



## Your Sleeping Brain is Hard at Work (🧠 A Physical Health Story) (1<sup>st</sup> Grade – 6-7 yrs)

Sleep is important for the survival of all animals. This story will describe what sleep is, why animals do it and what your brain is doing while you are sleeping.

- 🧠 All animals sleep in different ways.
- 🧠 Your body needs sleep to rest and recover from all the things you do while you are awake. Your brain's job, however, is never done. While your body rests, your brain has time to do other things. (fix things – repairer or repair technician, memory consolidation – storage facilitator, and waste removal – janitor)
- 🧠 There are many reasons why we need to sleep and people of different ages need different amounts of sleep.

### 🧠 SLIDE #1 - INTRODUCTION:

Good Morning (Afternoon)!

My name is \_\_\_\_\_ and I (describe who you are and give your relation to neuroscience – ex. you are a Neuroscientist, you study neuroscience, you have a friend that is a neuroscientist or you have recently been learning a lot about neuroscience).

Neuroscience, that's a really big word! But, a neuroscientist is a person who knows a lot about the brain.

I am here today to talk to you about how you can help to make your brain healthy – feeling good. It is REALLY easy and anyone can do it.

I love to talk about Brain Health because it's SPECTacular!!! SPECTacular means "GREAT". When your brain is SPECTacular, you are a happy and healthy person.

This story is about Physical Health – which is the P in SPECTacular. Physical Health means you are keeping your brain healthy because you are taking care of your body.

Being "physical" means you move your body, you eat – to give your body energy and you sleep – because sleeping does a LOT to take care of your body.

When you take care of your body by moving it and giving it the energy and sleep that you need, that also makes your brain healthy.

So, let's see how you can keep your brain healthy.

### 🧠 SLIDE #2 – YOUR SLEEPING BRAIN IS HARD AT WORK

We know that sleep is important because all animals do it – in some way.

Cats and dogs like to sleep a lot – about 12 hours.

Elephants and giraffes don't sleep for very long - only about 2 hours.

People like to sleep lying down. Bats hang upside down to sleep and horses can sleep standing up.

But, why do animals sleep?

### **SLIDE #3 – AWAKE**

When you are awake, your body and your brain are working extra hard.

You get up in the morning and have to get cleaned up and dressed and then you go to school.

At school, you are thinking and learning.

You are talking, working or playing with other people all day.

You may have chores to do around the house or you may need to help your family.

There is so much that you do while you are awake and your body and your brain – working together – help you to get everything done.

### **SLIDE #4 – SLEEP**

After doing so much work while you are awake, you get tired.

**QUESTION:** And, when you get tired, what do you want to do?

That is right – you want to go to sleep.

But, why do you want to go to sleep? What makes you go to sleep?

### **SLIDE #5 – SLEEP**

We know that your body and your brain need to sleep so you can rest and recover from all the things that you do when you are awake.

But, how does that work?

You probably will not be surprised to learn that just like your brain helps your body when you are awake to do all the things you need to do – like getting dressed, going to school to learn, helping with chores – your BRAIN also helps you when you are asleep.

In fact, while your body is resting – your brain is still hard at work.

### **SLIDE #6 – REPAIR**

What?!?!? What is the brain doing while you are sleeping?

First, your brain puts on a repairer or repair technician hat and then starts to fix all the parts of the body and the brain that got broken – or used too much – when you were awake.

Your brain repairs your body and your brain to get them ready to start working again when you are awake.

And, yes...the brain fixes the body and it also fixes itself.

### **SLIDE #7 – STORAGE**

The next thing that your brain does while you are sleeping, is that it stores all the things that you learned during the day.

It is like one of those storage places – only instead of storing old furniture or boxes of your stuff, it stores your memories.

### **SLIDE #8 – SHORT AND LONG**

Your brain is really cool. It can store (remember) things for you for a short time – or for a very long time.

If you need to store things for a short time, then your brain can do that while you are awake.

If you need to store things for a long time, then your brain can do that for you while you are asleep.

### **SLIDE #9 – SHORT TERM STORAGE**

I want you to look at this next picture. Ok...look at this.

Now, I am going to make the picture go away and I want you to think about the picture.

**QUESTION:** Now, what was in the picture? What color was the duck? Which animal had its head on top?

Ok, you were able to tell me what was in the picture because your brain “stored” it for you. But, you will only be able to remember this for a short time – unless you go to sleep.

### **SLIDE #10 – LONG TERM STORAGE**

Now, I want you to think about the last Halloween costume that you wore.

**QUESTION:** Can you remember what it was? What color was it? What else can you tell me about it?

Now, have you slept at all since you wore the Halloween costume? I would say you have.

You can remember things that happens a while ago because you slept and while you slept your brain busily stored all the information for you as a memory.

Thank you Brain Storage!!!

### **SLIDE #11 – JANITOR**

Now, the next thing that the brain does for you while you are sleeping is something that we just learned about recently.

When you are asleep, your brain puts on a janitor hat. What?!?!?

Yup, your brain is very busy cleaning up all of the garbage that is in your head.

### **SLIDE # 12 – BRAIN CLEANS UP**

What?!?!?! You have garbage in your head????

Ok...I am sorry have to tell you...BUT, you DO!!!!

All day you are busy doing things, walking to school, working at school, helping with chores around the house.

While your brain is busily working to help your body do all of those things – and lots of others – your brain is actually making some garbage.

Think of what happens when you eat a banana....inside of the banana peel there is a yummy banana. You eat the banana because it tastes good and it gives your brain the energy that you need to do all the things that you do. But, after you eat the yummy – good for you banana – you “make” garbage...the banana peel – which you throw away.

Well, while you are busy doing all the things that you do all day – your brain is working and it makes garbage that needs to be cleaned out of your head.

So...at night when you are sleeping, your brain washes away all of the “garbage” out of your head.

### **SLIDE #13 – BRAIN IS BUSY**

So, there are lots of things that your brain needs to do when you are sleeping – it needs to fix things, store memories and clean up messes that were made when you were awake.

Your brain does these things when you are sleeping to get you ready to do more things that next day.

### **SLIDE #14 – SLEEP AMOUNTS**

Now depending on what you do during the time you are awake or even how old you are, different people need different amounts of sleep.

Let's think about this...

**QUESTION:** Who do you think sleeps more – you or a baby?

For those of you that have been around babies, you know that they sleep a lot. Did you ever wonder why?

Let's think about this...

**QUESTION:** Who do you think is bigger – you or a baby?

That is right – you are bigger. Babies sleep a lot because they need to grow. Your brain helps you to grow when you are sleeping.

### **SLIDE #15 – BRAIN KEEPS BUSY**

I have another question...

**QUESTION:** What makes you more tired – running around or sitting around and watching tv?

Well, if you are like me then running around makes you more tired.

People who do more things and use their bodies and their brains tend to need more sleep.

Remember, when you do more things – your brain needs to work harder when you sleep to help you to repair your body and your brain, store memories about what you did and clean up after all the messes that you made.

### **SLIDE #16 – SLEEP HELPS YOUR BRAIN**

So, when someone tells you that it is time to go to bed – that person is actually helping you and your brain stay healthy.

That person knows that in order for you to be ready to do all the things that you need to do when you are awake, you first need to give your brain the time that it needs to fix your body and your brain, store memories of all the things that you have done and clean up the mess that gets made when you do all the things that you do.

So instead of whining and saying you do not want to go to bed, you should thank the person for helping you to help your brain stay healthy.

Getting enough sleep gives your brain the time that it needs to get you ready for all the fun things that you are going to do the next day.

### **SLIDE #18 – CONCLUSION**

Thank you all for letting me talk to you about how your sleeping brain is hard at work and sleep makes your body and your brain healthy.

I have enjoyed spending time with you today talking about the brain. I hope that you have had some fun and learned something about your brain.

REMEMBER, when you are sleeping your brain is hard at work getting you ready for all the things you are going to do the next day. Your brain helps you to fix your body and your brain, it helps you to store memories so you can remember all the things that you did, and it cleans up all the garbage that was made. Helping your brain stay healthy is SPECTacular.

**THANK YOU SO MUCH FOR ALL OF YOUR HELP!!! Brain Health is not just SPECTacular...it is FUN!!!**