



Mini Medical School Lesson

The American Osteopathic Association's (AOA) Mini Medical School Lesson is designed to help educators teach children about health and fitness. This lesson is aimed towards elementary school children in grades 1st through 4th and is intended to be completed before or while children play the online version of the Mini Medical School, where they will be tested on their knowledge.

Objectives of the Mini Medical School:

1. Alleviate children's fears of doctors and medical practices.
2. Create a better understanding of medical equipment.
3. Educate children on the importance of preventive medicine and a healthy lifestyle.
4. Educate children, faculty and parents on osteopathic physicians (DOs) and osteopathic medicine.

This lesson can also be taught by DOs or osteopathic medical students, who have access to medical equipment to show the children. To find a DO in your area, visit www.osteopathic.org. You can search by zip code or specialty when searching for a DO. On the website, you will also find a list of [osteopathic medical schools](#).

The Mini Medical School Lesson is organized into six lessons to coincide with the games of the online version.

LESSON 1 BONES

TO SAY: Has anyone seen bones or a skeleton in a museum before? Those bones are dry and crumbly, but the bones in your body are different. They are alive; growing, changing, and repairing themselves when they break. When you were a baby, you had tiny hands and tiny feet, tiny everything! As you've grown older, the bones have grown too and become bigger. A baby has 300 bones, but as the baby grows, the bones grow together to form the 206 bones that adults have. By the time you are 25, the process is complete and your bones stop growing. They are as big as they'll ever be. All of these bones make up a skeleton that is both strong and very light. The bones give our body its shape and help us move around. They also protect our organs.

- Do you know what bones protect our brain? - Our **skull**.
- And what about our heart and lungs? - Our **ribs**.
- The longest bone in the body is in your leg. It goes from your pelvis to your knee and it's called the **femur** (say: **fee**-mur).
- There are two bones in the lower leg, the **tibia** (say: **tih**-bee-uh) bone which is in front, and the **fibula** (say: **fi**h-byuh-luh) bone which is in back. These two bones and the femur are all wider at their ends than in the middle, which makes them strong.

LESSON 2 MEDICAL INSTRUMENTS

Show pictures of medical equipment or display real medical equipment, if possible.

TO SAY: Who's been to the doctor's office before?
It's really important to go to the doctor at least once a year, even when you're not sick. Doctors use different tools to make sure that everything in your body is working just like it should.
Does anyone want to be a doctor?

TO DO: Show the stethoscope image

TO SAY: Does anyone know what doctors use this for?

Doctors use **stethoscopes** to listen to your heartbeat. Your heart works really hard to pump blood throughout your entire body. Did you know that it takes about one minute to circulate blood around the body and back to the heart?

TO DO: Show the ophthalmoscope image.

TO SAY: Does anyone know what body part doctors check with this?

Doctors use **ophthalmoscopes** to look at your eyes. They check to make sure they look bright and clear and that there are no cloudy spots.

TO DO: Show the reflex instrument image.

TO SAY: Does anyone know what body part doctors check with this?

Doctors use this **reflex instrument** to make sure our bodies are reacting like they should. What happens when a doctor taps this on your knee? You kick! That means that your reflexes are working just fine.

TO DO: Show otoscope image.

TO SAY: Does anyone know what a doctor uses this for?

Doctors use **otoscopes** to check inside your ears. One thing they are looking for are signs of an ear infection. Has anyone ever had one of those? A healthy ear looks pink and is clean.

LESSON 3 HYGIENE, GERMS

TO SAY: What do you do before you eat dinner or after you go to the bathroom? **Wash your hands.**
Do you know why?

Even though we can't see them, there are little, invisible living organisms on everything around us. Sometimes, these can be harmful and cause us to get sick. Those are called germs. The more we touch, the more germs may be on our hands. That's why it's important to wash our hands throughout the day and especially before we eat, when our hands put food in our mouths.

You know you should wash your hands after you use the bathroom. When else should you wash your hands? After you... [Let the children come up with the answers]

- Use the phone
- Play with animals
- Sneeze
- Play with toys
- Play outside
- Come home
- Use the computer

Aside from washing hands, there are some other ways to stop germs from spreading from

person to person.

(Ask them if they know of any.)

1. **Use a tissue for a runny nose**
2. **Cover your mouth when you cough and sneeze**

Another way germs can get into the body easily is **through a cut or scrape**. That's why it's important to wash your cuts and remove any germs that are there and then cover them with a bandage.

LESSON 4 | ORGANS

TO SAY: Imagine you could see what is under your skin and bones. Your inside parts are called **ORGANS**. Every organ in your body has an important job to do and is controlled by one very special organ. Do you know which one? **YOUR BRAIN!** When the body grows, its organs remain in the same position. But do you know where your organs are in your body? The organs we are going to learn about today are in the torso of the body.

TO DO: As you say the name of each organ, show where the organ is on your own body and ask the children to do the same.

TO SAY: Repeat each organ's name after I say it. This is the heart. Say **heart**. Put your hand on your heart. Can you feel your heart beating? When your heart pumps, it pushes blood to all parts of the body. It works all the time without stopping.

These are the lungs. Say **lungs**. Put your hands on your lungs. Take a deep breath and feel your lungs make your chest get bigger with air. Did you know that your lungs can hold about as much air as a basketball? The best way to take care of our lungs is to breathe fresh air.

This is the liver. Say **liver**. Put your hand on your liver. The liver has a lot of jobs. When you are sick it helps you get well again. It stores the vitamins from the food you eat until your body needs them. When you need extra energy for running, or playing very hard, your liver helps you.

This is the stomach. Say **stomach**. Put your hand on your stomach. Your stomach is like a stretchy bag inside of you that holds the food you eat. When you eat food, it goes down your throat to your stomach, where your stomach starts to break down the food by adding liquids to it. That process is called digestion.

After the stomach, food enters the small intestine. Say **small intestine**. Put your hand on your small intestine. After your stomach mashes your food, it goes to the small intestine where it moves through 20 feet of tube. This tube is squished into a small space. If it were stretched out, it would be as tall as a big tree!

Then the waste from the food goes to the large intestine. Say **large intestine**. Put your hand on your large intestine. Waste is the part of the food that your body doesn't need. When you go to the bathroom, you get rid of the waste from your food.

These are the kidneys. Say **kidneys**. They are in the middle of your back and you have two of them. Put your hand on the kidneys. Now make two fists. Each of your kidneys is about as big as your fist. The kidneys have a lot of jobs, but the most important one is cleaning your blood. One of the amazing things about the kidneys is that if one does not work; the other one will do the job. You can help the kidneys do their job by drinking lots of water.

Show USDA food plate graphic

TO SAY: There's a lot of stuff going on in your body, isn't there? You've got organs that are all working to circulate your blood and digest your food, and bones that are growing and becoming stronger. We're kind of like a machine, like a car, and do you know what we need to fuel our car? It's FOOD!

Food is our fuel. Food provides us with energy and nutrients that keep our bodies healthy. Another important part of our diet is water. Every organ in our body needs water to function. That's why it's so important to drink water throughout the day, every day. Without food and especially water, we would not live very long.

Since we have to eat food to stay alive and keep our bodies working, it's really important to understand what the BEST food is. The better the food, the better our bodies work.

Food Plate

TO SAY: This is the Food Plate. It tells us which foods to eat every day and how much of these foods to eat. As you can see, fruit and vegetables make up half of the plate. When you sit down for a meal, you always want to think about fruit and vegetables making up half of that meal. Who can name some fruits?



TO DO: Point to the food plate and go through each section of the plate, asking children to name food from each food group as you go and listing other foods they did not mention.

TO SAY: Do you notice any food not on the plate? (Candy, sugar, pop.) These foods are ok to have every once in awhile because they taste good and we want cake for our birthdays, right? But, these foods aren't good for our bodies if we eat too much. If we eat too much of these and not enough of the good kind of food, especially the fruits and vegetables, we'll end up gaining weight and becoming unhealthy. One of the best things you can do to maintain a healthy weight is to learn which foods are the best for you and try to eat those every day instead of the unhealthy foods.

TO SAY: Who knows what exercise is? It's really important to get exercise every day so that you build a strong body that can do everything you want it to do. What are some activities that you do in gym class or at home that you think are exercise? (Let the children name games, activities)

That's right. When you do these exercises, what happens to your body? Do you sweat? Does your breathing change? And what does your heart do? – beats faster.

Everyone stand up. I want you all to make a fist with your right hand. The size of your fist is about the size of your actual heart. Now, take your fist and place it a bit to the left of the middle of your chest. That's just about where your heart is. You can also feel your heartbeat in your neck, by placing two fingers on the middle of the side of your neck, like this.

Can you feel it beating? What it's doing is sending blood around your body so that you get the oxygen and nutrients you need. When you exercise, your heart gets better at doing this important job. So, the more you exercise, the better your heart will work.