



Science Behind the Story (SBS)

What is Physical Health All About? (🌈 A Physical Health Story) (PreK - 4-5 years old)

Your brain's job is to take care of your body and your body helps your brain to do that. This story talks about how what we eat and how much we sleep and move around help us to keep our body and our brain healthy.

- 🌈 Being "physical" means you move your body. Any kind of moving around is good for your body and your brain.

Your body is made of lots of muscles. Skeletal muscles, which are connected to bones and make the body move, make up the majority of the muscles (Bear, 2016). There are over 600 skeletal muscles in the human body that allow you to move your body (Brooks, 2003).

The brain communicates with muscles by sending out signals to the spinal cord, which then sends out signals to the muscles (Breedlove, 2020). The muscles also send information back to the spinal cord and brain (Breedlove, 2020).

It is well known that any kind of movement, or physical activity, activates mechanisms in both the body and the brain that are beneficial (Lubans, 2016).

- 🌈 You eat because food gives your body and your brain the energy they need to make us healthy.

Our bodies need energy in order to do all the behaviors that we need to do to stay alive. All of the energy that we need to live (move, think, maintain homeostasis) is released as chemical bonds of complex molecules are broken down into smaller, simpler compounds (Bear, 2016).

While all foods provide energy, we need to also eat food for nutrients that our body needs for growth, maintenance, and repair (Hoskers, 2019). If we listened to our body telling our brain when we needed energy and nutrients, then we only eat when we needed energy and nutrients (Caron, 2017).

- 🌈 You sleep because your body needs to rest and your brain has lots of other things to do to make sure that we are healthy.

Sleep is a behavior that is ubiquitous among animals which is necessary for the health of both the body and the brain (Colrain, 2011).

National Standards:

Next Generation Science Standards

- Crosscutting Concepts:
 - **Structures & Functions:** The way an object is shaped or structured determines many of its properties and functions.

- The shape and stability of structures of natural and designed objects are related to their function(s).
- **Energy & Matter:** Tracking energy and matter flows, into, out of, and within systems helps one understand their system's behavior.
- **Cause & Effect:** Events have causes, sometimes simple, sometimes multifaceted. Deciphering causal relationships, and the mechanisms by which they are mediated, is a major activity of science and engineering.
 - Events have causes that generate observable patterns.

National Health Education Standards (Shape America) & CDC (Centers for Disease Control and Prevention)

- **Standard 1:** Students will comprehend concepts related to health promotion and disease prevention to enhance health.
 - 1.2.1: Identify that healthy behaviors impact personal health. **(CDC)**
 - 1.2.4: List ways to prevent common childhood injuries. **(CDC)**

References:

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