

Brain Health: It's SPECtacular

What to do TODAY Grade 1 (Physical Health Story)

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.
- For this story, the story video is 13 minutes and there are lots of discussion questions to do. You will have time to do a modification of the #5 Physical Activity Awake or Asleep. If time permits, at the end of the video you can also discuss some Weird Animal facts and turn it into a guessing time. For both activities, you only need the info provided at the end of this What To Do Today.
- Play the Intro and stop after the title slide. Reiterate the info and then ask some questions.



So, today's story is about Physical Health. When you move your body, eat, and SLEEP that is good for your Physical Health, which makes your body AND your brain healthy.

In today's story, we are going to talk about SLEEP and why animals (which include people) sleep.

Dr. Gorman said that cats & dogs sleep about 12 hours – that's a LOT – and elephants and giraffes only sleep about 2 hours – that is NOT a lot.

So...I have a **question** for you...do 1st graders sleep more or less than cats and dogs? Raise your hand it you think 1st graders sleep MORE than cats and dogs. Raise your hand it you think 1st graders sleep LESS than cats and dogs.

OK...I have another **question** for you...do 1st graders sleep more or less than elephants and giraffes? Raise your hand it you think 1st graders sleep more than elephants and giraffes. Raise your hand it you think 1st graders sleep LESS than elephants and giraffes.

Well, it turns out that 1st graders sleep about 9-12 hours – which means that you DEFINITELY sleep MORE than elephants and giraffes. BUT, it also means that some of you sleep as much as dogs and cats. Who knew?!?

Continue playing the video and stop video when I ask "When you get tired, what do you want to do?".



Ask the students, "When you get tired what do you want to do?"

Discuss the answers. The answer we are looking for is SLEEP.

Continue playing the video and stop at the end.



Then ask, "OK, when we are tired we want to go to sleep – but, WHY do you think you want to go to sleep?"

Discuss with the students – basically the answer revolves around the fact that something about sleeping makes you not tired anymore.

Tell the students it is the same with eating. You eat when you are hungry – you get food that gives your body the energy it needs and then you are no longer hungry. So, we sleep when we are tired to make us not tired anymore.

Continue playing the video and stop at the end.

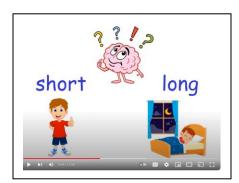


Reiterate that while you sleep, the brain is busy fixing the body and itself.

Say...WAIT A MINUTE – during the day our body and our brain get broken and so when we sleep they need to be fixed!!! That's right. When your body and your brain are working during the day – helping you do all the things that you need to do – billions of tiny cells are breaking down and need to be fixed. Your brain does that – while you sleep. It does all your repairs.

So, let's all say – THANK YOU – to our brains for fixing things while we sleep. (make them say it)

Continue playing the video and stop after the following slide.



Ok...reiterate that while you are sleeping, your brain fixes the parts of your body and your brain that worked really hard during the day.

Plus, while you are sleeping your brain stores things that you learned during the day so that you will remember it.

During the day, your brain stores things that you learn for a short time. But, if you want to store things and remember them for a LONG time, then you need to sleep so your brain can store them. Let's see what we mean...

Continue the video and stop the slide at various points when questions are asked.



At the end, reiterate that you were able to remember what you saw because your brain DOES store things during the day – but, only for a short time.

Continue playing the video and stop after I describe all the costumes in the picture.



Say, ok...what was your last Halloween costume? (Let them tell you their costumes.)

Ok...But, what about your Halloween costume LAST year? Can your remember that one? Discuss with them.

Continue playing the video and stop at the end.



Actually, you can remember what you wore for Halloween last year and you remember what your Halloween costume was this year – because you slept and your brain stored it away in your memory for a long time.

So, let's all say – THANK YOU – to our brains for helping us to remember things for a long time while we sleep. (make them say it)

At this point, you can do a modification of the Awake or Sleep? Activity. The students will start the activity seated at their desks. The Actions you will use are at the end of the WTDT. You can discuss answers. There is still about 6 minutes of the story video to finish.

In this activity, student will have to decide if a good night of sleep is needed before you do the action or if you can do the action without having slept.

Remind the students that a good night of sleep helps our brains do work. It repairs itself, cleans itself, and stores information.

If the students think the action happens either during sleep or can only happen after a good nights sleep, then they need to put their hands together and lie on their hands like they are sleeping. BE SURE to demonstrate this for the students.

If the students think the action happens when we are awake, have them to an awake action – like popping up from their seats behind their desk, or throwing up their hands and opening their eyes and mouth (or some other action you can think of doing). BE SURE to demonstrate.

Continue playing the video and stop at the following slide.



Ok...reiterate that while you are sleeping, your brain fixes the parts of your body and your brain that worked really hard during the day. While you are sleeping your brain is also storing all the things you learned during the day so you can remember.

And, while you are sleeping your brain is also cleaning up garbage. WHAT?!?!? Who has garbage in their heads???? WE ALL DO!!!

Continue playing the video and stop at the end of the following slide.



So, our while we are sleeping our brains are washing away all the garbage that gets made when we are doing all the things that we do during the day.

So, let's all say – THANK YOU – to our brains for cleaning up the garbage in our brains while we sleep. (make them say it)

Continue playing the video and stop after the question about who sleeps more.



Discuss with the students who sleeps more – them or a baby. See what they think and why.

Continue playing the video and stop after the question about who is bigger.



Discuss with the students who is bigger – them or a baby.

Reiterate that your body and your brain grow a lot while you are sleeping – so that is why babies need more sleep than you do, because they are smaller than you.

Now that you know that your body and your brain need to sleep to grow-who do you think needs more sleep -1st graders or adults - like your

parents, teachers, or other adults? Discuss their answers and how it makes sense that you need to go to bed earlier than adults.

Continue playing the video and stop after the question what makes you more tired.



Discuss with the students which makes them more tired. See what they think and why.

Continue playing the video and stop at the end of the following slide.



Our brain does so much for us – even when we are sleeping!!!

And the people that make us go to bed so we can sleep – are helping our brain to do its jobs....fixing things, storing things and washing away garbage. So, let's be sure to thank the people that make us go to bed at night too!

Continue playing the video until the end.

Reiterate the main points of the story...

Physical Health is all about moving your body, eating and sleeping.

Sleep is important for the survival of all animals, because just like the title of the story tells us – Your Sleeping Brain is Hard at Work.

- 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.

Before closing, if time permits, you can share with the students some Weird Facts about how other animals sleep.

You can give some of the facts below and then have the students raise their hands if they think the fact is correct, they can raise their hands. If not, they do not do anything.

You can then discuss whether or not the "fact" is the same or different from how people sleep.

When your time is up, be sure to thank the students.

Tell the students that you had fun talking with them today and ask them if they had fun learning.

Be sure to thank them for listening and the Brain Health Team of JHU students will see them soon.

Activity: #5 Physical Activity - Awake or Asleep?

Actions:

S = During sleep or after you sleep

A = When you are awake

- Eating a snack (A)
- Repeating a phone number right after you heard a commercial (A)
- Reading a book (A)
- Remembering your address so you can tell your friend (S)
- Doing homework (A/S)
- Recovering from Brain Drain (Repairing your brain) (S)
- Talking to your friends (A)
- Telling someone what you had for lunch yesterday (S)
- Remembering your Halloween costume from last year (S)
- Watching TV (A)
- Learning how to play a video game (A)
- Walking the dog (A)
- Cleaning up work from the day (A)
- Beating all the levels of your video game (S)
- Remembering what happened in your book so you can pass your test (S)
- Running around (A)
- Remembering your grandparents' phone number so you can call them every week (F)

Weird Animal Facts:

The average giraffe sleeps for 4.6 hours per day. For the most part, giraffes tend to sleep during the night, although they do get in some quick naps throughout the day. Giraffes can sleep standing up as well as lying down, and their sleep cycles are quite short, lasting 35 minutes or shorter.

Elephants are another animal that sleeps very little. Some researchers have documented their total sleep time at just 2 hours a day. Scientists can tell elephants are sleeping when their trunks stop moving. Elephants, like giraffes, likely only sleep for a few hours each day due to their massive body size and need to graze often. Scientists have observed elephants traveling for nearly two days without sleeping at all.

Like giraffes and elephants, horses don't sleep much, and when they do, they can sleep standing up.

There are dogs, who spend over a third of their day asleep. Another 21% of their day is spent in a state of relaxed drowsiness, ready to nap at a moment's notice.

Little brown bats sleep about 20 hours a day.

Walruses are like the bats of the sea, sleeping between 19-20 hours per day. They can sleep in water and on land, although they sleep for longer periods on land. When walruses sleep in the water, they usually lie at the bottom, float along the surface, or lean against something while in a standing position. They can even hook their tusks onto an ice floe and sleep that way. Like elephants, walruses can go for days without sleep. They can swim for up to 84 hours before needing to recharge.

Birds sleep uni hemispherically, with one side of the brain asleep while the other stays awake. As they sleep, only the eye associated with the sleeping hemisphere of their brain is closed.

Research indicates that reptiles such as lizards may rest in sleep cycles as short as 80 seconds.

Crocodiles sleep with one eye open, but snakes sleep with both eyes open— in fact, they must, since they don't have eyelids. Snakes may sleep for days at a time, digesting their food.

Fish sleep, but it's probably more appropriate to call what fish do "rest." When fish are resting, they slow down their level of activity and metabolism while remaining alert enough to protect themselves from danger.

Animal Sleeping Facts Credit: https://www.sleepfoundation.org/animals-and-sleep