



PARTNERING FOR YOUTH

CARDIO-FIT

PROJECT



Educating Children to Serve as Heart Health Ambassadors



@PFYASP

#CARDIOFITPROJECT

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Partnering for Youth

After School Programs

What is the Cardio-Fit Project?

The Partnering for Youth Cardio-Fit Project will inspire youth and other youth programs to embrace the positive, preventative actions necessary to enjoy a lifetime of cardiovascular health. C-FP will teach students the science behind nutrition and physical activity to understand the link between 'what' and 'why;' what they are told to do for their health and why it is important for their bodies. With the confidence, skills, motivation and knowledge of the scientific connection between diet and exercise, students will be equipped to take personal responsibility for the choices determining their future health. C-FP resources and experiences implementing the project will be shared with other youth programs in hopes of inspiring more children to learn the value of a personal, lifelong commitment to fitness and nutrition on behalf of their cardiovascular health.

For over 22 years, PFY has successfully utilized research-based after school program design to offer enrichment and recreational activities to youth in Queen Anne's County, Maryland. PFY's global program goals are to provide a safe and positive after school environment, strengthen attachment to school and community, improve academic success, enhance physical fitness and personal well-being and heighten family investment through involvement.

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Connections for Cardiovascular HealthSM

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Partnering for Youth – Cardio-Fit Project

A Word or Three Hundred about Lesson Delivery . . .

- Be enthusiastic. Introduce the lesson in an interesting and upbeat manner. You have the opportunity to make a real difference in the students' lives by providing valuable information and life skills. Make the most of it!
- Be prepared. Review the lessons prior to the day you deliver. Know the lesson objective(s) and modify delivery to meet the various learning levels of the children.
- Motivate students to be physically active and encourage them to persevere. With your encouragement they can meet your expectations and develop a value for participation.
- Provide positive feedback to all students. Spontaneously praise students in sincere and specific language. Attribute success to effort as well as ability.
- Some of the lesson contents require higher level thinking skills. Pair up or divide students into teams to encourage success. Be certain all individual contributions are respected.
- Emphasize content. Use surprising statements such as, "Now here this" or "Attention! This is important." Use repetition to emphasize the importance of a topic (repeating it 3-4 times when the lesson is delivered, during the physical activity, and during cool down as a reflection).
- If you are using questions to gauge student understanding, use an effective method for the process. Questions that require a unison answer should be used sparingly. Don't call on a student then ask a question. This only puts all other students at ease and they are less likely to think about the answer to the question themselves as they are "off the hook" to supply an answer. Instead, ask a question, pause 3-5 seconds then choose someone to respond.
- Emphasize goal setting. This personalizes their experience and gives them a skill to be used throughout their lives.
- Be creative. Show your students you take the Cardio-Fit Project lessons seriously enough to have given it some creative thought for delivering them.
- Close strong. The reflection should emphasize the lesson objective and reinforce the major points learned tying everything together.

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Lesson Outline

Follow the “Physical Activity Daily Structure” and deliver the following lessons.

	Lesson	Objectives
1	Introducing the Cardio-Fit Project (Administer the pre-assessment)	Name the #1 cause of death in the United States
2	Aerobic Capacity – Where Are You? (Administer the PACER)	- Summarize the importance of assessing knowledge and physical fitness levels - Describe the benefits of aerobic exercise - Recall their results from running a 20 meter PACER test
3	Get the Beat (Collect height, weight, blood pressure, and resting heart rates)	- Recall that your pulse is the number of heart beats per minute - Demonstrate ability to take a pulse in the neck (Carotid artery) and the wrist (Radial artery)
4	Exploring the Heart	- Describe the anatomy of a heart - Recall how the heart and circulatory system function
5	The FITT Principles	- Define the acronym FITT and understand how it guides health-related fitness - Determine intensity level by applying the Talk Test and exercising at their target heart rate
6	The Bad & The Good	- Conclude that heart disease can start in childhood - Recognize exercise reduces the risk of heart disease
7	Be Physically Active	- Conclude Life’s Simple 7 offers a guide to reduce your risk of developing heart disease - Recognize being physically active 60 minutes or more each day benefits your heart health
8	Keep a Healthy Weight	- Define a calorie as a unit of measuring energy - Compare energy intake to energy expenditure - Understand how weight is affected by the balance of calorie intake vs calorie expenditure
9	Eat a Heart Healthy Diet	- Use information on a food label to determine serving size - List components for a heart healthy diet - Analyze a food label, analyze the information and justify whether the food is healthy
10	Live a Tobacco-Free Life	- Summarize the effects of smoking on your health as it pertains to heart disease. - Describe some chemicals used in cigarettes including the addictive chemical “nicotine.”
11	Health by the Numbers (Administer the PACER)	- Determine how following Life’s Simple 7 can greatly improve heart health. - Comprehend what blood pressure, cholesterol and blood sugar are and what they do for our bodies. - Connect high blood pressure, cholesterol, and blood sugar with the disease they cause.
12	Session in Review (Administer the post-assessment)	Review all lesson objectives

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Physical Activity Daily Structure

Physical activities follow the prescribed structure every time they meet.

Warm-up	10-15 m	Phase 1 - some type of large muscle activity to raise heart rate slowly while increasing muscle temperature	Student-initiated – slow jogging, jogging in place, brisk walking, skipping, galloping or jumping jacks, moderate jump roping, or short game (i.e., Flag Tag, etc.) Instructor initiates transition to Phase 2
		Phase 2 - static stretching to slowly extend muscles (15 seconds for each stretch) progressively to the point of discomfort, but not pain	Static stretches lead by instructor at first transitioning to student-led
Inspiration & Exploration		Delivery of current week's lesson	Facilitated by instructor with enthusiasm
Physical Activity	30-60 m	Aerobic activity for at least 20 continuous minutes After the “Get the Beat” lesson, instructors are encouraged to initiate students checking heart rates during the 20 minutes of aerobic activity to monitor their performance at their target heart rate. Target: 130 bpm for 8-11 year olds 115 bpm for 12-15 year olds	No idle time for 20 minutes, each child staying near their target heart rate
Cool Down	5-10 m	Phase 1 Walking to lower the heart rate Phase 2 Static stretching as in the warm-up A proper cool down will: • Prevent blood from pooling in the muscles you were using. Without it, less blood reaches your heart, and you may feel light-headed; • Prevent waste products from building up in your muscles, keeping them from becoming sore; • Muscles and tendons relax, keeping them from becoming stiff and tight.	Student-initiated and led
Reflection		Review of lesson objectives	

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Lesson 1 – Introducing the Cardio-Fit Project

Materials

- 1 C-FP pre/post knowledge test & a pencil per student
- 1 set “Top Ten” cards per 3-5 students (Appendix A)

Objectives

When students complete this activity, they will be able to:

- Name the #1 cause of death in the United States

Warm-ups – Large Muscle & Static Stretches

Instruct students to slowly jog around the gym or your activity area, jog in place, briskly walk, skip, gallop or do jumping jacks, moderate jump roping, or short game (i.e., Flag Tag, etc.), any physical activity to raise heart rate slowly and warm up their large muscles for approximately 1-2 minutes. Lead students in static stretches for approximately 3-4 minutes. Students should eventually do these automatically with instructor input on the muscle warm-up activity and student-lead static stretches each time the activity meets.

Inspiration (Read and initiate a discussion about the following)

- *Each time we meet, we'll come to our activity area, warm up our large muscles, do static stretches, and receive a short lesson about our health. We will then do our physical activity, keeping active for as long as possible. After our activity, we'll cool down, stretch again, and reflect on the health lesson. If you are in more than one C-FP physical activity each week, you will hear the same lesson each time you meet but in a different way.*
- *As part of this activity, you're participating in the Cardio-Fit Project intended to teach you the value of personal fitness, to take charge of your heart health, and to increase the amount of time you're physically active.*
- *Taking personal responsibility for your health could be a matter of life or death.*
- *If you learn from the information, it could help you live a long and healthy life.*

Exploration

- Administer the C-FP knowledge test. Collect to be scored and recorded.
- Ask students: *What are the leading causes of death among all people in the United States?*
- Engage students in a brief discussion. (accept all answers)
- Play **Top Ten** by distributing one set of top 10 causes of death cards to groups of 3-5 students.
- Give instructions to collaboratively put the cards in order with the #1 cause of death at the top and the #10 cause at the bottom. Give them 3 minutes.
- Circulate between the groups assuring all opinions are being respected.
- Have groups share their #1, #2 and #3 choices. Give the students the correct order by calling out the causes in “Lettermen’s top-ten” style, from #10 to #1.
- *Are there any surprises?* If time allows, give additional information and/or percentages about some of the causes of death.
- *Heart disease is the number one killer in the United States and in the world! In the weeks to come, we'll learn what we can do to protect our hearts!*
- *By the way . . . the number one cause of death for children is accidents so wear your seat belts, put on your bike helmet, don't take unnecessary risks – be careful out there.*

Now it's time for your Physical Activity! *According to the experts, you need 60 minutes a day, every day so let's get started!*

Cool Down & Reflection

- Cool down by walking for at least 1 minute to lower student heart rates.
- Perform static stretching.
- While stretching, reflect on today's lesson.

Options

Reaching lower levels:

- Have students determine the top 5 causes of death.
- Do the activity as a large group instead of pairs or teams.

Suggestions for delivering C-FP multiple program days in the week:

- Put students in teams and create a relay race to retrieve the top ten cards and put them in order. Determine a winning team strategy for example the first team to complete the relay and have the top 5 causes correct.
- Choose 10 students to stand before the group and each take one of the top ten cards. Invite the students to put themselves in order from #1 to #10 causes of death. Once they have completed the task, have the group audience decide if they were successful.

Resources: Center for Disease Control and Prevention

Suggested physical activity to reinforce concept (Lesson 1):

Materials:

Handkerchiefs, one per student

Flag Tag (general instructions FYI – do not play this version):

- Distribute handkerchiefs to all but 3 players. Players will tuck the handkerchief in their waistband so that at least $\frac{3}{4}$'s of it is visible at the side of their body.
- Those players with handkerchiefs will begin game in scattered formation in playing area. The 3 players without a handkerchief will stand at the cone and wait to enter the game.
- If there is a large group (16+), use 2 playing areas if available, or play two games.
- Use cones to mark areas if outside.
- *Instructor should emphasize traveling safe pathways to avoid collisions during game.*
- Object of the game is to pull a handkerchief from any other player while protecting your own handkerchief. Players may not:
 - Touch another player including wrapping arms and hands around someone to remove handkerchief
 - Stand against a wall to prevent removal of handkerchief
 - Hold onto own handkerchief to prevent it from being taken
- When a player's handkerchief is removed (or falls from their waistband), they pick it up and give it to the next player waiting in line, then go to the end of the line to wait their turn to re-enter.
- When players are ready to begin the game with handkerchiefs tucked securely in waistbands, instructor will give a signal.

Modified Flag Tag (Play this version only)

- This version of the game illustrates the prevalence and impact of heart disease.
- Assign a number to each player (1-15+). Players should remember their number.
- All players should receive a handkerchief.
- Give directions for Flag Tag with the addition: "I will call a number. If it's your number you will leave the game with your handkerchief and have a seat outside the playing area (indicate where). You may not re-enter the game."
 - Instructor will call a number every 20 seconds after game begins but say, "That's 40 seconds, number XX!"
- Game ends after 5 minutes or when 1 student is left standing.

Discussion

- *Did you enjoy playing Flag Tag?* (Hopefully students will have a positive response, but will also question why they played it differently and had to leave the game and not return).
- If not, prompt students: *Is this the way you've played Flag Tag before?*
- *What's different about the way we played today?*
- *How often did I called out a number for a player to leave the game?* (A number was called out every 40 seconds. If they realize it was less, explain it was to save time for their next activity.)
- *Anyone want to venture a guess why we eliminated a player every 40 seconds?*
- *Our game illustrated how heart disease claims a life every 40 seconds of every day, every year – **It's the number one cause of death in the United States.***

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Lesson 2 – Aerobic Capacity – Where Are You?

Materials

PACER CD or Digital File & PACER test instructions (20m shuttle)

CD Player or Sound Bar

Data Collection Form (Appendix G)

Gym

Materials for 2nd day of the week plus above materials

Charade Cards (Appendix B)

Timing device (optional)

Materials for 3rd day of the week plus above materials

White board or chalk board with writing instruments

Objectives

When students complete this activity, they will be able to:

- Summarize the importance of assessing knowledge and physical fitness levels
- Describe the benefits of aerobic exercise
- Recall their results from running a 20 meter PACER test

Warm-up – Large Muscle & Static Stretches

Inspiration

Share with students, read or state in your own words:

- *To assess any improvements in your fitness knowledge or physical health, first you must determine where you are, then, after a period of time, test again to check your progress. The first tests are called the baselines. We did one last week when you took the knowledge test.*
- *There are many health-related physical fitness tests. Today we'll perform a test to measure our aerobic capacity called the PACER. It stands for Progressive Aerobic Cardiovascular Endurance Run.*
- *Your scores are personal information and should only be compared to established standards, not to your classmates' scores. The emphasis should be on measuring how you perform and how much you improve.*
- *The "A" in "PACER" stands for Aerobic which means "with oxygen". Aerobic capacity is your body's ability to use oxygen to fuel exercise activity. It's one of the most important areas of any cardiovascular fitness program.*
- *Research shows acceptable levels of aerobic capacity are linked to a reduced risk of heart disease and other health problems.*
- *Physical activities fall into two categories, aerobic (with oxygen) and anaerobic (without oxygen).*
- ***Aerobic exercise** is done over long periods of time at consistent levels (for example, jogging, bicycling, swimming laps, etc.). It requires interaction between your heart, lungs, and blood vessels providing oxygen to your muscles allowing you to continue exercise. The higher your aerobic capacity, the less tired you become while exercising.*
- *Aerobic activities increase the strength and pumping ability of your heart.*
- ***Anaerobic exercise** is done quickly for short periods of time at maximum levels (for example, running a 100m race, playing baseball, weightlifting, etc.). Your body can't keep up with the oxygen demands of this type of activity so it can only be done in short bursts.*

- Anaerobic activity improves muscle and joint strength, agility, and muscle tone.
- A healthy balance of aerobic and anaerobic exercise is important to help maintain strong muscles, build strength, and receive the maximum benefits for a healthy balanced body.

Exploration

- *Let's perform the PACER! As with any test, it's important to always give it YOUR BEST EFFORT.*
- Have students perform the 20 meter PACER test and record their scores.

Now it's time for your Physical Activity! *Remember, kids your age should be physically active for 60 minutes every day!*

Cool Down & Reflection

- Cool down by walking for at least 1 minute to lower student heart rates.
- Perform static stretching.
- While stretching, reflect on today's lesson.

Options

Reaching lower levels:

- Reduce the amount of information and repeat the vocabulary focusing only on the objectives. (Example: Objective: Describe the purpose of aerobic exercise. *Aerobic exercise means "with oxygen." Our muscles need oxygen to exercise. We get oxygen to our muscles by breathing air into our lungs where it's combined with our blood. Blood is pumped to our muscles by our heart. The oxygen in blood feeds our muscles so they can exercise for long periods of time. Some examples of aerobic exercise are jogging, bicycling, or swimming laps which are done without pausing over a longer period of time. Can we name more exercises that are aerobic? Can we name some exercises that are not aerobic? Aerobic exercise makes your heart strong.*)
- For the 2nd and 3rd program days (described below) use only the aerobic cards.

Suggestions for meeting the 2nd or 3rd program days in the week:

- Play Charades
 - Discuss the difference between aerobic and anaerobic exercise.
 - Play charades using the provided cards. As a group, determine if it is aerobic or anaerobic.
 - The instructor card indicates which type of exercise it might be in general but the discussion could lead to learning it can be both. (i.e., certain positions in games might not be continuously active like a catcher, goalie or kicker).
- Play Pictionary
 - Discuss the difference between aerobic and anaerobic exercise.
 - Divide the students into two teams. Play Pictionary with the Charade cards. When the team guesses the form of exercise, they must state whether it is aerobic or anaerobic exercise. If it is controversial, the instructor makes the final decision based on the strength of the team's argument.

Suggested physical activity to reinforce concept (Lesson 2):

Ball Tag

Materials

1 foam ball – hand size

Pinnies of one color (if available) for “It” players, enough for most of the students in the activity

Procedure & Rules

Students will use teamwork and communication skills to play Ball Tag.

- Gym or open area
- Start in a scattered formation
- Non-elimination game
- 2 -3 players start as “It”, they wear pinnies, and one holds the ball.
- The “It” players work as a team attempting to tag all other players with the ball.
- To begin, one “It” player holds the ball. When an “It” player has the ball, they cannot move but can pivot like in basketball without taking any steps.
- The other “It” players position themselves near those they wish to tag. When the ball is thrown to them they quickly tag anyone they can reach. Because they now have the ball, they cannot move so they look for the other “It” players who have positioned themselves near other players and the game continues.
- Tagging is a touch, not a throw.
- If a player gets tagged, they run to the sideline, pick up a pinnie, and return to the game joining the “It” team. The game continues until only one untagged player remains.
- They are the winner.
- Strategy is needed.
 - “It” players cannot just run with the ball to tag someone so they must always be thinking about their next step
 - Before they pass the ball, they must watch the players to anticipate where they should run to get in a position to receive a pass and tag the most players
 - Stress that the game can start off slowly, but using the above strategy can aid “Its” in tagging players

Discussion

- *Did you enjoy playing Ball Tag? (Hopefully students will have a positive response). Would you want to play this game again? Why?*
- *As a player not wearing a pinnie, what were you trying to do during the game? Prevent yourself from being tagged. We know your heart is the most important organ in your body. Protecting it from potential diseases is your responsibility, just like protecting yourself from being tagged in a game.*
- *As an “It” player, with the ball, you needed to always be thinking about their next step. When it comes to your heart health, it’s important to think about the steps you will take to live a long, active life.*

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Lesson 3 – Get the Beat

Materials

Timing device
Oximeter (optional)
Stethoscope & alcohol wipes (optional)

Objectives

When students complete this activity, they will be able to:

- Recall that your pulse is the number of heart beats per minute
- Demonstrate ability to take a pulse in the neck (Carotid artery) and the wrist (Radial artery)

Inspiration (Read and initiate a discussion about the following)

- *Your heart is part of the cardiovascular system. Cardio means heart, vascular means blood vessels and blood.*
- *Because our focus is cardiovascular health, we can use our heart rates to measure our fitness levels before, during and after exercise.*
- *We call the number of heart beats per minute your pulse and your pulse is measured in “beats per minute” or bpm.*
- *Generally, a lower heart rate means good heart function and better cardiovascular fitness. (Normal heart rate ranges: children 7 to 9 years old: 70 to 110 beats per minute; children 10 years and older, including all adults: 60 to 100 beats per minute)*
- *Think about it . . . The difference between a person with a 100 bpm pulse and one with a 60 bpm pulse is 40 beats per minute. In one hour the difference is 2,400 beats, in a day 57,600 beats, in a week 403,200 beats and in a year, the person with a 100 bpm pulse is beating over 20 million beats more than the person with a 60 bpm pulse. Can you imagine the difference over a lifetime!*
- *Have you ever wondered what makes your heart beat? How does it know to beat every second of every minute of every hour of every day? The answer is because of a special group of cells that generate electrical activity on their own. These electrical impulses, located in the cells which spread over your heart like a net, telling it to squeeze at just the right time.*
- *Aerobic exercise makes your heart become stronger and more efficient. Remember, aerobic exercise is done over long periods of time at consistent levels, like when you jog, bicycle or swim laps. It requires interaction between your heart, lungs, and blood vessels providing oxygen to your muscles allowing you to continue exercise.*
- *To put your heart in training you will need to progressively challenge it, making it work harder between your resting heart rate and your maximum heart rate. This is called your “target heart rate” for exercise.*
- *Let’s first learn how to properly take our pulse to calculate our “beats per minute” or bpm.*

Exploration

- Demonstrates how to take a pulse in the neck and wrist.
- Heart rates are easily taken from 2 sites.
 - Carotid artery (neck) - place your index and middle fingers from the ear lobe midway toward your Adam’s apple.
 - Radial artery (wrist) – place index and middle fingers on wrist in line with your thumb.

- Tell students to only use their index and middle fingers, not their thumb.
- You can count the number of beats per minute by choosing to use a timing device (watch, phone timer, stopwatch, etc.) and count for 60 seconds. When we are measuring our bpm, we always start with “0” not “1.” Demonstrate.
- *Can you think of another way to count our bpm?* Count beats for 30 seconds and multiple by 2 or 15 seconds and multiple by 4, or 10 seconds and multiple by 6.
- Instruct students to prepare to measure their heart rate for 15 seconds (or choose the option to meet success). On the “go” from the instructor, students will begin their count with “0, 1, 2, 3, etc.”
- Instructor will say “Go” and time students then say “Stop” and ask students to multiply their number by whichever method you are using. Have students share their results.

Optional Exploration

- *There are tools medical professionals use to measure your pulse. Let’s give them a try!*
 - **Oximeter (pulse-ox)** – measures your pulse rate and percentage oxygen. Turn the device on and place it on your index or middle finger. The display provides your bpm and oxygen level. A normal oxygen level is between 95% and 100%.
 - **Stethoscope** – a common tool used by medical professionals to listen to a patient’s body. Carefully clean the ear pieces with an alcohol wipe. Make sure it is quiet. Students should only listen to their own heart beat without any other student touching the stethoscope. Notice there are two sides to the stethoscope, a bell shaped side and a flat side. To listen to your heart, place the ear pieces in your ears, gently push the flat side of the stethoscope against your chest where your heart is located (The heart is located beneath the chest bone, inside the ribs, slightly to the left of center in your chest). Use a timing device, count, and multiple using the same method when checking your pulse at your wrist and neck. Clean ear pieces thoroughly with alcohol wipes between each use.

Now it’s time for your Physical Activity! *Now it’s time for our activity! Remember, kids your age should be physically active for 60 minutes every day! Our main goal today is to feel our heart change from beating slowly to quickly after exercise.*

Cool Down & Reflection

- Cool down by walking for at least 1 minute to lower student heart rates.
- Perform static stretching.
- While stretching, reflect on today’s lesson.

Options

Reaching lower levels:

- Omit the comparison of a 100 bpm heart rate to a 60 bpm heart rate.
- Instead of measuring bpm by counting and dividing, have students experience their pulse prior to exercise then check it again periodically only to compare and recognize that their resting heart rate is lower than their elevated heart rate due to exercise.
- Refer to the two pulse sites as neck and wrist.

Suggestions for meeting the 2nd or 3rd program days in the week:

- Review the sites for measuring our pulse – carotid (neck) and radial (wrist). Have a student volunteer to teach students both methods of measuring.

- Review the sites for measuring our pulse – carotid (neck) and radial (wrist). Have students take their pulse while seated then run a few laps to take their pulse again. Discuss how the two measurement results differ.

Resources:

Heart Rates for Children - <https://medlineplus.gov/ency/article/003399.htm>

Health, Prentice Hall Publishers

Center for Disease Control and Prevention

<http://science.howstuffworks.com/life/human-biology/heart6.htm>

www.bbc.co.uk/learningzone/clips/the-human-heart-and-its.../2270.html

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Lesson 4 – Exploring the Heart

Materials

Circulatory System Station Cards (set up in activity area as a circuit prior to start) (Appendix C)

Timing device (optional)

Stethoscope & alcohol wipes (optional)

Heart Model (optional)

Tennis balls, 1 per pair of students (optional)

Two containers (one empty, one with 4 liters of water or rice), one 2 oz. plastic condiment cup and a timing device (optional)

Objective

When students complete this activity, they will be able to:

- Describe the anatomy of a heart
- Recall how the heart and circulatory system function

Exploration, Warm-ups – Large Muscle & Static Stretches

Instructor should give directions for the warm-up that doubles as the Exploration this week.

Students will begin by jogging in place at center of gym or, if using the hallway, together at one end. Instructor will identify 4-6 students at a time to begin at the 1st station and continue through the 10th station reading the information and doing the exercises on the station cards. Instructor will continue to select students until the entire group is participating in the circuit. When students complete the circuit, they should begin their stretches and prepare to discuss the information they read about the circulatory system.

Inspiration

- *The heart is an amazing part of the body. It pumps approximately 4 liters (a little more than a gallon) of blood every minute. It beats about 100,000 times a day, about 35 million times in a year. During an average lifetime, your heart will beat more than 2.5 billion times and you don't even have to think about it!*
- *Since the heart is such an important pump, you want to keep it free from heart disease that may lead to a heart attack or stroke. When the heart stops, life stops. So when you take care of your heart, you take care of your life.*
- *Is the heart an organ or a muscle? The answer is yes. The heart is an organ made of muscle.*
- *The heart has two upper chambers and two lower chambers. The upper chambers (right atrium and left atrium) receive blood. The lower chambers (right ventricle and left ventricle) pump blood. (optional – show students the heart model)*
- *The circulatory system is made of all the vessels that carry the blood throughout the body. Vessels carry blood to and from the heart.*
- *Oxygen poor blood (blood without oxygen) enters the right top chamber of the heart and then is pumped down to the right lower chamber so it can be pumped out to the lungs. In the lungs, waste (carbon dioxide) is taken from the blood and oxygen is put into the blood. The oxygen rich blood (blood with oxygen), returns to the heart and enters the upper left chamber. The blood then is pumped down to the lower left chamber and is pumped to all of the body organs and tissues.*

- *Your heart takes care of you so you should take care of your heart. Heart disease is the #1 cause of death in the United States. In fact, about 610,000 people die of heart disease in the United States every year - that's 1 in every 4 deaths.*
- *Although heart disease happens more to adults, it can start when you're a child. Taking steps to prevent heart disease at any age is extremely important.*
- ***The good news for today:*** *Participating in physical activities that strengthen the heart is a good start to reducing your chances of developing heart disease.*

Optional Explorations

- **Heart Squeeze** – *Let's do an experiment to see just how hard our heart works.*
 - *We'll time ourselves for 1 minute as we squeeze and release a tennis ball 70 times because the average pulse rate is 70 bpm. We'll count together as we go.* Instructor should give signal to start and stop.
 - **Wow!** *How does your hand feel? Your heart does this every minute of every day of every week of every month of every year you are alive!*
- **Heart Pump** – *Our hearts work like machines pumping about 4 liters of blood to our bodies each minute. Do you think you can work as hard as your heart?* Sit the two containers (one empty, one with 4 liters of water (or rice)) next to each other. Ask for a volunteer to move the 4 liters (representing the blood) from one container (representing the heart) to the other (representing the body) with a cup (representing one heart beat) in one minute.
- **Stethoscope**
 - *A heartbeat, which sounds like lub-dup, can be heard during the pumping phase. The "lub" sound of a heartbeat are the valves closing between the atriums and ventricles. The "dub" sound are the valves in the large blood vessels leading out of the heart snapping shut. All this happens in less than a second!*
 - Use the stethoscope to listen to the "lub-dub" of the heart beat and visualize the valves opening and snapping shut. Remember to use proper hygiene procedures given in Lesson 3.

Now it is time for your Physical Activity! *Let's get moving and raise our heart rates! Remember, your goal is to be active 60 minutes a day. What are we waiting for?*

Cool Down & Reflection

- Cool down by walking for at least 1 minute to lower student heart rates.
- Perform static stretching.
- While stretching, reflect on today's lesson.

Options

Reaching lower levels:

- Focus on the lesson objectives simplifying vocabulary and amount of statistics discussed.

Suggestions for meeting the 2nd or 3rd program days in the week:

- Review the anatomy and functions using an active true/false strategy. i.e., one wall true, one wall false, ask questions and students respond by jogging to the correct wall.
- Review the anatomy and functions using a game show strategy. i.e., create two teams to answer questions from the lessons assigning points to correct answers.

Resources

http://kidshealth.org/kid/growup/conditions/heart_disease.html#cat20895

http://paths.unt.edu/PATHS_Lessons/Lesson1/Lesson1.pdf

Suggested physical activity to reinforce concept (Lesson 4):

Chamber Challenge

Materials

6 hula hoops (all the same size) per team
2-3 hand size foam balls

Procedure and Game Rules:

- Instructor will demonstrate how to build the chambers of the heart. (These are constructed like hula hoop houses).
- Build a chamber:
 - Place a hoop on floor
 - Place two hoops upright inside and against the hoop on the floor with their tops touching.
 - Place two more hoops upright perpendicular to the others with the tops touching.
 - The 6th hoop is key to completing the chamber. Place the hoop on top of the 4 side hoops to form the roof.
- Divide students into 3-4 teams depending on enrollment.
- Give each team a cone and 6 hula hoops.
- Instructor will designate area for each team and they will build their chamber.
- Distribute 1 ball to each team.
- Instructor may add additional balls to game at any time.
- On signal “Go” from the instructor, students will throw the ball in the direction of another chamber, attempting to knock it down (not good for the cardiovascular system).
- When a team’s chamber is knocked down:
 - Any ball being held by a team member must immediately be dropped (not thrown toward another team’s chamber).
 - The entire team must complete a chosen exercise (to be determined by instructor).
 - Once exercise is completed, the team must then work together to rebuild the chamber.
 - Team is not back into game until roof is back on.
 - Balls may then be picked up again and rejoin the game.
 - No other team may throw at a team that is rebuilding their chamber until the roof is on.
 - The team rebuilding may not throw at anyone else.
- If a player hits their own chamber, balls are dropped, exercise performed, chamber rebuilt.
- A point is scored when your team’s house is the **only** one standing.
- Team to score 5 points first wins the game (number may be changed).
- Have students take their heart rate (beats) at end of game.



Discussion

- *Love playing Chamber Challenge! Why does your heart like it when you’re playing games and sports?* Because it increases your heart rate that strengthens your heart muscle.
- *In our game, our chamber was made of 6 hula hoops. How many chambers make up our heart?* Four, the top 2 atriums, and bottom 2 ventricles.
- ***Live long, learn a lot, and love your heart.***

Partnering for Youth – Cardio-Fit Project

Lesson 5 – The FITT Principle

Materials

Timing device (optional)

Objectives

When students complete this activity, they will be able to:

- Define the acronym FITT and understand how it guides health-related fitness
- Determine how to measure intensity level using different techniques

Warm-ups – Large Muscle & Static Stretches

Inspiration Read the following and initiate a discussion with the students.

- *Every activity requires energy, and through exercise, you improve your heart's ability to pump blood and the muscle's ability to pull oxygen from the blood.*
- *To improve and maintain cardiovascular fitness, it is important to apply the FITT Principle.*
- *The **FITT Principle** is a formula that includes a set of guidelines you can follow to increase or maintain your fitness level for a lifetime.*
 - ***F = Frequency:** How often are you physically active? Do some type of physical activity every day.*
 - ***I = Intensity:** How hard are you working? Choose activities that are at least moderate in intensity, but also add a few more vigorous activities Vigorous activity makes you breathe hard and sweat. It gets your heart working to its target heart rate for your age.*
 - ***T = Time:** How long are you exercising? Plan on a total time of at least 60 minutes of activity each day. This can be done all at once or added together over several shorter blocks of activity. Remember, your heart benefits most from aerobic activity that lasts at least 20 continuous minutes.*
 - ***T = Type:** How are you varying your routine? The type of activity can include a variety of team sports, individual sports, recreational activities, family activities, active hobbies, and walking or bicycling. Several times every week do weight-bearing activities that promote muscle strength, flexibility, and bone health. The most important thing is to choose something fun!*
- *In the FITT Principle, Intensity is the most difficult to measure. Intensity is directly related to how difficult an activity is to sustain because your body needs more energy. The heart must work hard to get more oxygen to the muscles.*
 - *The most accurate measurement is monitoring your heart rate. Children use a target of 130 (8-11 year olds) or 115 (12-15 year olds) which is approximately 60%-80% of a child's maximum heart rate. The point is to challenge your heart therefore it receives the exercise it needs.*
 - *The talk test is another method of measuring intensity:*
- ***Light intensity:** If active at a light intensity level, you should be able to sing or carry on a normal conversation while doing the activity. An example would be easy walking.*
- ***Moderate intensity:** At a moderate intensity level, you should be able to carry on a conversation but not sing while engaging in the activity. An example would be brisk walking, biking, or dancing.*

- **Vigorous intensity:** *If you're doing vigorous-intensity activity, you will not be able to say more than a few words without pausing for a breath. Examples would include jogging or running and sports such as basketball, competitive swimming, and tennis (singles).*
- *Intensity levels may also be monitored based on observing your body's physical signs during physical activity, including increased heart rate, increased respiration or breathing rate, increased sweating, and muscle fatigue.*

Exploration

Besides sweating, let's use the Talk Test to measure our Intensity!

- In the gym or a defined area, pair up and start by walking back and forth the length of the area having a conversation. Pay close attention to how well you can breathe and how hard your heart is pumping.
- After two passes, start a slow jog or brisk walk continuing your conversation for the first pass, observing your breathing and heart rate. For the second pass, while continuing a slow jog or brisk walk on your own, sing "Happy Birthday." Keep repeating the song until you finish the second pass.
- Now sprint back and forth the length of the area trying to sing "Happy Birthday." When you finish the two passes, choose someone to talk with about the three experiences you just had doing the Talk Test.
- As a group, ask about their experiences. Is this a good way to measure intensity?

Enjoy your physical activity! *Get out there and use FITT today and every day for 60 minutes. Let's see if we can stay within our target heart rate. When I say "Get Ready," prepare to take your pulse on your neck or wrist. When I say "Go," start counting beginning at "0." When I say "Stop," multiple your count by 4. Are exercising on target? (130 bpm (8-11 year olds) or 115 bpm)*

Cool Down & Reflection

- Cool down by walking for at least 1 minute to lower student heart rates.
- Perform static stretching.
- While stretching, reflect on today's lesson.

Options

Reaching lower levels:

- Emphasize the vocabulary describing intensity, repeat concepts.
- Instead of measuring bpm by counting and dividing, have students experience their pulse prior to exercise then check it again periodically only to compare their resting to elevated heart rates due to exercise.

Suggestions for meeting the 2nd or 3rd program days in the week:

- Review the FITT Principle and provide an opportunity for everyone to reach their target heart rates through a game or activity.
- Review the FITT Principle and have a few students demonstrate the Talk Test then interview them (with a fake microphone) directly afterwards to describe how they are feeling.

Resources

- <http://www.csc.unc.edu/taag/pubinter/INTERVENHEACClassroomManual8thGrade03032008.pdf>

- http://www.glencoe.com/sites/common_assets/health_fitness/gln_health_fitness_zone/pdf/heart_rate_monitor_activities/health_skill_related_fitness/health_skill_related_fitness_activity_5.pdf
- <http://www.healthychildren.org/English/healthy-living/fitness/Pages/The-FITT-Plan-for-Physical-Activity.aspx>
- <http://www.sciencedaily.com/releases/2011/05/110512082938.htm>
- <http://www.cdc.gov/physicalactivity/everyone/measuring/index.html>

Partnering for Youth – Cardio-Fit Project

Lesson 6 – The Bad & The Good News

Materials

Atherosclerosis Visual, 1 copy for every 3 students (Appendix D)
Timing device (optional)

Objectives

- Conclude that heart disease can start in childhood
- Recognize exercise reduces the risk of heart disease

Warm-up – Large Muscle & Static Stretches

Inspiration

The Bad News

- *One illness that starts at an early age is heart disease, which is the #1 cause of death in the United States.*
- *For every American who dies from cancer (the #2 cause of death in the United States), two die from heart-related illnesses.*
- *The primary cause of heart disease is a build-up of fatty deposits inside the walls of our arteries which causes passageways to become smaller and smaller. This is called atherosclerosis (ath-uh-roh-skluh-roh-sis).*
- *It restricts the blood flow much like holding your thumb over the end of a garden hose. This causes additional pressure inside the hose.*
- *Because the fatty deposits restrict blood flow in our arteries, the additional pressure makes our heart work harder.*
- *As these fatty deposits build up, blood does not flow well through the artery.*
- *Blood vessels can become totally blocked by fatty deposits or a blood clot. (A clot is when blood changes from a liquid into a thickened clump.)*
 - *When this happens to an artery that feeds the heart, a heart attack occurs.*
 - *When this happens to an artery that supplies blood to the brain, a stroke occurs.*

The Good News

- *Participating in activities that promote cardiovascular fitness strengthens the heart and reduces atherosclerosis.*
- *Active people are better able to clear fats from their blood stream as a result of exercise.*
- *Next week we'll discuss 9 factors leading to a higher risk of heart disease. Three of the nine we can't control. They are our gender, heredity, and age. But we can take control of the other six. They are Inactivity, Obesity, High Blood Pressure, High Levels of Cholesterol, Stress, and Smoking.*
- *Research shows active people have less heart disease and are less likely to die from a heart attack than inactive people.*
- *While heart attacks and strokes happen suddenly, the factors causing the blocked arteries can be traced back, in many cases, to childhood.*
- *That's why it's important for you to stay active! How many minutes of exercise do you need each day? (60 minutes).*

Exploration

- Distribute the atherosclerosis visual and discuss the illustrations.

Enjoy your physical activity! *Now it's time for our activity! Remember, kids your age should be physically active for 60 minutes every day! For 20 minutes of our time, we will try to stay at our target heart rate. Do you remember your target number? (130 bpm for 8-11 years & 115 bpm for 12-15 years)*

Cool Down & Reflection

- Cool down by walking for at least 1 minute to lower student heart rates.
- Perform static stretching.
- While stretching, reflect on today's lesson.

Options

Reaching lower levels:

- Focus on the lesson objectives.
- During the physical activity, instead of measuring bpm by counting and dividing, have students experience their pulse prior to exercise then check it again periodically only to compare their resting to elevated heart rates due to exercise.

Suggestions for meeting the 2nd or 3rd program days in the week:

- Ask a student who participated in the lesson the 1st day to review the heart disease concepts with the group. Give them the lesson plan and assist as needed.
- Review the heart disease information using an active true/false strategy. i.e., jumping jacks for true, squats for false, ask questions from the lesson and students choose their response.

Resources:

Personal Fitness, Kendall/Hunt Publishing Company
Center for Disease Control and Prevention

Suggested physical activity to reinforce concept (Lesson 6):

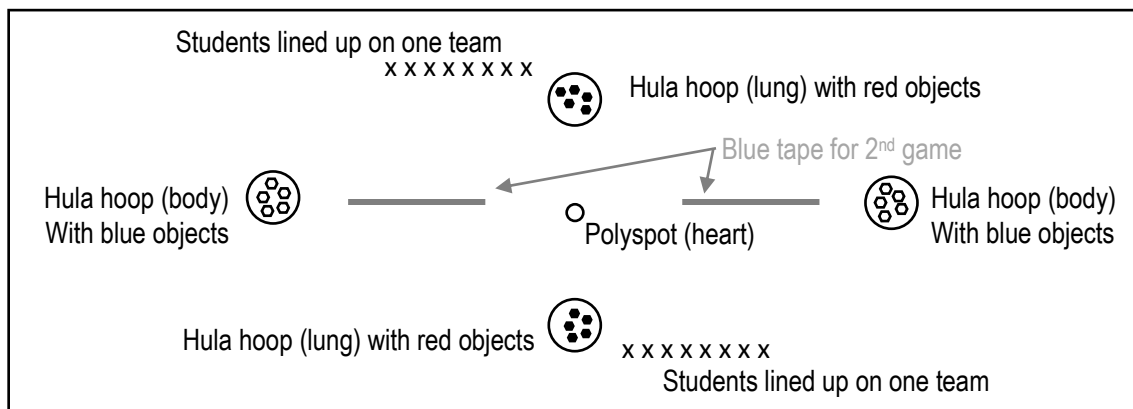
Heart Function Relay

Materials

30 red and 30 blue noodle pieces
4 hula hoops
1 poly spot
Blue tape

Explain the following rules and procedures to play “Heart Function Relay”.

- Set up for game includes the heart station in the middle of the game area represented by a poly spot. Place two hoops on either side of the poly spot representing the lungs and two hoops on each end of the game area representing the body.



- The red objects represent oxygen-rich blood and should start in the lung hoops.
- The blue objects represent oxygen-poor blood and should start in the body hoops.
- All students represent blood.
- Divide group into 2 teams and have each team begin the relay lined up at a lung. It is important to line up so that the students can watch as the activity demonstrates the function of the heart.
- On instructor's signal, 1st student in line picks up a red object (oxygen-rich blood) and runs to the heart, does 1 push up to represent a heartbeat, then chooses to go to either end of the body.
- The student exchanges oxygen-rich blood (red object) for oxygen-poor blood (blue object), returns to the heart, does a push up (heartbeat), then runs back to the lungs to deliver the blue object to their team's lung hoop.
- The instructor will indicate when the next student in line should start gauged by when the 1st student arrives at the body hoop. Consider the safe passage of students on the game area. Students from the same team cannot pass each other. There should be 2 students from each team actively on the game area. Instructor continues to start students until all have had an opportunity to participate.
- There are no winners or losers in this game as it is meant to demonstrate the function of the heart. Everyone learns, everyone wins!

Play it again with the following changes to demonstrate atherosclerosis:

- Add a long piece of blue tape between the heart and body on each side. This represents an artery with fatty deposits restricting the flow of blood.

- Explain what the tape represents. Tell the students when delivering the red object to the body hoop, they are to travel the length of the tape by walking at a normal pace, keeping their feet on the tape by placing one foot directly in front of the other. Demonstrate for them.
- Play the game again, releasing the students at the same intervals.
- When all of the students are on the game area with the majority backed up at the tape line encroaching upon the heart, stop the game and have everyone take a seat where they are.

Discussion

- *What happened?* Relate the experience to the lesson. *We're backed up to the heart. What's causing this?* (a blocked artery) *If we were a body, what disease are we experiencing?* (Atherosclerosis) *What happened to our game?* (We had a heart attack!)

Partnering for Youth – Cardio-Fit Project

Lesson 7 – Life’s Simple 7 – Be Physically Active

Materials

None

Objectives

- Conclude Life’s Simple 7 offers a guide to reduce your risk of developing heart disease.
- Recognize being physically active 60 minutes or more each day benefits your heart health.

Warm-up – Large Muscle & Static Stretches

Inspiration

Initiate a discussion using the following facts:

- *What is the number 1 cause of death in the United States and in the world? Heart Disease*
- *Do we know what’s good for our hearts?*
The American Heart Association recently did a survey and found over a third (1 out of 3) of Americans think they have ideal heart health . . . yet more than half of those self-reporting “ideal heart health” were told they had a heart disease risk factor and needed to make changes to improve their health. Do Americans see the connection between risk factors and heart disease? What’s going on?
- *How about you? Do you have the knowledge to protect the most important organ made of muscle in your body?*
- *Heart disease isn’t contagious – you don’t catch it like you can a cold or the flu. There are certain things that increase your chances of having heart disease. They’re known as risk factors.*
- *There are 9 risk factors for heart disease: age, heredity, gender, being inactive, being overweight or obese, smoking, having high blood pressure, having high cholesterol, or having high levels of stress.*
- *Out of these 9, 3 are not controllable. Can you name them? (age, heredity, gender)*
- *The other 6 are controllable.*
- *The American Heart Association (AHA) is dedicated to fighting heart disease and stroke. Their mission is to build healthier lives, free of heart disease and stroke.*
- *The AHA has a guide called Life’s Simple 7. The guide identifies 7 factors that impact health and quality of life. The 7 guidelines address the 6 controllable risk factors. They are:*
 - *Be Physically Active*
 - *Keep a Healthy Weight*
 - *Eat a Heart Healthy Diet*
 - *Live Tobacco Free*
 - *Keep Your Blood Pressure Healthy*
 - *Keep Your Total Cholesterol Healthy*
 - *Keep Your Blood Sugar Healthy*
- *Life’s Simple 7 says to be physically active every day. The hard part is making the decision to “Just Do It”!*
- *Less active people means overweight and obesity statistics increase at an alarming rate.*
 - *30% (one third, one out of every 3) of all American children are overweight or obese.*

- *Young people, as early as age 2, who have weight issues are likely to continue to have weight issues when they are an adult putting them at a higher risk for all kinds of health problems.*
- **Stop the Statistics Now!** *Change inactivity into physical activity for 60 minutes every day.*
 - **Keep in mind:** *Physically active children tend to be physically active adults. The choice belongs to you, but it begins now and must continue so you'll live a healthy and long life.*

Exploration

- **Enjoy your physical activity!** *Now it's time for our activity! Remember, kids your age should be physically active for 60 minutes every day! For 20 minutes of our time, we will exercise aerobically and try to stay at our target heart rate. Do you remember your target number? (130 bpm for 8-11 years & 115 bpm for 12-15 years)*

Cool Down & Reflection

- Cool down by walking for at least 1 minute to lower student heart rates.
- Perform static stretching.
- While stretching, reflect on today's lesson.

Options

Reaching lower levels:

- Focus on the lesson objectives reducing the vocabulary expectations and amount of statistics discussed.
- Focus on Life's Simple 7 by omitting the 3 uncontrollable and 6 controllable risk factor information.

Suggestions for meeting the 2nd or 3rd program days in the week:

Day 2 Script

- Statistics are numbers that have been collected to interpret information. There are a lot of statistics to study heart disease. Let's look at the numbers!
- The bad numbers!
 - 1 – heart disease is the #1 cause of death in the U.S.
 - 30 – 30% of children are overweight or obese
 - 43 – every 43 seconds someone in the U.S. has a heart attack
 - 49 – almost half, 49% of Americans have at least one heart disease risk factor
 - 70 – 70% of Americans (adults and children) are overweight or obese
 - 70-80 – there's a 70-80% chance an overweight child will become an overweight adult
 - 9-1-1 – the number to call if experiencing chest pain, upper body discomfort, shortness of breath, cold sweat, nausea or light-headedness – these alone or together are signs of a heart attack
 - 15 – 15% of people who have a heart attack will die from it
- The good numbers!
 - ½ – make half your plate fruits and vegetables
 - 2 – Limit yourself to no more than 2 hours of screen time per day
 - 7 – Life's Simple 7 can guide you to have a healthy heart
 - 60 – get 60 minutes of moderate to vigorous physical activity each day
 - 100 – put 100% effort into taking care of your heart and living a long, fantastic life!
- The numbers are in! Now it's your responsibility to share and use the data.
- **Think about it:** Avoid the bad numbers. Take charge, it's up to you.

Day 3 Script

- Let's play thumbs up or down. I'm going to say a statistic and if you agree it's true, thumbs up – if you think it's false, thumbs down. Any questions?
 - 70% of all Americans are overweight. ↑
 - 10% of all U.S. children are overweight or obese ↓ *30%*
 - Heart disease is the #2 killer in the U.S ↓ *It's the #1 killer*
 - Every 43 minutes, someone in the U.S has a heart attack ↓ *Every 43 seconds*
 - Almost half of all Americans have at least one heart disease risk factor ↑
 - Without a change, overweight children have a 70-80% chance of being an overweight adult ↑
 - Children spend an average of 7 hours per day in front of a screen ↑
 - Kids should limit their screen time to 2 hours per day ↑
 - Children need 60 minutes of exercise a day ↑
 - There's free exercise equipment in most houses ↑ *Yes there is! Go up and down the stairs, dance, do chores, walk the dog . . . what else?*
- Make physical activity part of your daily routine to help you:
 - Keep your heart healthy and strong.
 - Build healthy muscles, bones and joints.
 - Give you more energy.
 - Raise your self-esteem (feel better about yourself).
 - Have a healthy body weight.
 - Sleep better.
- What are you waiting for? Get going!**

Suggested physical activities to reinforce concept (Lesson 7):

Simple 7 Bean Bag Game

Materials:

- 4 Hula hoops
- 3 Cones
- 7 Bean bags

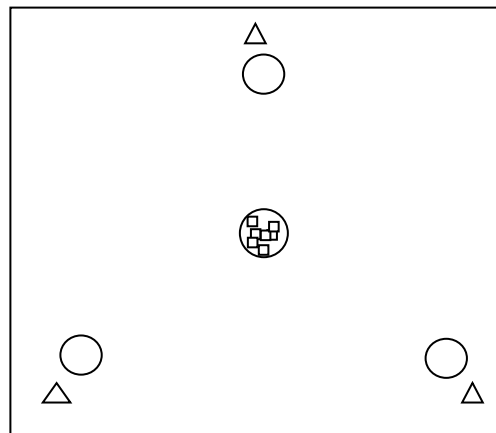
Game setup:

Use a 30-40 foot square area

○ - Hoops

△ - Cones (place behind hoops for teams to sit).

□ - Bean bags



Explain the following rules for playing:

- 4 hula hoops are used and positioned in triangle with 1 hoop in the center containing 7 (Life's Simple 7 health choices) bean bags.
- Students are divided into teams and stand in a single-file line behind their hoop (body).

- *Option of playing game: decide before beginning game.*
 - 1st student only competes until 3 bean bags are collected.
 - Compete as a relay: 1st person takes turn; tags next person and continues until team as collected 3 bean bags.
- On the teacher's signal, one person at a time from each team will run to the center hoop and take **1** Simple Seven bean bag and bring it back and place it in their hoop (body).
- *Remind students to place, not throw, their bean bags into the hoop. If they throw and miss, it will take additional time to pick up.*
- *Students MUST travel in a safe manner to avoid any collisions.* Students will be eliminated from the game for unsafe play.
- Students have the option to strategically take a Simple 7 bean bag from an opposing hoop (body) instead of from the center hoop.
- Games stops when a team collects 3 bean bags. Instructor asks the team to **name** 3 Simple 7 health choices to win the game.
 1. *Be Physically Active*
 2. *Keep a Healthy Weight*
 3. *Eat a Heart Healthy Diet*
 4. *Live Tobacco Free*
 5. *Keep Your Blood Pressure Healthy*
 6. *Keep Your Total Cholesterol Healthy*
 7. *Keep Your Blood Sugar Healthy*
- If team fails to name 3 Simple 7 health choices, there is no winner and a new game begins with 7 bean bags returned to center hoop.
- Continue play as time allows.

Blindfolds Hide and Seek (Optional)

Materials

30 x 30 feet area

Blindfolds (or handkerchiefs for half of the students)

1 cone

Activity

(Instructor: You will play Blindfolds Hide and Seek and reveal the point illustrated in the discussion following the game.)

- Play area – 30 x 30 feet. *If larger group, use 2 areas.*
- Students choose partner.
- Partners are spread out around playing area.
- One partner will wear blindfold.
- One partner will be a guide.
- Instructor will place target (cone or other safe object) within playing area after players are blindfolded.
- On signal from instructor, student guide will give out verbal commands to blindfolded partner (arms need to be stretch outward) to move them to the target.
- When player touches target, player removes blindfold and returns to partner while game continues until all players have located target.

- Only guides may talk until completion of game.
- Repeat game with partners changing roles.

Game Discussion

- *Have you played Hide and Seek similar to the way we played today?* Answers will vary. *What was different?* If necessary, prompt students to respond with having a guide to give verbal directions toward target.
- *Is playing Hide and Seek easier or harder when you have a guide?* *Hopefully most will respond easier.*
- *What if you had a guide that could improve your chances of living longer, would you use it?*
- *What's Life's Simple 7?* The American Heart Association's guide called Life's Simple 7. The guide helps you make small choices every day to keep your heart healthy.
- *Can we name the 7 guidelines?*
 - *Be Physically Active*
 - *Keep a Healthy Weight*
 - *Eat a Heart Healthy Diet*
 - *Live Tobacco Free*
 - *Keep Your Blood Pressure Healthy*
 - *Keep Your Total Cholesterol Healthy*
 - *Keep Your Blood Sugar Healthy*

Resources

- http://www.heart.org/HEARTORG/HealthyLiving/HealthyKids/ChildhoodObesity/Overweight-in-Children_UCM_304054_Article.jsp#.WfYQK1tSzIU
- http://www.heart.org/HEARTORG/GettingHealthy/HealthierKids/LifesSimple7forKids/Lifes-Simple-7-for-Kids_UCM_466610_SubHomePage.jsp

Partnering for Youth – Cardio-Fit Project

Lesson 8 – Life’s Simple 7 – Keep a Healthy Weight

Materials

Hershey Milk Chocolate Kisses, one per student

Timing device (optional)

Objectives

- Define a calorie as a unit of measuring energy
- Compare energy intake to energy expenditure
- Understand how weight is affected by the balance of caloric intake vs caloric expenditure

Warm-up – Large Muscle & Static Stretches

Inspiration

Initiate a discussion using the following facts:

- *Fuel consumption is as important to our body as it is to cars. Cars burn gasoline converting it into energy so we can go places. People burn food converting it into energy so we can do things. You need energy in order to live!*
- *A “Calorie” is the measure of energy in food.*
- *If you don’t eat enough calories your hearts could not beat, your lungs could not breath, your muscles could not move, and your brains could not think.*
- *People fill their cars with gasoline to go places until their tank is empty, then, they fill it up again.*
- *But in the human body, people fill themselves with calories to do things, however, if we fill up with more calories than we need, your body changes the calories to fat and stores them.*
- *That’s the “balancing act” when fueling your body:*
 - *“Caloric-intake” (energy-in) are the calories we take in from the food we eat.*
 - *“Caloric-expenditure” (energy-out) are the calories we use to function.*
- *The balancing act is simple:*
 - *To maintain your weight, caloric-intake is equal to caloric-expenditure. The amount of food you eat every day is equal to the amount of energy your body needs every day.*
 - *To gain weight, caloric-intake is greater than caloric-expenditure.*
 - *To lose weight, caloric-intake is less than caloric-expenditure.*
- *There isn’t any “right” number of calories that works for everyone. The number of calories you need depends on age, heredity, gender, body size, and how active you are.*
- *A person who burns a lot of calories is described as active. A person who burns few calories is called inactive or sedentary. The more calories you burn the more fuel you need.*
- *A healthy lifestyle requires balance, in the foods you eat, beverages you drink, and in the amount of physical activity you include in your daily routine.*
- *There is a special number you can use to monitor your health for the rest of your life. It’s called a Body Mass Index or BMI. In the beginning of the session we measured your height and weight. With this information, knowing your age, and using a formula, we can estimate your BMI. To use a child’s BMI to measure health, you need a special chart because you are still growing. For adults, a healthy BMI is between 18 and 25.*

Exploration

- *Let's explore the caloric-intake vs. caloric-expenditure idea by demonstrating what it takes to burn off calories from a snack.*
- *I have some Hershey's Milk Chocolate Kisses. If you choose to eat one you must expend (or burn off) the amount of calories contained in the Kiss by jogging.*
- *How many calories do you think are in 1 serving (9) Candy Kisses? (There are 219 calories in 1 serving, approximately 24 calories in 1kiss. Calorie breakdown: 50% fat, 44% carbs, 6% protein).*
- *Pass out 1 candy Kiss to students that choose to participate (be aware of students with any relevant food allergies). Students not participating will have a seat and watch those who do.*
- *To expend the calories of 1 Chocolate Kiss, you will jog for 3 minutes.*
- *On the instructor signal, students will begin jogging for 3 minutes.*
- *When activity is completed, remind students that they didn't even eat one serving. If you ate one serving (9 Kisses) you would need to jog 27 minutes to burn off the calories! Have you ever eaten one serving of Hershey Kisses?*

Enjoy your physical activity! *Now it's time for our activity! Think about what you have eaten today. Have you taken in more than you have used? Remember, kids your age should be physically active for 60 minutes every day! Let's be active for at least 20 minutes of our time and try to stay at our target heart rate. Do you remember your target number? (130 bpm for 8-11 years & 115 bpm for 12-15 years)*

Cool Down & Reflection

- *Cool down by walking for at least 1 minute to lower student heart rates.*
- *Perform static stretching.*
- *While stretching, reflect on today's lesson.*

Options

Reaching lower levels:

- *Focus on the lesson objectives simplifying the concepts.*

Suggestions for meeting the 2nd or 3rd program days in the week:

- *Ask a student who participated in the lesson the 1st day to review the balance concepts with the group. Give them the lesson plan and assist as needed.*
- *Review the calorie intake vs calorie expenditure information using an active true/false strategy. i.e., jumping jacks for true, squats for false, run to wall "a" for true and wall "b" for false, ask questions from the lesson and students choose their response.*

Suggested physical activity to reinforce concept (Lesson 8):

Intake vs Expenditure Relay

Materials

Intake vs Expenditure Relay Cards (one set per team) and the answer key (Appendix E)
2 cones per team

Activity

- Set up cones for each team in the relay, one at the starting position and one at the opposite end of the activity space.
- Divide the students into relay teams.
- Distribute one set of cards containing the food items to each team
- Place a set of calorie/expenditure cards at the opposite position cone.
- Students will run the relay retrieving the cards. As cards are retrieved, students in line will match the food card with the calorie/expenditure card.
- Note the order in which the relay teams finish. In that order, check the correctness of their answers (using instructor key).
- First team to finish with the correct answers wins.

Resources

- http://www.heart.org/HEARTORG/GettingHealthy/HealthierKids/LifeSimple7forKids/Life-Simple-7-for-Kids_UCM_466610_SubHomePage.jsp
- <https://www.fatsecret.com/calories-nutrition/usda/milk-chocolate-candies?portionid=39823&portionamount=1.000>

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Lesson 9 – Life’s Simple 7 – Eat a Heart Healthy Diet

Materials

Empty snack packages

Nutrition Label Visual (Appendix F)

Objectives

- Use information on a food label to determine serving size
- List components for a heart healthy diet
- Analyze a food label, analyze the information and justify whether the food is healthy

Warm-up – Large Muscle & Static Stretches

Inspiration

Initiate a discussion using the following facts:

- *What does it mean when you hear, “Don’t Judge a Book by Its Cover”? Allow time for discussion. (One should not form an opinion on someone or something based purely on what is seen on the surface, because after taking a deeper look, the person or thing may be very different than what was expected.) Keep this advice in mind when surfing at the grocery store.*
- **The Bad News:** Descriptive words like low-fat, sugar free, organic and heart healthy, plus the logos for “whole grains” have been slapped on the front of cereal boxes, crackers, breads and even cookies! Don’t be fooled by some of these labels as manufacturers attempt to mislead you into thinking something is healthier than it really is.
- **The Good News:** Food manufacturers **must be truthful** about the nutrition information in the food labels and ingredients in their products! Read the label! This is where you find the whole story about what you eat.
- Ingredients are listed in order of their proportion in the product. This means the first 3 ingredients are most important in telling consumers what they’re eating. If the ingredients list contains long, chemical-sounding words that you can’t pronounce, it might be best to avoid the product.
- One of the most important parts of the food label is how many servings are in a package. The rest of the numbers are expressed by serving size. Plus, you may not be aware you are eating 2, 3, or 4 servings if you aren’t careful.
- The best way to choose healthy food is to eat it closest to its original form. For example, you don’t see a food label on the back of a banana!
- To eat a heart healthy diet:
 - Eat more fruits and vegetables, in fact, make them half of your plate at meal times according to the MyPlate nutrition guide published by USDA.
 - Eat a variety of grain products every day. Include whole-grain foods that have lots of fiber and nutrients like oats, whole wheat bread, and brown rice.
 - Eat fish at least 2 times each week. Oily fish contain omega-3 fatty acids, are best for your heart. These fish include salmon, mackerel, lake trout, herring, and sardines.
 - Read food labels and limit the amount of trans fat you eat. Trans fat is found in many processed foods made with shortening or with partially hydrogenated or hydrogenated vegetable oils. These foods include cookies, crackers, chips, and many snack foods.
 - Choose healthy fats which are unsaturated fats, such as olive, canola, corn, and sunflower oils. But all fats are high in calories, so watch your serving sizes.

- *Limit sodium (salt). Less is best and watch for hidden sodium in foods.*
- *Limit added sugar. Limit sugary drinks and foods with added sugar.*
- *A healthy diet and lifestyle are your best weapons in the fight against heart disease.*

Exploration

- *Reading food labels and ingredient lists will help you determine the nutritional value of what you are eating. Labels tell us the servings per package then all of the additional information is based on one serving. Per serving, the label states the calories and calories from fat. It also shows us the % Daily Value based on a 2,000 calorie diet. Daily value can basically be read as 5% being low and 20% being high.*
- Divide the students into teams and distribute the empty snack bags (2 per team) and the Nutritional Label visual.
- Have students analyze the two snacks to determine if one is healthier for their heart than the other.
- Have them report out with facts supporting their opinions.

Enjoy your physical activity! *Let's keep moving 60 minutes today and every day to help keep our cardiovascular system strong and healthy.*

Cool Down & Reflection

- Cool down by walking for at least 1 minute to lower student heart rates.
- Perform static stretching.
- While stretching, reflect on today's lesson.

Options

Reaching lower levels:

- Focus on the serving size on the Nutrition Label and the heart healthy diet choices.
- Reduce vocabulary expectations.

Suggestions for meeting the 2nd or 3rd program days in the week:

- Ask a student who participated in the lesson the 1st day to review the balance concepts with the group. Give them the lesson plan and assist as needed.
- Review the calorie intake vs calorie expenditure information using an active true/false strategy. i.e., jumping jacks for true, squats for false, run to wall "a" for true and wall "b" for false, ask questions from the lesson and students choose their response.

Suggested physical activity to reinforce concept (Lesson 9):

Bean Bag Bop

Materials

- Gym floor
- 4 different color bean bags

Game

- Playing area is the gym with students in scattered positions.
- Designate exercise area for students to complete chosen task to be performed if hit by the bean bag.
- For safety of students, play the 1st time with half of students only. This will provide more space for students to move. Emphasize the importance of using eyes to avoid collisions because of constantly changing pathways.
- Explain that up to four bean bags may be used if students demonstrate using spatial awareness skills.

x – Students	x		x		x		x o	x	
		o	x				x		
o – Beanbags				o	x			x	
	x		x			x	o		
				x		x		x	

Place cone on sideline to mark area for exercises
If hit

- Instructor will announce there are certain things to avoid in our diets to keep ourselves healthy and strong. Each different color bean bag represents something to avoid.
 - Red is sugar
 - Blue is salt
 - Yellow is fats
 - Green is cholesterol (or whatever colors you have)
- Rules
 - Any student may pick up the bean bag and slide it on the floor towards another student in attempt to hit **only** their feet.
 - Students who do not slide, but throw the bean bag are immediately removed from the game for 1 minute. (2nd offense- 2minutes, 3rd offense – elimination)
 - Students may pick up the bean bag with their hands at any time to keep it from striking their feet.
 - If a student is **hit or player steps on a bean bag while it is sliding**, that student leaves the game and goes to a designated area to perform exercises. Student may choose 20 jumping jacks or 10 push-ups.
 - When students complete the exercise, they return to the game.
- Instructor will slide 1 bean bag into playing area. Add another bean bag as you see students adjusting to game and safe play.
- As students are hit, the instructor reminds them that they have had too much sugar, salt, fats, or cholesterol, depending upon what color bean bag was used. Interject information about these for example: You need to lay off the cookies (sugar – candy, kettlecorn, sodas), cut back on those potato chips (sodium – sandwiches, pizza, soups), a little less butter please (fat –

chocolate, milkshakes, whole milk), no more Big Mac's for you (cholesterol – bacon, steak, cookies).

- Instructor sets a 5-7 minute time limit.

Variations

Game may be played via elimination rather than recycling.

Resources

- http://www.heart.org/HEARTORG/GettingHealthy/HealthierKids/LifesSimple7forKids/Lifes-Simple-7-for-Kids_UCM_466610_SubHomePage.jsp
- <http://www.livebeaming.com/2013/11/whats-your-food-label-really-telling-you/>

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Lesson 10 – Life’s Simple 7 – Live a Tobacco-Free Life

Materials

- a clear plastic bottle with a narrow neck (e.g., a small soda or water bottle) with the lid
- 10 cotton balls (5 to place in the bottle, 5 to compare after the experiment)
- modeling clay (size of a walnut)
- a pencil
- cigarette
- matches
- for optional exploration: regular drinking straw and “coffee-stirrer” cut in half (1/2 straw and stirrer per student)

Objectives

- Summarize the effects of smoking on your health as it pertains to heart disease.
- Describe some chemicals used in cigarettes including the addictive chemical “nicotine.”

Warm-up – Large Muscle & Static Stretches

Inspiration

Initiate a discussion using the following facts:

- *Why is smoking the most preventable cause of death in America?* Because many of those who lose their lives due to smoking-related illnesses could have probably lived much longer if they had chosen not to smoke.
- *Smoking gives you bad breath and makes your teeth yellow. It makes you cough and affects your ability to breathe.*
- *It’s expensive. One pack of cigarettes costs between \$6 and \$8 - and it can cost you your life!*
- *One cigarette...no big deal. Think again. That 1 “no big deal cigarette” contains over 4,000 chemicals!*
- *On food packages, you can look on the back and the ingredients are listed for you. Not so with tobacco products. Cigarette smoke contains hundreds of poisons and cancer-causing agents, but there’s no law that requires the printing of that information on packages to let people know exactly what they’re smoking. If they did, people might think twice about lighting up.*
- *Nicotine is the ingredient that receives the most attention because it is the drug that causes the addiction, meaning it becomes difficult to quit. Within a few days, your body becomes physically dependent on the drug and begins to crave it.*
- *Nicotine causes blood vessels to constrict, heart rate to quicken and blood pressure to increase. This puts an excessive amount of pressure on the cardiovascular system.*
- *Fatty buildup or plaque increases in the arteries of smokers. Atherosclerosis (ath-er-o-skler-O-sis) is the disease caused by this buildup. Over time, plaque hardens and narrows your arteries. This limits the flow of oxygen-rich blood to your organs and other parts of your body.*
- *Coronary heart disease (CHD) occurs if plaque builds up in the coronary (heart) arteries. These are the arteries that supply blood to the heart muscle giving it the energy to work. Over time, CHD can lead to chest pain, heart attack, heart failure, arrhythmias (ah-RITH-me-ahs), or even death.*
- *Smoking is a major risk factor for heart disease. When combined with other risk factors -*

such as unhealthy blood cholesterol levels, uncontrolled high blood pressure, and being overweight or obese—smoking further raises the risk of heart disease.

- *You need to know more! Nicotine is also used in bug spray.*
- *Other chemicals that you may be familiar with are:*
 - *Tar. This ingredient, which gives cigarettes flavor, is the same thick black substance used to pave roads and driveways.*
 - *Cyanide, which is also a main ingredient in rat poison.*
 - *Lead. It's also found in some kinds of paint.*
 - *Carbon monoxide, a common pollutant and the same stuff that escapes from the exhaust in cars.*

Exploration

- **Instructor only** performs this demonstration for students to observe because it involves matches and a cigarette.
- **This demonstration should be performed outside. Dispose of the trash properly, placing the remains of the cigarette, used matches, and modeling clay inside the plastic bottle, sealing it with the bottle's lid.**
- Start the demonstration by offering a handful of students an opportunity to drop a cotton ball into the plastic bottle. Comment how white they are. Then create a ball of modeling clay and block the mouth of the bottle with it. Use a pencil, poke a hole through the modeling clay until you see the pencil tip inside the bottle; then remove the pencil.
- Stick one end (the filtered end, if you are using a filtered cigarette) into the hole created in the modeling clay.
- Move to an outside area and light the cigarette.
- Now gently squeeze the plastic bottle to simulate breathing. Squeezing the bottle draws cigarette smoke inside the bottle the way lungs draw smoke into the body. Allow the smoke to linger so it is absorbed by the cotton balls. Smoking should take 2-3 minutes.
- Then remove the smoked cigarette and clay plug. Ask students to observe the cotton balls in the bottom of the container comparing them to the fresh, white cotton balls.
- Lead a discussion with the following questions: *What happened? How do the cotton balls in the bottle look compared to the fresh ones? Why do they look that way?* (they've accumulated tar and nicotine) *How does this demonstration show the potential effects of smoking on the body?* (This is what is deposited in your lungs when you smoke. As your lungs refresh your blood, the chemicals get into your blood stream and are carried throughout your body to every artery, vein, and organ.)
- *Think about it! This is just one cigarette. What if you smoked one or two packs every day?*
- *Decide to quit before you start. Live a tobacco-free life!*

Enjoy your physical activity! *Now it's time for our activity! Enjoy your tobacco-free lungs with their unaffected ability to refresh your blood with clean oxygen giving your muscles and organs what they need to perform. Remember, kids your age should be physically active for 60 minutes every day! Let's be active for at least 20 minutes of our time and try to stay at our target heart rate. Remember your target number? (130 bpm for 8-11 years & 115 bpm for 12-15 years)*

Cool Down & Reflection

- Cool down by walking for at least 1 minute to lower student heart rates.
- Perform static stretching.
- While stretching, reflect on today's lesson.

Options

Reaching lower levels:

- Focus on the lesson objectives simplifying the concepts.
- Reduce vocabulary expectations.

Suggestions for meeting the 2nd or 3rd program days in the week:

- Review the facts from the inspiration using an active true/false strategy. i.e., one wall true, one wall false, ask questions and students respond by jogging to the correct wall.
- Review the facts from the inspiration using a game show strategy. i.e., create two teams to answer questions from the lessons assigning points to correct answers.

Optional Exploration

Materials

- 1/2 per student – regular drinking straw (cut in half)
- 1/2 per student – “coffee-stirrer” straw (cut in half)

Discuss with students

- *Smoking can damage the most important organs in your body, including the lungs, heart and brain.*
- *Let’s find out how difficult it is to breathe due to smoking. (This activity should not be done by children with asthma, who use an inhaler, or anyone with breathing difficulties. Refer to the medical needs list of students in your folder and refer any questions to your site coordinator. Before you begin, tell students to opt out if they ever have difficulty breathing.)*
- Give each student a drinking straw.
- Ask them to place the straw in their mouth and breathe only through the straw for 30 seconds. It may help students to hold their noses. Be sure to let them know they should stop the activity if breathing becomes difficult or they feel uncomfortable or dizzy.
- Instructor will time for 30 seconds.
- Ask students if their breathing felt normal or was it difficult?
- Then hand out the thinner straws (coffee stirrers). Repeat the activity, having each student breathe through the straw for 20 seconds. Again, be sure to let them know they should stop the activity if breathing becomes difficult or they feel uncomfortable or dizzy.
- Ask students if they know what these two activities simulates.
 - *The first one simulates breathing for a smoker.*
 - *The second simulates breathing for a smoker with chronic lung disease.*
- Smoking decreases your lung capacity. In fact, a 25 year old who smokes will have a difficult time keeping up with a 45 year old non-smoker!
- Just like the cigarette package says, “Cigarettes may be hazardous to your health,” and “Smoking causes lung cancer, heart disease, emphysema, and my complicate pregnancy.”
- Be good to yourself and live a tobacco-free life!

Resources

- http://peer.tamu.edu/LessonPlanPrint.asp?id=184&file=activityhttp://articles.coastlinepilot.com/2002-05-31/news/export7294_1_smoking-project-four-cigarettes-lungs
- <http://kidshealth.org/kid/watch/house/smoking.html>
- <http://pbskids.org/itsmylife/body/smoking/article2.html>
- <https://www.nhlbi.nih.gov/health/health-topics/topics/smo/>

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Lesson 11 – Life’s Simple 7 – Health by the Numbers

Materials

- Handkerchiefs, one per student (for optional exploration)

Objectives

- Determine how following Life’s Simple 7 can greatly improve cardiovascular health.
- Comprehend what blood pressure, cholesterol and blood sugar are and do for our bodies.
- Connect high blood pressure, cholesterol, and blood sugar with disease they cause.

Warm-up – Large Muscle & Static Stretches

Inspiration

Read to students:

- *We’ve been discussing Life’s Simple 7, a guide identifying 7 factors that impact our health and quality of life. Who can name the guidelines we’ve discussed so far? Be Physically Active, Keep a Healthy Weight, Eat a Heart Healthy Diet, and Live Tobacco Free*
- *The last 3 guidelines are to keep your blood pressure, total cholesterol and blood sugar levels healthy. Each of these guidelines are expressed with numbers.*

Initiate a discussion using the following facts:

Blood Pressure

- *Blood pressure measures how hard your blood is pushing against the sides of your arteries. As your heart squeezes, your blood pressure goes up. As your heart relaxes, your blood pressure goes down. Blood pressure rises to a maximum level and then falls to a minimum level with each heartbeat.*
- *When your blood pressure is taken, the result is given as two numbers - the maximum and minimum levels. It is expressed as a number “over” a number, like "120 over 80".*
 - *The first or top number is the highest level your blood pressure reaches when your heart is squeezing. This is called your systolic blood pressure level.*
 - *The second or bottom number is the lowest level of your blood pressure when our heart is relaxing. This is called your diastolic pressure.*
- *Blood pressure is measured with a blood pressure monitor. A cuff, placed on your arm, squeezes and slowly releases to measure the top and bottom numbers. You had your blood pressure taken earlier this session at PFY.*
- *Everyone has blood pressure and it only becomes a problem when it is too high or too low for a given age group.*
- *High blood pressure contributes to the development of heart disease.*
- ***Now for the numbers!*** *The average blood pressure for children varies depending upon your age. For adults, the average is 120/80 but when the top number is 140 or more, it’s considered high.*

Total Cholesterol

- *Cholesterol is a type of fat found in your blood.*
- *Your liver makes cholesterol for your body. You also get cholesterol from animal products you eat like meat, poultry, fish, eggs, butter, cheese, and milk. Cholesterol is not found in foods from plants.*

- You need some cholesterol to help your brain, skin, and other organs grow and do their jobs.
- But eating too much cholesterol is a bad idea, especially for people whose bodies already make too much cholesterol.
- There are two types of cholesterol: "**good**" (HDL) and "**bad**" (LDL).
 - HDL (remember "healthy for "H") acts like a scavenger or vacuum cleaner, picking up cholesterol and transporting it back to the liver, where it is processed and put to many necessary uses like building cell walls and membranes.
 - LDL (remember "lousy" for "L") picks cholesterol up from the liver and drops it off throughout the body. This becomes a problem in blood vessels where the extra cholesterol can form plaque.
- When too much cholesterol circulates in the blood, it combines with other substances in your blood to form "plaque."
- Plaque can build-up inside the walls of your arteries causing the passageways to become smaller and smaller, restricting the blood flow much like holding your thumb over the end of a garden hose. This causes additional pressure inside the hose and, in our arteries, this pressure makes our heart work harder.
- The condition narrowing of our arteries due to plaque build-up is called atherosclerosis (ath-uh-roh-skluh-roh-sis), a primary cause of heart disease. We spoke about atherosclerosis a few weeks ago.
- Arteries can become totally blocked by plaque or by a blood clot. (A clot is when blood changes from a liquid into a thickened clump.)
 - When this happens to an artery that feeds the heart, a heart attack occurs.
 - When this happens to an artery that supplies blood to the brain, a stroke occurs.
- Both kids and adults can have too much cholesterol in their blood.
- Doctors find out what your cholesterol level is by taking a small amount of your blood and testing it.
- **Now for the numbers!** A healthy total cholesterol number for adults is less than 200 (milligrams per deciliter (mg/dL)) and for children it's less than 170.

Blood Sugar

- When you eat foods containing carbohydrates - like grains, fruits and vegetables - your body breaks them down into sugar to use as energy.
- Certain foods, like whole grains, many fruits and vegetables and other high-fiber foods, take longer to break down keeping the amount of sugar entering your blood from going too high.
- But when you eat refined grains, like white bread and pasta, and foods high in added sugar, your body breaks them down fast delivering sugar to the bloodstream quickly. If the sugar entering your blood goes high too often, it can overwork your body's ability to keep your blood sugar in healthy ranges, and you're more likely to develop diabetes.
- There are two types of diabetes. One can develop when you are very young and comes on suddenly. The other type develops over time due to bad habits like eating too much, being overweight, and not getting enough exercise.
- With diabetes, the body has problems either using or making something called insulin. Insulin is important because it helps your body turn sugar and other food into energy. When the body doesn't have enough insulin, it causes too much sugar to build up in your blood, which can cause damage to your heart and other parts of your body.
- Diabetes causes plaque to grow in your arteries at a faster rate, increasing your risk of heart disease and stroke.

- Doctors find out what your blood sugar level is by taking a small amount of your blood and testing it.

What can you do to help prevent high blood pressure, high cholesterol, and high blood sugar?
 Follow the other 4 guidelines of course! – Be physically active at least 60 minutes every day; keep a healthy weight balancing your calorie intake with your calorie expenditure; eat a heart healthy diet with plenty of fruit and vegetables; and live tobacco free by quitting before starting!

Exploration (optional)

Freeze Flag Tag

- Play Flag Tag freezing the game to ask the following questions from the Inspiration.
- Students should answer as a group followed by the instructor stating the correct answer.
- Freezing should be done quickly to keep the students active most of the time.

Questions:

- Blood pushing against the walls of your arteries is called what? (**Blood Pressure**)
- High blood pressure contributes to what disease? (**Heart Disease**)
- A type of fat found in your blood is called? (**Cholesterol**)
- When there's too much cholesterol in your blood and it mixes with other things to form what? (**Plaque**)
- Plaque can build up on the artery walls causing what? (**Heart Disease or Stroke**)
- Your body breaks down what to use as energy? (**Sugar**)
- Is eating whole grains, fruits, vegetables, and high fiber foods good for you? (**Yes**) Why? (**Because our bodies break it down into sugar slowly therefore it doesn't raise your blood sugar level quickly**)
- High blood sugar causes what disease? (**Diabetes**)
- People with diabetes are at higher risk for what other disease? (**Heart Disease**)
- What other of Life's Simple 7 can we do to prevent high blood pressure, high cholesterol, and high blood sugar? (**Be physically active, keep a healthy weight, eat a healthy diet, and live tobacco free!**)

Enjoy your physical activity! Let's keep moving 60 minutes today and every day to help keep our cardiovascular system strong and healthy.

Cool Down & Reflection

- Cool down by walking for at least 1 minute to lower student heart rates.
- Perform static stretching.
- While stretching, reflect on today's lesson.

Options

Reaching lower levels:

- Simplify concepts and reduce vocabulary expectations. (points using the bullet “➤” should only be used in middle school)

Suggestions for meeting the 2nd or 3rd program days in the week:

- Ask three student who participated in the lesson the 1st day to each review one of the last 3 guidelines for Life's Simple 7. Give them the lesson plan and assist as needed.
- Review the inspiration by using an active true/false strategy. i.e., jumping jacks for true, squats for false, run to wall “a” for true and wall “b” for false, ask questions from the lesson or exploration.

Resources:

- <http://www.bloodpressureuk.org/microsites/u40/Home/facts>
- Personal Fitness, Kendall/Hunt Publishing Company
- Center for Disease Control and Prevention
- <http://kidshealth.org/en/kids/cholesterol.html#>
- <http://www.heart.org>

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Lesson 12 – Life’s Simple 7 – Session in Review

Exploration

True or False Review

- In a large open interior space, assign one wall as “true” and the opposite wall as “false”.
- Students are to answer the question read by the instructor by running to the appropriate wall.
- Once students are at a wall, the instructor will reveal the answer either ask for or offer additional information.

Questions:

*Heart Disease is the number 1 cause of death in the United States.

True, in fact it is the #1 cause of death in the world.

*The CDC recommends children your age should get 20 minutes of exercise every day.

False. Children should get 60 minutes or more of moderate to vigorous exercise every day.

*Jogging is considered an aerobic exercise.

True. Aerobic exercise is done continuously over a long period of time and is the best form of exercise for cardiovascular health.

*You can best measure your pulse in your wrist or neck.

True. In your neck you are using the carotid artery and in your wrist, the radial artery.

*The heart has 6 chambers.

False. The heart is an organ made of muscle and has 4 chambers – two atrium and two ventricle.

*The FITT Principle guides you to improve or maintain your fitness level.

True. FITT stands for Frequency, Intensity, Time, and Type. Intensity is the most difficult to measure but if you are sweating, you are probably exercising at a high intensity.

*Heart disease starts when you’re an adult.

False. Heart disease can start when you are a child but following Life’s Simple 7 will help you and your family prevent it.

There are only two uncontrollable risk factors and they are age and gender.

False. Trick question because there are three: age, gender, and heredity.

When you match the number of calories in with the number of calories you use, your weight will remain the same.

True. It’s a balancing act, more in and less out will make you gain weight and less in and more out will make you lose weight.

Calorie is a unit of measurement for energy.

True. Food is measured in calories, the number of energy units it provides your body when eaten.

Almost one in three children in the United States are overweight or obese.

True. In fact there's a 70-80% chance an overweight child will become an overweight adult.

The most important piece of information on a food label is the calorie content.

False. It is the serving size because all the other numbers are based on serving size. For example, if you eat an entire package of chips that contains 2 servings and the calories are listed at 50 on the food label, then you just ate 100 calories.

*Nicotine is the nasty ingredient in cigarettes that causes addiction.

True. Once you are hooked on nicotine it's very hard to quit so never start! The ingredients in cigarettes harms your heart and almost every organ in your body!

Blood pressure is caused by blood putting pressure on the walls of your arteries.

True. High blood pressure leads to what? HEART DISEASE!

All cholesterol is bad.

False. Your body needs cholesterol to be healthy but too much cholesterol is bad because it leads to what? HEART DISEASE!

Cholesterol mixes with other substances in your blood stream making plaque.

True. Plaque is the thick hard deposits that can clog your arteries and causes what? HEART DISEASE!

Diabetes is a medical condition when too much sugar builds up in your blood.

True. Diabetes puts you at greater risk for what? HEART DISEASE!

All of the above questions are addressed on the 6th-8th grade Cardio-Fit pre/post knowledge assessments. Those questions with an asterisk are on the 3rd-5th grade assessment.

Enjoy your physical activity! *Let's remember to follow Life's Simple 7 to prevent heart disease and keep active 60 minutes every day to keep our cardiovascular system strong and healthy.*

Cool Down & Reflection

- Cool down by walking for at least 1 minute to lower student heart rates.
- Perform static stretching.
- While stretching, reflect on today's lesson.

Options

Reaching lower levels:

- The questions containing asterisks are addressed on the elementary Cardio-Fit pre/post knowledge assessments.

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Permission

Before testing or collecting student data, ask families to agree to the practice as part of the registration process for your program.

Statements such as:

As a program participant, individual data is collected and evaluated for program effectiveness. This data includes (*list the data collected*).

As part of the fitness activities, all students will participate in the measurement of height, weight, blood pressure, and calculation of BMI (Body Mass Index) 2-3 times during the year. All information will remain confidential and will be collected privately. Student names will be coded to protect their identity. Students will not be compared to each other but to their own results, pre and post, and to health fitness national standards that indicate good health, established for each age and gender.

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Evaluation Options

Knowledge Assessment

Administer pre and post. Compare scores to measure improvement.

PACER (Progressive Aerobic Cardiovascular Endurance Run)

The Progressive Aerobic Cardiovascular Endurance Run (PACER) is a multistage shuttle run. It is designed to measure aerobic capacity which is characterized by endurance, performance, and fitness. The objective of the PACER is to run as long as possible while keeping a specified pace. An audio file sets the pace indicated by a beep as students run back and forth across a 20-meter space. The pace gets faster each minute. A point is scored for each 20-meter distance covered. The test is easier in the beginning but progressively gets more difficult. The PACER is an effective, fun, and easy way to measure aerobic capacity that encourages participation from all youth and is relatively easy to score and administer. A 15-meter test is available for younger students or if space is limited. The pre and post-test should be the same distance for comparison. Instructions for administering the PACER can be found on the web (one resource is <https://pyfp.org/doc/fitnessgram/fg-05-aerobic.pdf>). The PACER audio file for the 20m or 15m test can be found on the web (one resource is <https://youtu.be/pP4eIcwgQbk>). The standards table indicating the PACER healthy fitness zone can be found at <http://www.olchs.org/assets/1/6/StandardsTable.pdf>.

Administer pre and post session. Compare results to an age-leveled chart defining a healthy fitness zone range (children 10 and older). Compare pre and post PACER results to determine improvement, maintenance, or decreasing performance.

Health Assessments

Collect blood pressure, height, weight, and resting heart rate at the start and end of the school year. Information can be used to calculate BMIs for trend data and to educate students about the science behind the numbers. An Excel file to calculate children's BMI can be found at https://www.cdc.gov/healthyweight/assessing/bmi/childrens_bmi/tool_for_schools.html. To use the calculator you must have the following information: gender, birth date, date of measurement, height in feet and inches, and weight in pounds. The Excel file calculates the BMI of children based on the standard growth charts.

Surveys

Student and parent surveys collect opinions and self-reported improvements. A question about the Cardio-Fit Project could be added to a program survey. For example, using a Likert Scale (All of the time, Most of the time, Some of the time, and Never), students might answer the question, "I improved my fitness & health knowledge." On a family survey with a choice of "yes" or "no," the questions, "Did your child discuss any fitness or health information they learned participating in the program?" and "Did your child increase their physical activity as a result of participation in the program?"

Partnering for Youth – Cardio-Fit Project

Equipment Options

Blood Pressure Monitor

If choosing to measure blood pressures an automatic, cuff-style, bicep (upper-arm) monitor is needed. Depending on the age of the child, a child's cuff may also be needed. Check the manufacturer specification to select the best option for the children you serve.

Stadiometer

A stadiometer allows you to measure height consistently. It usually includes a stand, ruler, and sliding horizontal headpiece which is adjusted to rest on the top of the head.

Digital Scale

Choose a heavy duty battery operated scale for consistent weight measurements.

Oximeter

A pulse oximeter indirectly monitors the oxygen saturation of blood (as opposed to measuring oxygen saturation directly through a blood sample) and the pulse. Choose a model with a strong hinge to get optimal use as they can be fragile.

Heart Model

Many science supply companies sell human organ models. Ours was purchased from Carolina Biological.

Partnering for Youth – Cardio-Fit Project

Appendices

Appendix A – Top Ten Cards

Appendix B – Charade Cards

Appendix C – Circulatory System Statin Cards

Appendix D – Atherosclerosis Visual

Appendix E – Intake vs Expenditure Relay Cards

Appendix F – Nutrition Label Visual

Appendix G – Data Collection Form example

Appendix H – Pre/Post Knowledge Assessment (1st & 2nd Grades)

Appendix I – Pre/Post Knowledge Assessment (3rd-5th Grades)

Appendix J – Pre/Post Knowledge Assessment (6th-8th Grades)

Heart Disease



Cancer



Chronic Lung Disease



Accidents



Stroke



Alzheimer's Disease



Diabetes



Flu & Pneumonia



Kidney Disease

Suicide

Answer Key

Top 10 Causes of Death in the US

Average US life expectancy = 78.8 years

Source: Center for Disease Control and Prevention,
2014 statistics

1	Heart Disease	23.4%
2	Cancer	22.5%
3	Chronic Lung Disease	5.6%
4	Accidents	5.2%
5	Stroke	5.1%
6	Alzheimer's Disease	3.6%
7	Diabetes	2.9%
8	Flu & Pneumonia	2.1%
9	Kidney Disease	1.8%
10	Suicide	1.6%

Answer Key

Top 10 Causes of Death in the US

Average US life expectancy = 78.8 years

Source: Center for Disease Control and Prevention,
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1	Heart Disease	23.4%
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6	Alzheimer's Disease	3.6%
7	Diabetes	2.9%
8	Flu & Pneumonia	2.1%
9	Kidney Disease	1.8%
10	Suicide	1.6%

Instructor Guide

Top 10 Causes of Death in the US

#1 Heart Disease

Heart disease is the leading cause of death for both men and women in the U.S. and also worldwide. Heart disease describes several conditions, many are related to plaque build up in the walls of arteries.

#2 Cancer

Cancer is a group of diseases characterized by the uncontrolled growth and spread of abnormal cells. If not controlled, it can interfere with essential life-sustaining systems. Lung cancer accounts for more deaths than any other cancer.

#3 Chronic Lung Disease

Lung diseases cause airflow blockage and breathing-related issues.

#4 Accidents

Unintentional injuries are the 4th leading cause of death in the U.S. and the leading cause of death for those age 1 to 44 years old.

#5 Stroke

Strokes result from problems with the blood supply to the brain.

#6 Alzheimer's Disease

This disease results from changes to blood vessels that supply circulation to the brain causing a decline of cognitive function that affects a person's ability to perform everyday activities and eventually basic bodily functions. Alzheimer's is the only cause of death in the top 10 that cannot currently be cured, prevented, or slowed.

#7 Diabetes

Diabetes is a disease in which the body is no longer able to carefully control glucose, a simple sugar our bodies make from the food we eat in order to give us energy.

#8 Flu and Pneumonia

Flu is a highly contagious viral infection. Having the flu can lead to pneumonia which is a serious complication that can cause inflammation of the lungs.

#9 Kidney Disease

Kidney disease is a condition in which the kidneys are damaged and cannot filter blood as well as healthy kidneys. Because the blood is poorly filtered, waste remains in the body and may cause other health problems.

#10 Suicide

Suicide is intentional self-harm. It can be prevented by identifying and acting upon risk factors and signs in yourself or in others.

Source:

<https://www.medicalnewstoday.com/articles/282929.php>

PUSH-UPS



GOLFING



WEIGHTLIFTING



RUNNING A 100
METER DASH



WRESTLING



BASEBALL



DOUBLES
TENNIS



TUG OF WAR



WASHING
WINDOWS

PARTNERING FOR YOUTH
CARDIO-FIT
PROJECT

DUSTING
FURNITURE

PARTNERING FOR YOUTH
CARDIO-FIT
PROJECT

KICKBOXING

PARTNERING FOR YOUTH
CARDIO-FIT
PROJECT

LACROSSE

PARTNERING FOR YOUTH
CARDIO-FIT
PROJECT

DANCING

PARTNERING FOR YOUTH
CARDIO-FIT
PROJECT

SOCCER

PARTNERING FOR YOUTH
CARDIO-FIT
PROJECT

BRISK
WALKING

PARTNERING FOR YOUTH
CARDIO-FIT
PROJECT

ZUMBA

PARTNERING FOR YOUTH
CARDIO-FIT
PROJECT

BASKETBALL



BICYCLING



SWIMMING LAPS



JOGGING



FOOTBALL



VACUUMING



PUSH MOWING
THE LAWN



SHOVELING
SNOW

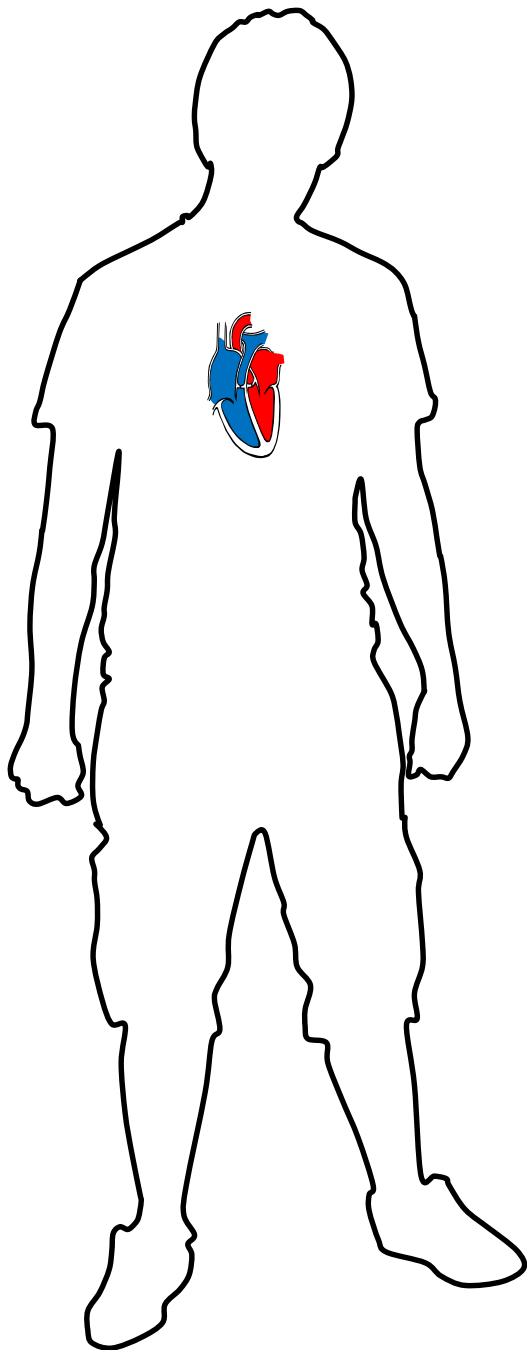


ANSWER KEY

Baseball	Anaerobic
Basketball	Anaerobic/Aerobic
Bicycling	Aerobic
Brisk Walking	Aerobic
Dancing	Aerobic
Doubles Tennis	Anaerobic
Dusting Furniture	Anaerobic
Football	Anaerobic
Golfing	Anaerobic
Jogging	Aerobic
Kickboxing	Aerobic
Lacrosse	Anaerobic/Aerobic
Push Mowing the Lawn	Aerobic
Push-ups	Anaerobic
Running a 100 Meter Race	Anaerobic
Shoveling Snow	Aerobic
Soccer	Anaerobic/Aerobic
Swimming Laps	Aerobic
Tug of War	Anaerobic
Vacuuming	Aerobic
Washing Windows	Anaerobic
Weight Lifting	Anaerobic
Wrestling	Anaerobic
Zumba	Aerobic

ANSWER KEY

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Zumba	Aerobic

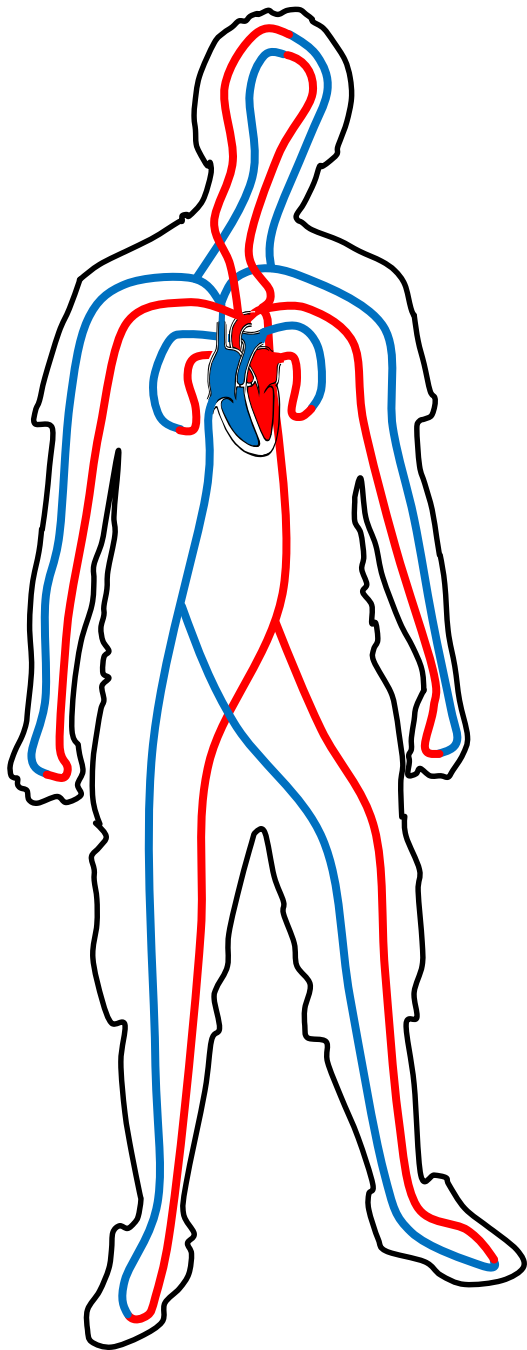


Your heart is a pump.

It's a muscular organ about the size of your fist located slightly left of center in your chest.

Exercise:
10 jumping jacks

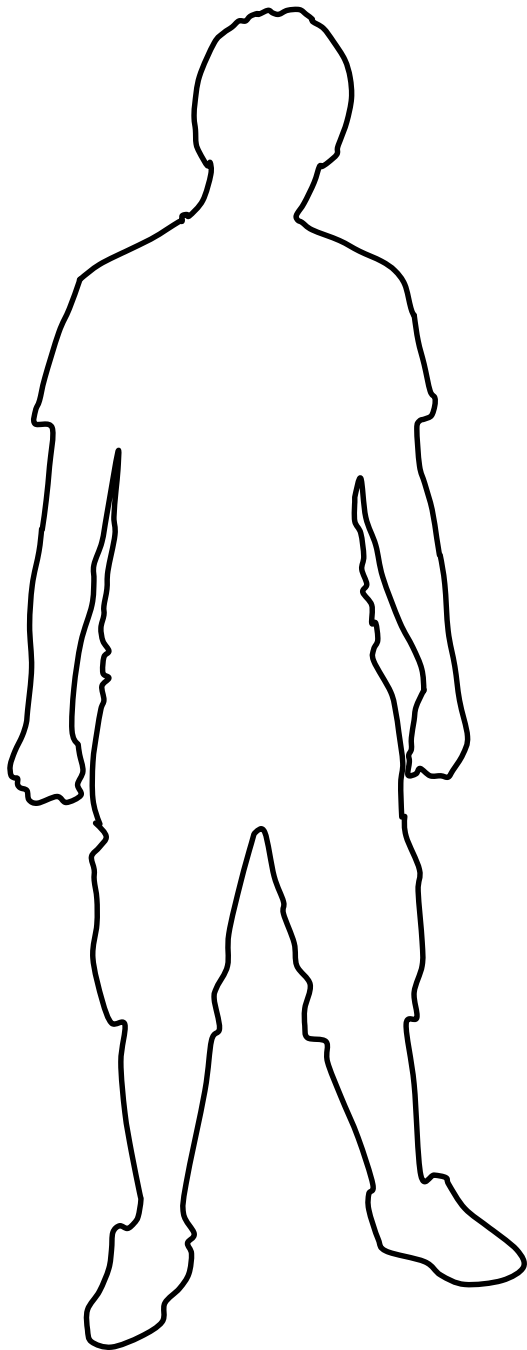




Together, your heart and blood vessels make up your circulatory system, which circulates blood around your body.

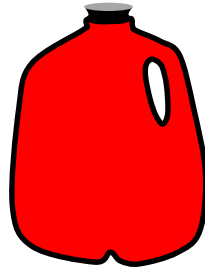
Exercise:
10 sit ups





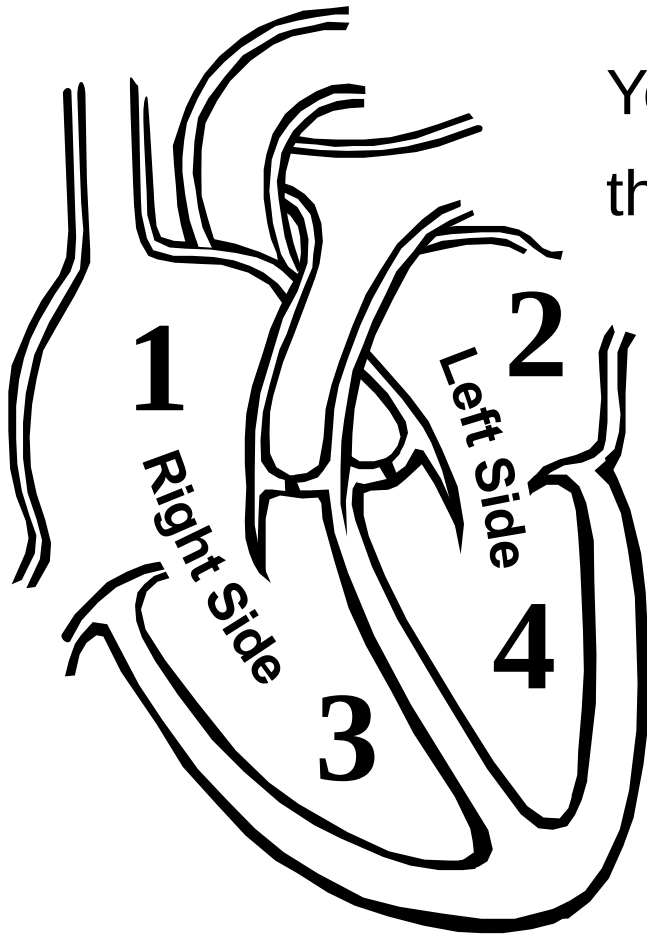
Your heart pumps about 1 gallon
(4 liters) of blood every minute.

It beats about 100,000 times in 1 day,
that's about 35 million times in a year!



Exercise:
10 supermans





Your heart is divided into the right and the left sides. The division protects oxygen-rich blood from mixing with oxygen-poor blood.

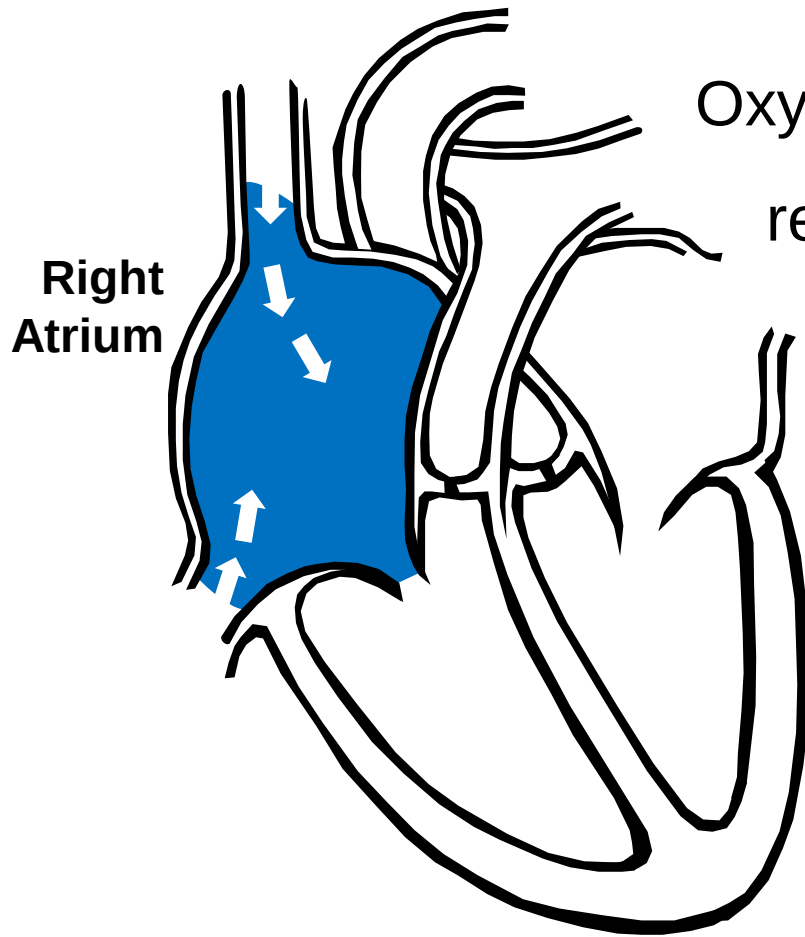
It has 4 chambers - 2 atriums (1 & 2) and 2 ventricles (3 & 4).

Exercise:
10 squats



PARTNERING FOR YOUTH

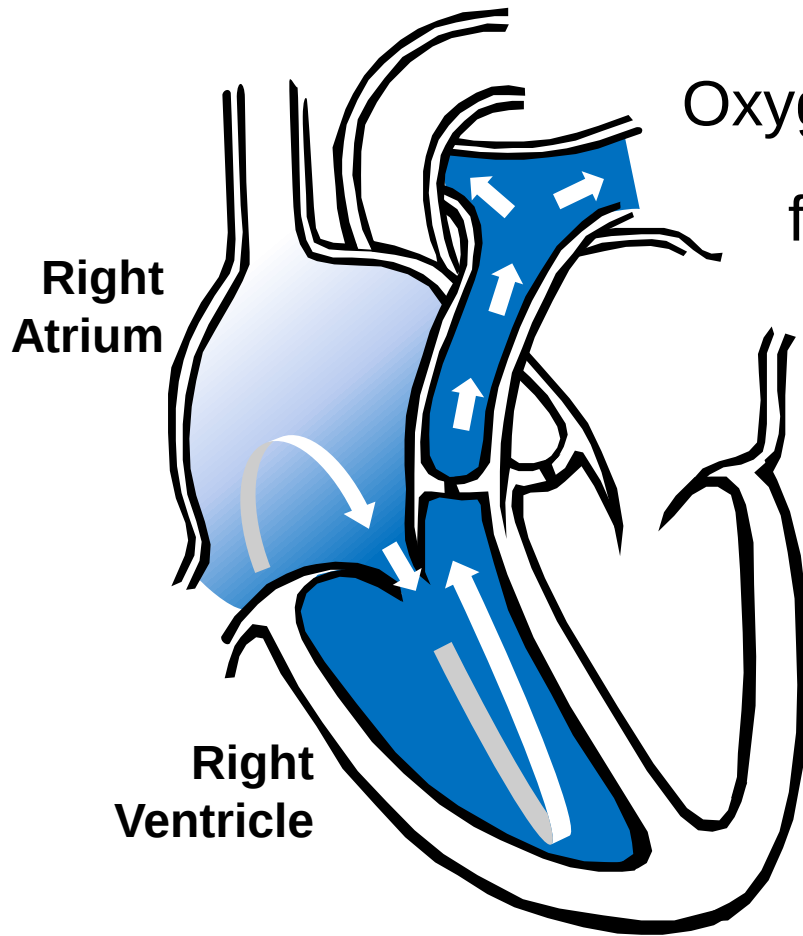
CARDIO-FIT
PROJECT



Oxygen-poor blood, "blue blood," returns to the heart after circulating through your body and is collected in the right atrium.

Exercise:
5 squat jumps

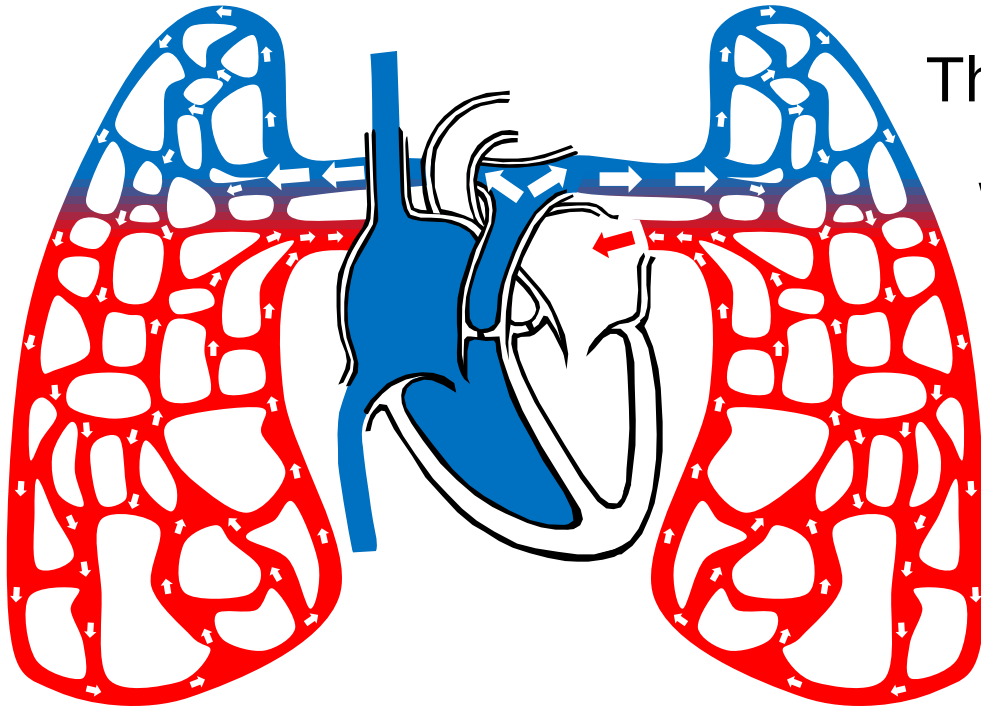




Oxygen-poor blood is transferred from the right atrium to the right ventricle, then pumped to the lungs through the pulmonary arteries.

Exercise:
10 push ups





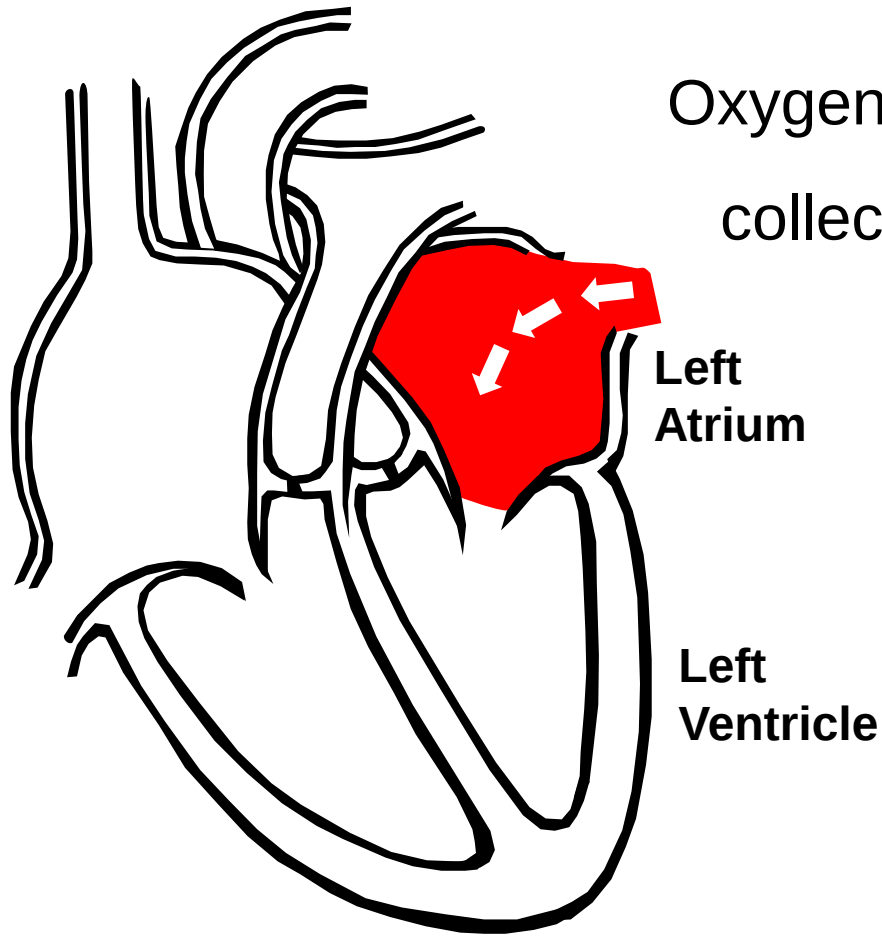
The lungs refresh the blood with a new supply of oxygen, making it turn red.

Exercise:
6 inches for
15 count



PARTNERING FOR YOUTH

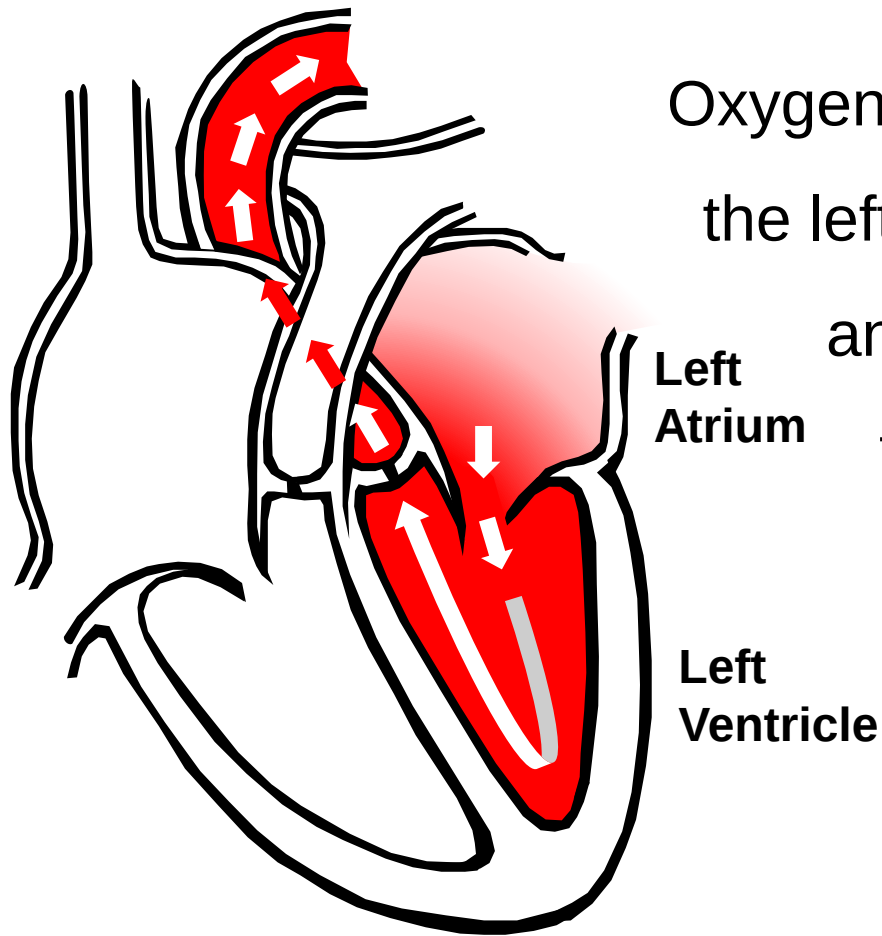
CARDIO-FIT
PROJECT



Oxygen-rich blood, "red blood," is collected in the left side of the heart, in the left atrium.

Exercise:
10 arm circles

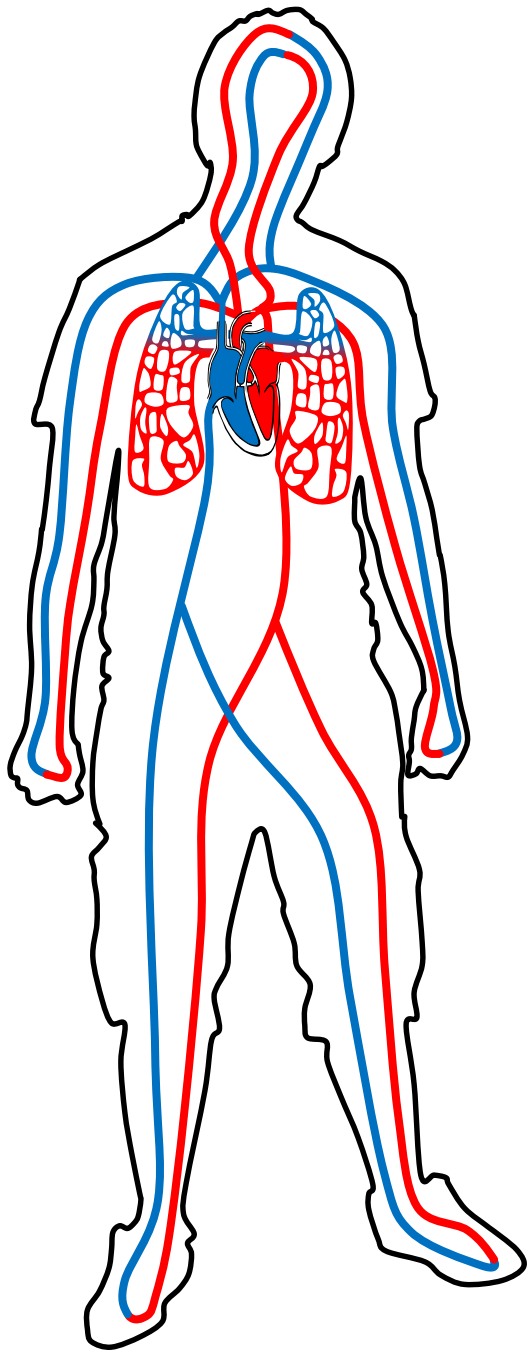




Oxygen-rich blood is transferred from the left atrium to the left ventricle, and is pumped through the aorta for the body to supply tissues with oxygen.

Exercise:
10 lunges





Do you feel your heart working?

Lub Dub, Lub Dub, Lub Dub

Exercise:
5 burpees



PARTNERING FOR YOUTH

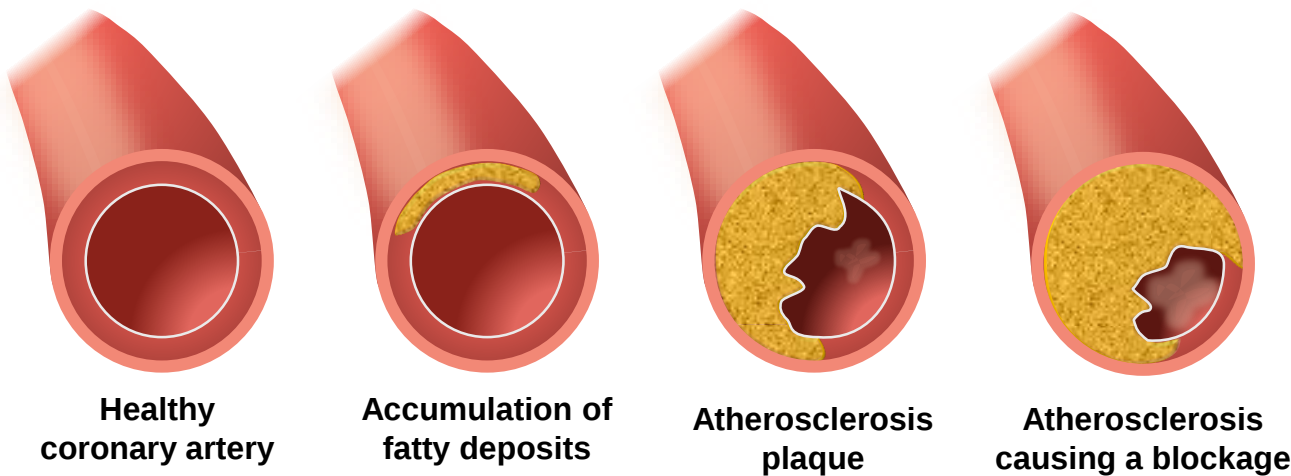
CARDIO-FIT
PROJECT



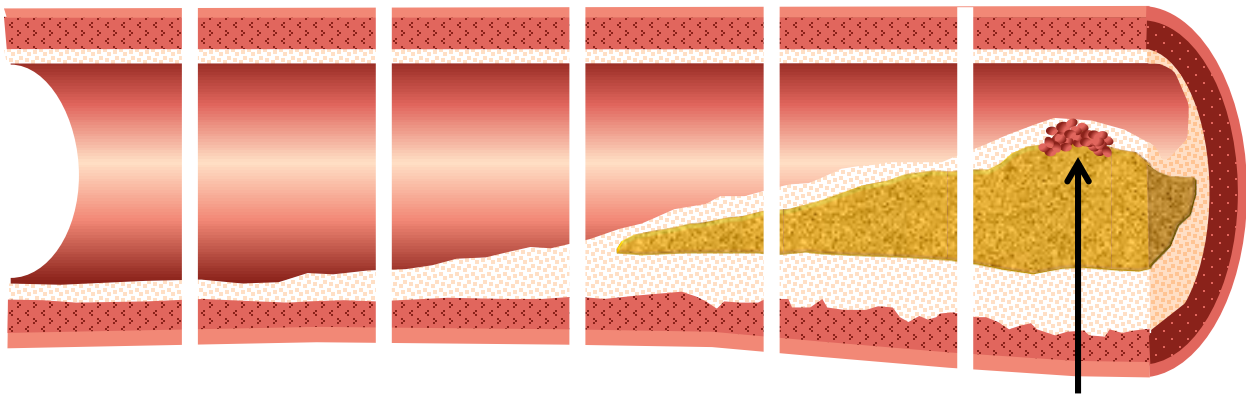
ATHEROSCLEROSIS

(ath-uh-roh-skluh-roh-sis)

Atherosclerosis is the build up of fatty deposits on the inside of blood vessels.
In Greek, “athere” means gruel (sort of like oatmeal), and “skleros” means hard.
Atherosclerosis is often referred to as hardening of the arteries.



Progressive stages of Atherosclerosis



Stroke or Heart Attack



The growth of cholesterol plaques slowly blocks blood flow in the arteries. Worse, a cholesterol plaque can suddenly rupture. The sudden blood clot that forms over the rupture then causes a heart attack or stroke. With proper actions, plaque build-up can be stopped and partially reversed.

The Partnering for Youth After School Program has five goals: build a safe & positive after school environment; strengthen attachment to school & community; improve academic success; enhance physical fitness & personal well being; and heighten family investment through involvement. To address fitness & personal well being, activities are offered to increase our children’s physical activity and heart health knowledge in a fun and rewarding way. Partnering for Youth is excited to offer these activities and hope the children become heart health ambassadors distributing and exhibiting healthy choices throughout their lives. The Cardio-Fit Project was developed by Partnering for Youth with funding provided by the **AstraZeneca HealthCare Foundation Connections for Cardiovascular HealthSM** administered through Chesapeake Charities, a charitable community foundation.

16 OUNCE

**soft
drink**



 **13 minutes**

138 calories



STANDARD

candy bar

 **22 minutes**

229 calories

¼ OF A

pizza



 **43 minutes**

449 calories



SMALL BAG OF

chips

 **16 minutes**

171 calories

BLUEBERRY

muffin



 **25 minutes**

265 calories

Answer Key - do not cut

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**soft
drink**



 **13 minutes**

138 calories



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 **22 minutes**

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¼ OF A

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 **43 minutes**

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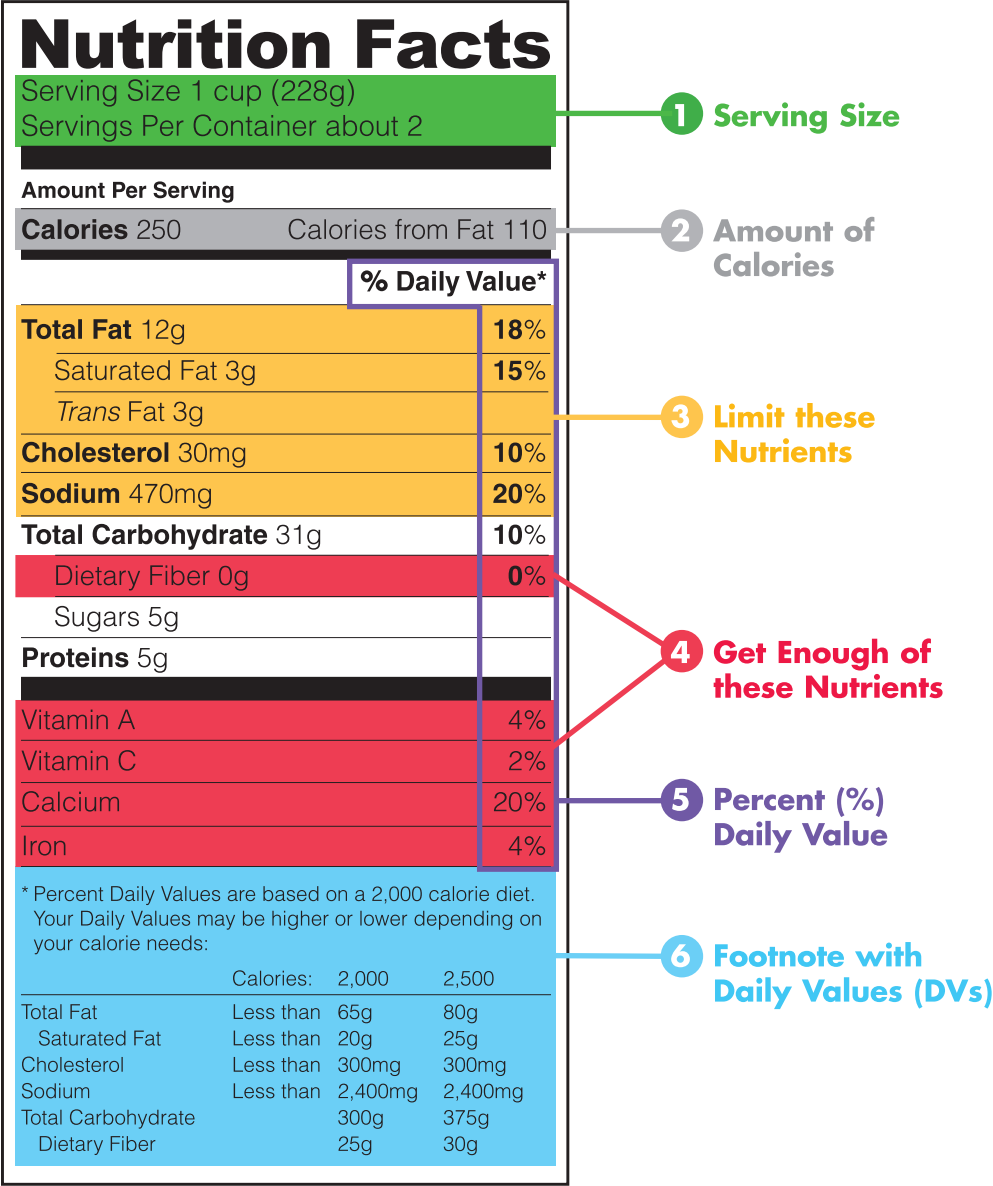
BLUEBERRY

muffin



 **25 minutes**

265 calories



For educational purposes only. This label does not meet the labeling requirements described in 21 CFR 101.9.

PFY Cardio-Fit Project – Pre/Post Knowledge Quiz (1st and 2nd Grade)

Name: _____ Grade: ____ Date: _____

Circle the 😊 saying you agree or ☹️ saying you don't agree with the sentence.

1. Heart Disease is the number 1 cause of death in the United States.

😊 Yes

☹️ No

2. When you do aerobic exercise it is done non-stop for a long period of time.

😊 Yes

☹️ No

3. Aerobic exercise is best for your heart. Jogging is an example of aerobic exercise.

😊 Yes

☹️ No

4. The 2 best places for measuring your pulse is your foot and your hand.

😊 Yes

☹️ No

5. Sweating is a good way to measure how hard you are exercising.

😊 Yes

☹️ No

6. The heart is an organ made of muscle. There are 2 chambers or rooms in our heart.

😊 Yes

☹️ No

7. Heart disease is serious but it only happens when you are an adult.

😊 Yes

☹️ No

8. Life's Simple 7™ says to be active. You should be physically active 60 minutes a day.

😊 Yes

☹️ No

9. Smoking cigarettes can hurt your heart.

😊 Yes

☹️ No

10. When you look at a food label, the most important part is the serving size.

😊 Yes

☹️ No

PFY Cardio-Fit Project – Answer Key – Pre/Post Knowledge Quiz (1st and 2nd Grade)

Name: _____ Grade: ____ Date: _____

Circle the 😊 saying you agree or ☹️ saying you don't agree with the sentence.

1. Heart Disease is the number 1 cause of death in the United States.

😊 **Yes**

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😊 **Yes**

☹️ No

4. The 2 best places for measuring your pulse is your foot and your hand.

😊 Yes

☹️ **No**

5. Sweating is a good way to measure how hard you are exercising.

😊 **Yes**

☹️ No

6. The heart is an organ made of muscle. There are only 2 chambers (rooms) in our heart.

😊 Yes

☹️ **No**

7. Heart disease is serious but it only happens when you are an adult.

😊 Yes

☹️ **No**

8. Life's Simple 7™ says to be active. You should be physically active 60 minutes a day.

😊 **Yes**

☹️ No

9. Smoking cigarettes can hurt your heart.

😊 **Yes**

☹️ No

10. When you look at a food label, the most important part is the serving size.

😊 **Yes**

☹️ No

Cardio-Fit Project – Pre/Post Knowledge Quiz (3rd to 5th Grade)

Name: _____ Grade: ____ Date: _____

Circle the correct answers.

1. What is the number 1 cause of death in the United States?
A. Lung Disease B. Cancer C. Heart Disease
2. What words best describe aerobic exercise?
A. Exercise lasting a long time B. Short bursts of exercise C. Exercise without moving
3. Aerobic exercise is best for your heart. Which is not an example of aerobic exercise?
A. Jogging B. Playing baseball C. Riding a bike
4. Where are the 2 best locations for you to measure your pulse?
A. Wrist & Cheek B. Cheek & Neck C. Neck & Wrist
5. The heart is an organ made of muscle. How many chambers or rooms does it have?
A. 2 B. 4 C. 6
6. Heart disease is serious but it only happens when you are an adult.
A. True B. False
7. In the FITT Principle, exercise intensity is the hardest to measure. What is an easy way to tell you are exercising at a high rate?
A. You are running B. You are sweating C. You are walking
8. Life's Simple 7TM helps you understand how to make good choices for your heart. When you think about "Be Active," how many minutes of physical activity should a child plan to get each day?
A. 30 minutes B. 60 minutes C. 90 minutes
9. Life's Simple 7TM says to "Live a Tobacco Free Life." Smoking cigarettes harms which organs in your body?
A. Only the heart B. Only the lungs C. Nearly every organ
10. What is the most important information on a food label?
A. Serving size B. Ingredients C. Calories

Thank you for participating in the Cardio-Fit Project!

Cardio-Fit Project – Answer Key - Pre/Post Knowledge Quiz (3rd to 5th Grade)

Name: _____ Grade: ____ Date: _____

Circle the correct answers.

1. What is the number 1 cause of death in the United States?

- A. Lung Disease B. Cancer **C. Heart Disease**

2. What words best describe aerobic exercise?

- A. Exercise lasting a long time** B. Short bursts of exercise C. Exercise without moving

3. Aerobic exercise is best for your heart. Which is **not** an example of aerobic exercise?

- A. Jogging **B. Playing baseball** C. Riding a bike

4. Where are the 2 best locations for you to measure your pulse?

- A. Wrist & Cheek B. Cheek & Neck **C. Neck & Wrist**

5. The heart is an organ made of muscle. How many chambers or rooms does it have?

- A. 2 **B. 4** C. 6

6. Heart disease is serious but it only happens when you are an adult.

- A. True **B. False**

11. In the FITT Principle, exercise intensity is the hardest to measure. What is an easy way to tell you are exercising at a high rate?

- A. You are running **B. You are sweating** C. You are walking

12. Life's Simple 7TM helps you understand how to make good choices for your heart. When you think about "Be Active," how many minutes of physical activity should a child plan to get each day?

- A. 30 minutes **B. 60 minutes** C. 90 minutes

13. Life's Simple 7TM says to "Live a Tobacco Free Life." Smoking cigarettes harms which organs in your body?

- A. Only the heart B. Only the lungs **C. Nearly every organ**

14. What is the most important information on a food label?

- A. Serving size** B. Ingredients C. Calories

Thank you for participating in the Cardio-Fit Project!

Cardio-Fit Project – Pre/Post Knowledge Quiz (6th to 8th Grade)

Name: _____ Date: _____

Circle the correct answers.

1. What is the number 1 cause of death in the United States?

- A. Lung Disease B. Cancer C. Heart Disease D. Stroke

2. What words best describe aerobic exercise?

- A. Continuous exercise B. Short bursts of exercise
C. Weight exercises D. None of these answers

3. Aerobic exercise is best for heart health. Which is not an example of aerobic exercise?

- A. Jogging B. Swimming laps C. Playing baseball D. Riding a bike

4. When measuring your pulse using your carotid artery, you place your fingers on your _____.

- A. Wrist B. Cheek C. Neck D. Elbow

5. The heart is an organ made of muscle. How many chambers or rooms does it have?

- A. 2 B. 4 C. 6 D. 8

6. The FITT Principle guides you to improve or maintain your fitness level. What does the “I” in “FITT” stand for?

- A. Into B. Information C. Improvement D. Intensity

7. Heart disease is a serious heart condition that keeps the heart or blood vessels from working properly. Heart disease starts when you are an adult.

- A. True B. False

8. Which is not a controllable health risk factor?

- A. Inactivity B. Stress & Tension C. Heredity D. Obesity

9. Life's Simple 7TM helps you understand how to make heart-healthy choices. When thinking about “Be Active,” how many minutes of physical activity should you plan to get each day?

- A. 30 minutes B. 60 minutes C. 90 minutes D. 120 minutes

10. When you think about “Eat a Heart-Healthy Diet,” what can you do to be balanced?

- A. Match calories in to calories out B. Eat fruits and vegetables
C. Stand on 1 foot D. Eat low fiber foods

Appendix J

11. What is the unit called for measuring energy in your body?

- A. Pounds B. Voltage C. Meters D. Calorie

12. When you think about “Keep a Healthy Weight,” what are the factors that determine a healthy body weight?

- A. Age B. Height C. Weight D. Age, height, and weight

13. According to statistics, about how many kids and teens are overweight or obese?

- A. 1 in 10 (10%) B. 1 in 5 (20%) C. 1 in 3 (33%) D. 1 in 2 (50%)

14. What is the most important information on a food label?

- A. Serving size B. Total Fat C. Cholesterol D. Sodium

15. When you think about “Live a Tobacco-Free Life,” what is the addictive chemical found in tobacco products?

- A. Ammonia B. Tar C. Nicotine D. Smoke

16. Using tobacco products harms which organs in your body?

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17. What causes blood pressure?

- A. The lungs pushing blood back to the heart B. The heart pushing blood to the chambers
C. Pumped blood putting pressure on the vessel walls D. None of the answers

18. All cholesterol is bad.

- A. True B. False

19. Bad cholesterol mixed with other substance in your blood can form a thick hard deposit that can narrow the arteries and put you at risk for heart disease and stroke. What is the name for this thick hard deposit?

- A. Plaque B. Clot C. Tar D. Jello

20. Diabetes is a medical condition when too much _____ builds up in your blood which can damage your heart as well as other parts of your body.

- A. Plaque B. Sugar C. Oxygen D. Cholesterol

Thank you for participating in the Cardio-Fit Project!

Cardio-Fit Project – Answer Key – Pre/Post Knowledge Quiz (6th to 8th Grade)

Name: _____ Date: _____

Circle the correct answers.

1. What is the number 1 cause of death in the United States?

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Thank you for participating in the Cardio-Fit Project!

Partnering for Youth – Cardio-Fit Project

PFY Partnerships

AstraZeneca HealthCare Foundation *Connections for Cardiovascular Health*SM

Providing Cardio-Fit Project development and operational funding, the AstraZeneca HealthCare Foundation is a Delaware not-for-profit corporation and a 501(c)(3) entity organized for charitable purposes, including to promote public awareness of healthcare issues, to promote public education of medical knowledge, and to support or contribute to charitable and qualified exempt organizations consistent with its charitable purpose.

Board of Education of Queen Anne’s County

Providing facilities, personnel management, financial management, support services and committee membership, the Board of Education is the oldest partner and largest in-kind supporter of the Partnering for Youth After School Program.

Chesapeake Charities

Providing 501(c)(3) charitable fund, fund development, sustainability support, evaluation, grant writing and committee membership, Chesapeake Charities provides innovative leadership and quality services that encourage charitable giving, build community resources, and enable donors to achieve their charitable purposes, making lasting investments in the Chesapeake Bay region.

Clifton Foundation

Providing operational funding to support organizations that promote leadership and personal growth based on the values of Respect, Responsibility, Caring, Citizenship, Trustworthiness and Fairness.

Queen Anne’s County Government

Providing operational funding to locally support the county’s largest youth program.

United Way of Queen Anne’s County

Providing operational funding to improve lives by mobilizing the caring power of our community.

21st Century Community Learning Center Program

Providing operational funding at three Title I schools, the federal program helps students meet state and local student standards in core academic subjects, such as reading and math; offers students a broad array of enrichment activities that can complement their regular academic programs; and offers educational services to the families of participating children. Funds are administered through the Maryland State Department of Education.