

# Science Lesson – Heart

What is your heart?      *{major muscle of your body}*

How big is it?            *{size of your fist}*

What does it do?         *{pumps blood through body, never stops }*  
                                 *{Blood picks up oxygen from the lungs – arteries -and*  
                                 *carries it throughout body back - veins - to get more oxygen}*

**Show heart card, pictures, model, and inflatable**

**Show the felt body - where is the heart?**

Sing...

**My heart's beating, My heart's beating,  
Thump, thump, thump! Thump, thump, thump!  
It's slower when I'm sitting. It's slower when I'm sitting.  
Sit and rest, Sit and rest!**  
*[Everybody sits and rests.]*

**My heart's beating, My heart's beating,  
Thump, thump, thump! Thump, thump, thump!  
It's faster when I'm moving. It's faster when I'm moving.  
Hop and jump, Hop and jump!**  
*[Everybody hops and jumps.]*

Show how we can hear other's heart beat through the paper tube. Have kids pair up and listen to each other's heart.

**Show Stethoscope** - What does this do?

Allow kids to take turns listening to hearts

Introduce "Iris", the **girl puzzle**. & "Ignacio", the **boy puzzle**. Has anyone seen these puzzles before? They are special in that they show us what our body looks like, outside and inside.

Have kids take turns peeling apart

Sing...

**My heart is a muscle that's pumpin' blood,  
Pumpin' blood, pumpin' blood.  
My heart is a muscle that's pumpin' blood  
To make my body healthy.**

**My heart pumps blood through blood vessels,  
Blood vessels, blood vessels,  
My heart pumps blood through blood vessels  
All through my body.**

**My heart is a muscle that's pumpin blood,  
Pumpin' blood, pumpin' blood,  
My heart is a muscle that's pumpin blood  
To make my body healthy!**

### **Interesting Heart Facts**

Your Heart beats ~130,000 times per day or 47 million times a year

Your body holds about 3 Liters of blood (1 gallon)

Too much salt can make your heart work harder than it needs to

# Science Lesson – Heart, Lungs, Brain

What is your heart?      *{major muscle of your body}*

How big is it?            *{size of your fist}*

What does it do?         *{pumps blood through body, never stops }*  
                                 *{Blood picks up oxygen from the lungs – arteries -and*  
                                 *carries it throughout body back - veins - to get more oxygen}*

**Show heart card, pictures, model**

**Show the felt body - where is the heart?**

Sing...

**My heart is a muscle that's pumpin' blood,  
Pumpin' blood, pumpin' blood.**

**My heart is a muscle that's pumpin' blood  
To make my body healthy.**

**My heart pumps blood through blood vessels,  
Blood vessels, blood vessels,**

**My heart pumps blood through blood vessels  
All through my body.**

**My heart is a muscle that's pumpin blood,  
Pumpin' blood, pumpin' blood,**

**My heart is a muscle that's pumpin blood  
To make my body healthy!**

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What are your lungs?     *{Like 2 big balloons in our body}*

What do they do?         *{They take in and out air which is used to nourish our bodies}*

### Show lung card

A muscle under our lungs (diaphragm) contracts and allows air to pull into the lungs, it then relaxes and the air pushes out of the lungs

**Have children put hand under lungs and feel diaphragm contract and relax**

**Show the felt body - where are the lungs?**

Sing...

*(tune of row, row, row your boat)*

**Breathe, Breathe, In and out**

**Taking in clean air**

**Through the nose to fill the lung**

**And out the mouth,**

**Exhale!**

=====

What is your brain?     *{nerve center of your body}*

How big is it?         *{size of 2 clinched fists held together}*

What does it do?       *{controls everything in your body }*

“Everyone stand up. “ - Your brain told your body to stand up.

“touch your nose” ...

**Show the brain pictures, model, and inflatable  
Show the felt body - where is the brain?**

Your brain controls your heart, lungs along with all the other parts in your body.  
Your brain tells your body to SEE, SMELL, HEAR, TASTE, and TOUCH  
Your brain is used to talk, remember, dream, ... everything is controlled with your brain!

Sing...

*(tune of Twinkle, Twinkle Little Star)*

**Twinkle, Twinkle brain of mine,  
How I think you're really fine.**

**Up in my head so high,  
Like a diamond you do shine.**

**Twinkle, Twinkle brain of mine,  
How I think you're really fine.**

=====

Have kids cut, color, and glue body parts

Can also take apart and put together "Iris" & "Ignacio"

# Science Lesson – Skeleton

## Bone

### Show a bone & bone card

What is a bone? (hard, living, protein, forms the skeleton, ...)

Allow kids to observe bones with magnifying glass

### Show the chicken bones, let children feel their stiffness and hardness

Have you heard of “calcium”? (Calcium is a mineral which makes our bones hard. Also makes our teeth hard)

Vinegar removes calcium which we will observe over the next few days. (put bone in vinegar jar)

## Skeleton

### Show skeleton card and Large skeleton

What is our skeleton? (Bones)

### Show “Iris” and peel her down to her bones

What does our skeleton do for us?

(Help us stand, help us move, protect our organs - heart, lungs, brain, ...)

### Show skeleton picture and X-rays

### Show skeletal sticker project

Break kids into groups

work on skeleton stickers in pairs

view x-rays and build the body in small team

build skeletal floor puzzle in small team

**Play anatomy “Simon says”** (heart, lungs, brain, stomach, tibia, femur, rib, skull, ...)

## **Hokey Pokey**

You put left leg in

You take left leg out

You put left leg in and shake it all about

You do the hokey pokey and turn yourself around

That's what its all about!

You put your finger bone in

...

You put your skull in

...

You put your arm in

...

# Science Lesson – Body Review

## Review the body felt

Brain, heart, lungs.

Add intestines, stomach to discussion

**Play anatomy “Simon says”** (heart, lungs, brain, stomach, tibia, femur, rib, skull, flanges’, ...)

## Talk about the chicken bone

What happened after it sat in vinegar a few days?

The vinegar removed calcium from the bone.

What do you think calcium does for our bones?

Show the new chicken bone. Allow kids to examine it.

Show the coke can. How much sugar do you think is in this coke? (10 tsp)

Lots of sugar is not good for our bodies. It is known to feed cancer.

## Play Five Senses BINGO

Sing...

**My heart's beating, My heart's beating,  
Thump, thump, thump! Thump, thump, thump!  
It's slower when I'm sitting. It's slower when I'm sitting.  
Sit and rest, Sit and rest!**  
*[Everybody sits and rests.]*

**My heart's beating, My heart's beating,  
Thump, thump, thump! Thump, thump, thump!  
It's faster when I'm moving. It's faster when I'm moving.  
Hop and jump, Hop and jump!**  
*[Everybody hops and jumps.]*

Sing...

*(tune of row, row, row your boat)*

**Breathe, Breathe, In and out  
Taking in clean air  
Through the nose to fill the lung  
And out the mouth,  
Exhale!**

Sing...

*(tune of Twinkle, Twinkle Little Star)*

**Twinkle, Twinkle brain of mine,  
How I think you're really fine.**

**Up in my head so high,  
Like a diamond you do shine.**

**Twinkle, Twinkle brain of mine,  
How I think you're really fine.**

## **Hokey Pokey**

You put left leg in  
You take left leg out  
You put left leg in and shake it all about  
You do the hokey pokey and turn yourself around  
That's what its all about!

(finger, skull, arm, stomach, ...)

## Germs Lesson

Today we will talk about germs. To get started, let's sing a song about germs.

Sing ...

### **Germs Will Make you Sick** (*Tune: Hokey-Pokey*)

Germs are really mean,

But they can't be seen.

They will make you sick,

Then you will feel "ick'.

Use some soap and water,

Scrub your hands to get them clean-

Clean's what it's all about!

Germs are tiny, itty bitty living organisms. So tiny we can't see them. They can invade our bodies and make them sick

### **Show "germ " card**

2 types of germs that can make us sick are:

Virus – **show card**

Bacteria – **show card**

Germs come in many different shapes and colors

**Show germ shapes card** – pass around

**Show germ mini "stuffedies"** – pass around

Sneeze into arm. “Good thing I caught that sneeze” Tiny germs can be in a sneeze – don’t want to spread them.

“Where else do we find germs?” (*Hands, mouth, table, toilet...*)

### **Show the water spray bottle.**

“This water is like what comes out of you when you sneeze or cough”

Spray the water over the kids. “Raise your hand if you felt the water droplets.”

Germs can be in sneezes & coughs & spread from one person to another like the water droplets.

Blow baby powder off hand

“See how long the powder hangs in the air?”

“Germs can travel through air like the powder.”

Put powder on student’s hand. Ask student to touch a table or shake another’s hand. Talk about how germs spread from one to another.

Germs are very, very small.

“How can we pass germs to our friends?” (*Touch, sneeze/cough, touch something a friend touched*)

“What happens when germs get in our body?”

“How can we keep our germs off our hands?” “Out of the air?”

Sing ...

**Wash Your Hands** (*Tune: Row, row, row your boat*)

Wash, wash, wash your hands

Play this handy game

Rub and scrub and scrub and rub

And germs go down the drain.

Dry, dry, dry your hands

Dry them both today

Dry them with this nifty towel

And wipe any water away

**Show Petri dish** - They have “agar” which is food for the germs.

**Show cotton swabs**

Each student will get one cotton swab to collect germs.

“Where can we collect our germs?”

(mouth, door knob, toilet seat, table, ...)

Put germs into each of the 3 petri dishes

Then put hand sanitizer in one, soap in one, and nothing in one.

“Now, we will need to leave the dishes alone for several days and see what happens.”