NGSS MS-LS1-3

Follow the Blood: Activity & Role Play

CCSS.ELA-LITERACY.RI.3-8.7, SL.3-8.1; NGSS 4-LS1-1, NGSS MS-LS1-3

Design a Healthy Heart

CCSS.ELA-LITERACY.RI.3-8.7, SL.3-8.1; NGSS 4-LS1-1, MS-LS1-3

Healthy Heart Challenge

CCSS.ELA-LITERACY.RI.3-8.7, W.3-8.10; NGSS 4-LS1-1, MS-LS1-3

Heart Rate Investigation

CCSS Math 4.MD.B.4, 6.SP.B.4, 6.SP.B.5; CCSS.ELA-LITERACY.W.4.2, SL.4.1, W.7.2, W.7.9

Additional Resources & Book List



The Children's Hour
kids public radio

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<https://www.childrenshour.org/the-heart/>



Get Set to Listen

1. Before listening!

Read each statement and write TRUE or FALSE based on what you already know.



2. After listening!

Based on what the experts said in the episode, write TRUE or FALSE.



Before Listening	TRUE or FALSE?	After Listening
	1. The human heart has 3 chambers it uses to pump blood throughout the body.	
	2. The heart is a muscle.	
	3. The heart can become stronger through regular exercise.	
	4. High blood pressure can cause the heart muscle to become thicker.	
	5. Electric signals are important for making the heart beat in an organized way.	
	6. Caffeine has no effect on the speed of your heartbeat.	
	7. The heart pumps approximately 2,000 gallons of blood through the body in one day.	

What did you learn?



Get Set to Listen

Answer key

1. FALSE. The heart has 4 chambers.
2. TRUE
3. TRUE
4. TRUE
5. TRUE
6. FALSE. Too much caffeine can make your heart beat faster.
7. TRUE



Vocabulary

Listening for Words

1. Make a four-column chart and label the columns “I don’t know,” “I’ve seen or heard, but don’t know the meaning,” “I think I know the meaning,” and “I know the meaning.”
2. Write the vocabulary word in the column that describes how well you know the meaning of the word.
3. Listen to [the episode](#). Note how the speaker uses the words.

Matching Words with Definitions

1. Print and cut apart the word and definition cards.
2. Spread out the word cards so you can see them all. One by one, attach a definition card to each word card.

Writing with New Words

After working with the words and definitions, write a one-page essay or story that uses at least three of the words.

heart

A muscular organ that pumps blood throughout the body.

blood

A liquid that carries oxygen, nutrients, and waste around the body.



Vocabulary

chamber

One of the four sections inside the heart.

atrium

An upper chamber of the heart that receives blood.

ventricle

A lower chamber of the heart that pumps blood out.

artery

A blood vessel that carries blood away from the heart.



Vocabulary

vein

A blood vessel that carries blood back toward the heart.

capillaries

The smallest and thinnest blood vessels in your body. They act as bridges between your arteries and veins.

pulse

The beat felt in an artery as the heart pumps blood.

blood pressure

The force of blood pushing against the walls of the arteries.



Vocabulary

oxygenated

Has a lot of oxygen in it.

deoxygenated

The oxygen has been removed.

cardiac

Having to do with the heart, which is the muscular organ that pumps blood throughout the body.

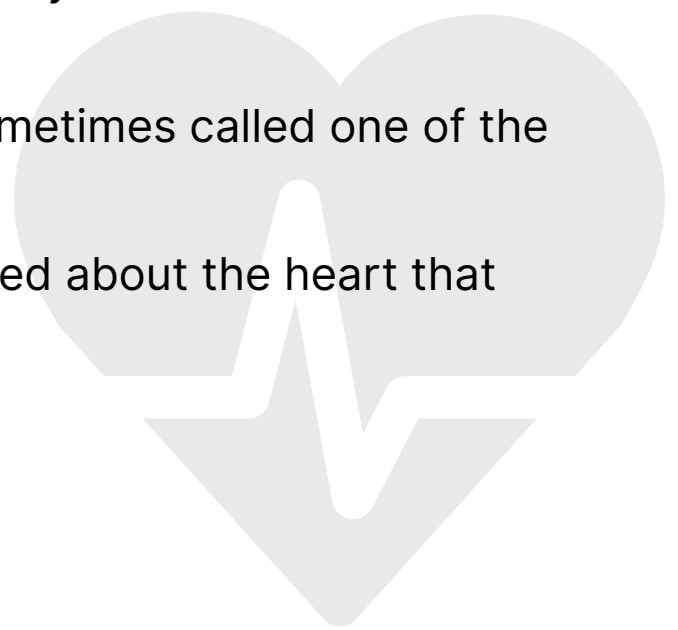
circulatory system

A body-wide network of the heart, blood vessels, and blood that delivers oxygen and nutrients to every cell while carrying away waste.



Discussion Questions

1. Why does your heart beat faster when you exercise?
2. What do you think would happen if the heart stopped pumping blood? Why?
3. Why don't we have to think about making our hearts beat? Why do you think the body works this way?
4. What are some healthy habits that you can start now to protect your heart?
5. Why do you think the heart is sometimes called one of the body's most important organs?
6. What is one new thing you learned about the heart that surprised you?



Group Discussion Strategies

Think Pair Share:

1. Individually, student writes down their answer to a question.
2. Students pair up and tell each other their answers.
3. Teacher calls for volunteers to share with the whole class their answer (and/or their partner's answer). Teacher notes key words/phrases on board.

Round Robin:

1. Teacher poses one question (written on top of a large page) to students, who are assembled into small groups of 3 or 4.
2. Students take turns brainstorming the answers. The recorder of the group writes down all answers.
3. The leader reads the group's ideas to the entire class. Teacher moderates.



Writing Prompts

Narrative Prompts

1. Imagine you are a blood cell. Describe your journey as you are pumped around the body by the heart.
2. Imagine you could travel inside your own body and visit your heart. What would you see, hear, and experience?
3. Write a story about a character who trains for a big race. Explain how their heart and body respond as they practice and compete.

Informational/Expository Prompts

1. Explain how the heart pumps blood throughout the body. Include the four chambers and the jobs they perform.

Extension: Draw a diagram.

2. Explain several habits that can help keep the heart healthy, such as exercise, healthy eating, and staying active.

Opinion/Persuasive Prompts

1. Write an opinion piece explaining whether children should get regular physical activity. Use reasons and evidence from the lesson.
2. Convince other students to make healthier food choices to protect their hearts. Give at least three reasons to support your opinion.



Build-a-Heart

Listen

- [Part 1: The Heart's Job \(segment 10:35-14:13\)](#)
- [“Heart Song” by Kids Learning Tube on the album Body Part Songs and More](#)

Diagram

Draw your own labeled diagram of the heart or use [this free downloadable PDF](#).

Be sure to include:

- *left atrium*
- *right atrium*
- *right ventricle*
- *left ventricle*
- *valves (pulmonary, aortic, mitral, tricuspid)*
- *arteries*
- *veins*
- *lungs*
- *aorta*

Extend

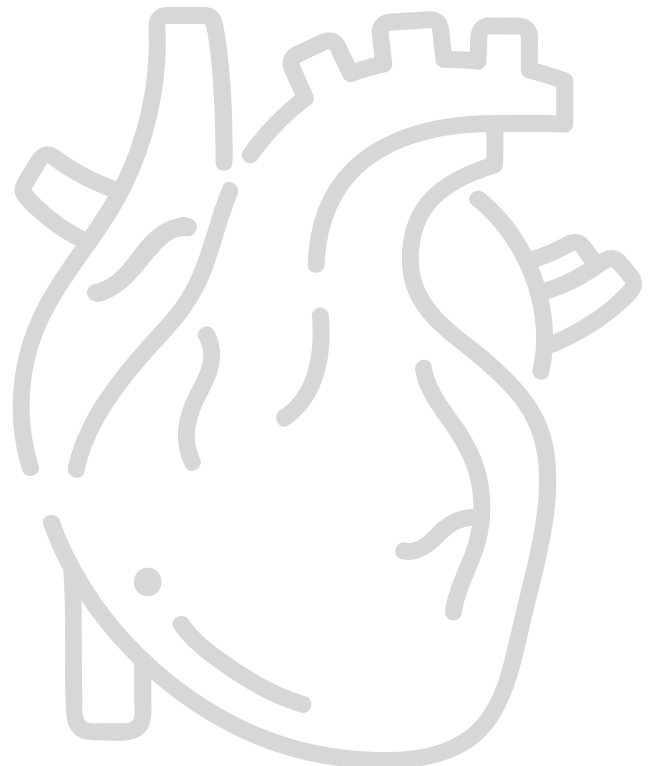
Use arrows to show the direction blood travels.

Heart Model

Use materials such as cups, straws, balloons, or recycled containers to create a simple model of the heart to demonstrate how a pump moves liquid.

Watch

[This video](#) to learn how!





Follow the Blood

Trace the path of blood through the heart, lungs, and body in these hands-on activities!

Listen

- [Part 1: The Heart's Job \(segment 10:35-14:13\)](#)
- ["Circulation Song" by Peter Weatherall on the album *Human Biology*](#)

Materials

- "Blood-flow cards" (use the ones provided or make your own)
- Arrows or string to connect the cards

Directions

1. Divide participants into small groups.
2. Give each group a shuffled set of blood-flow cards.
3. Challenge participants to work together to arrange the cards in the correct order.
4. Once they agree on the order, connect the cards with arrows to show the direction of blood flow.

(Correct Order: *Body → Right Atrium → Right Ventricle → Lungs → Left Atrium → Left Ventricle → Body***)**

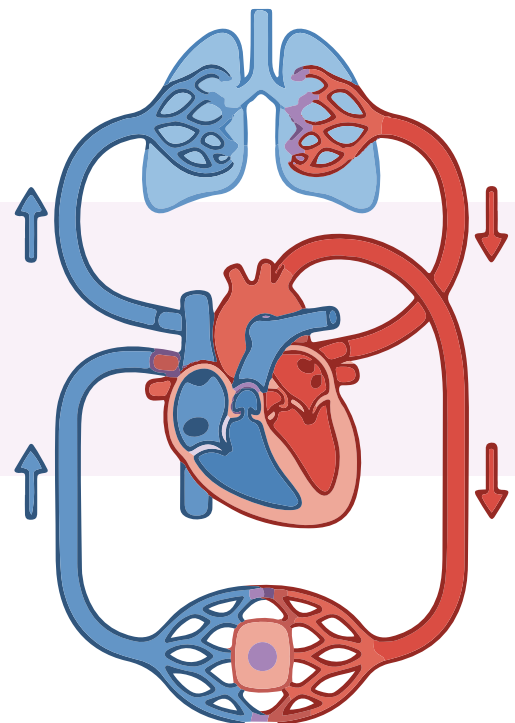
Explain

Use the sentence starter: "Blood starts at the ___, travels to the ___, and then..."

- *Where does blood pick up oxygen?*
- *Where does it deliver oxygen?*

The Circulatory System Role-Play

Assign roles such as heart, lungs, arteries, veins, oxygen, carbon dioxide, and blood cells. Act out how blood travels through the body.





Follow the Blood

Blood Flow Cards

Body

**Right
Atrium**

Lungs

**Right
Ventricle**

Left Atrium

**Left
Ventricle**

Body



Design a Healthy Heart

Listen

- [Part 3: Fixing Heart Problems \(segment 31:53-33:57 + 43:36-46:24\)](#)
- [Part 4: Keeping Your Heart Healthy \(segment 33:58-35:58 + 46:25-47:55 + 55:49-56:49\)](#)

Design a Healthy Heart

Draw a picture of a healthy heart and surround it with pictures or words showing healthy choices, such as exercise, fruits, vegetables, water, sleep, and physical activity.

Heart Health Challenge

Use the “**Heart Health Challenge**” journal to track daily physical activity, healthy food choices, water intake, or time spent moving.



Heart Health Challenge

Listen

- [Part 3: Fixing Heart Problems \(segment 31:53-33:57 + 43:36-46:24\)](#)
- [Part 4: Keeping Your Heart Healthy \(segment 33:58-35:58 + 46:25-47:55 + 55:49-56:49\)](#)

Heart Health Challenge

Create a one-week heart-health challenge for yourself or your class. Use this journal to track your heart-healthy activities.

Day 1

Today I took care of my heart by:

exercising for _____ minutes

eating these healthy foods: _____

drinking _____ oz. of water

other: _____

Day 2

Today I took care of my heart by:

exercising for _____ minutes

eating these healthy foods: _____

drinking _____ oz. of water

other: _____

Day 3

Today I took care of my heart by:

exercising for _____ minutes

eating these healthy foods: _____

drinking _____ oz. of water

other: _____



Heart Health Challenge

Day 4

Today I took care of my heart by:

exercising for _____ minutes

eating these healthy foods: _____

drinking _____ oz. of water

other: _____

Day 5

Today I took care of my heart by:

exercising for _____ minutes

eating these healthy foods: _____

drinking _____ oz. of water

other: _____

Day 6

Today I took care of my heart by:

exercising for _____ minutes

eating these healthy foods: _____

drinking _____ oz. of water

other: _____

Day 7

Today I took care of my heart by:

exercising for _____ minutes

eating these healthy foods: _____

drinking _____ oz. of water

other: _____



Heart Rate Investigation

Listen

- [Part 2: Controlling the Heart \(segment 22:47-28:25\)](#)

Measure Your Heart Rate

[Find your pulse](#) at your wrist or neck and count beats for 60 seconds.

Record your heart rate after doing each of the following activities:

Note: For a more accurate heart rate reading, be sure to wait for at least 5-10 minutes between activities to allow for a return to normal heart rate. However, for the purposes of a relative comparison in this investigation, you can wait less time between activities.

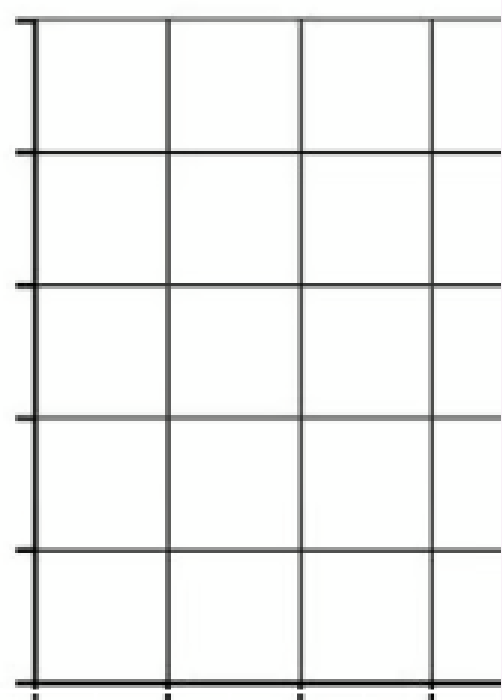
Activity	My Heart Rate
Sitting in a chair	
After 1 minute of jumping jacks	
After 2 minutes of jumping jacks	
After watching this relaxation exercise video	

Discuss

Why did your heart rate change?

Graph It

Create a simple line graph showing how your heart rate changed.



Sitting in a chair

After 1 minute of jumping jacks

After 2 minutes of jumping jacks

After watching relaxation video





Additional Resources

[Heart Anatomy Worksheet](#)

Download this free heart diagram, which includes a labeled reference sheet and a blank one for students to complete on their own.

Videos

[The Human Body: The Heart](#)

A great 6-minute overview for kids.

[The Human Heart for Kids](#)

You'll learn some amazing facts about the human heart and how it works.

[Human Heart](#)

Learn about the parts of the heart, how it works, and the journey blood takes through it.

[Pumping Heart Experiment: Kids Science](#)

Learn how to make a working model of a heart pump with common household materials in this fun and easy science demonstration video.



Book List

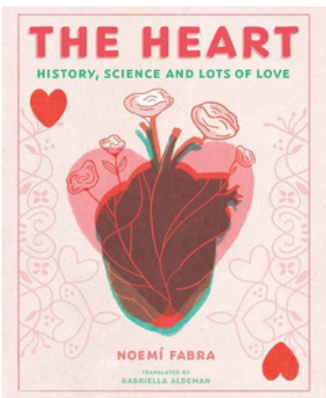


Your One and Only Heart

by Rajani LaRocca, illustrated by Lauren Paige Conrad

A stunning and lyrical non-fiction picture book by an award-winning doctor and author that is a moving ode to the human heart and all that it does.

ages 4-8

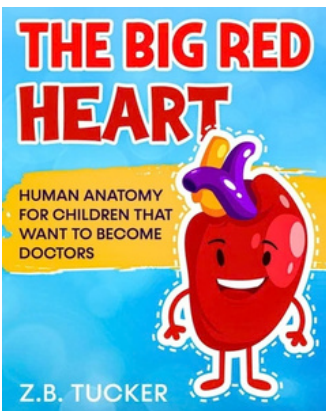


The Heart: History, Science, and Lots of Love

by Noemí Fabra, translated by Gabriella Aldeman

Explore fun facts and tales about the heart and discover why it's so special in our lives and culture. Key scientific and historical information is presented with beautiful illustrations in this exploration of the heart in all its forms.

ages 7-9

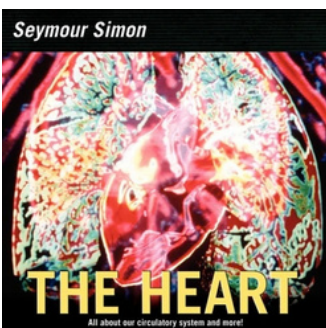


The Big Red Heart: Human Anatomy for Children That Want to Become Doctors

by Z.B. Tucker

Packed with colorful, kid-friendly diagrams, The Big Red Heart is an easy-to-read, super informative anatomy book designed especially for elementary school learners. With full-page illustrations of the human heart, blood flow pathways, and the entire cardiovascular system, this book makes learning science fun, engaging, and unforgettable.

ages 6-12



The Heart: All About Our Circulatory System and More

by Seymour Simon

Join award-winning science writer Seymour Simon as he investigates one of the body's most important organs: the heart. With clear, simple text and stunning full-color photographs, readers will learn all about our hearts and how they work in this informative picture book.

ages 6-10