

Brain Health: It's SPECtacular

## Science Behind the Story (SBS) Do You Know What I Know? ( A Cognitive Health Story) (1<sup>st</sup> Grade- 6-7 yrs)

This story helps children to understand that everyone is able to learn things about the world around them, but what one person "knows" may be different from what another person "knows".

We learn about the world that is around us and because people live in different places, people "see" and learn different things.

Our sensory systems allow us to get information from the world around us. The physical energy in the world is converted into neural energy by our sensory receptors (Torre, 1995). Humans have sensory receptors which allow them to learn about the things in the world that are important for survival. Humans are also able to use technology to enhance our sensory receptors (Bach-y-Rita, 2003) – which is how we can "hear" people who are miles away from us by using phones.

While humans are born with immature brains, the sensory areas of the brain develop first and the higher cortical areas develop when into late adolescence (Meltzoff, 2009).

What people are paying attention to plays a big role in learning, changing how we "see" the world and how we remember what we "see".

People pay attention to different things that interest or surprise them (Ptak, 2012; Horstmann, 2015). By paying attention to relevant stimuli, children are able to learn and remember (Posner, 2014).

What children are paying attention to changes the way they see and remember the world around them (Hollingworth, 2001).

Understanding that different people "know" different things and being able to learn from each other is important to keeping our brain healthy.

It is important for children to realize that because others are exposed to different information in the world around them, that they can learn from others (Gelman, 2009; Rueda, 2020).

#### National Standards:

#### **Next Generation Science Standards**

- Crosscutting Concepts:
  - **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.

- **Patterns:** Observed patterns in nature guide organization and classification and prompt questions about relationships and causes underlying them.
  - Patterns in the natural and human designed world can be observed, used to describe phenomena, and used as evidence.
- **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).
- Related Grade Level Content
  - 1-LS1-2: Patterns in behavior to survive

## ASCA (American School Counselors Association):

## Academic Development

- **Standard A:** Students will acquire the attitudes, knowledge and skills that contribute to effective learning in school and across the life span.
  - A:A2 Acquire Skills for Improving Learning
    - A:A2.3 Use communications skills to know when and how to ask for help when needed

### Personal/Social Development

- **Standard A:** Students will acquire the knowledge, attitudes and interpersonal skills to help them understand and respect self and others.
  - PS:A1 Acquire Self-knowledge
    - PS:A1.1 Develop positive attitudes toward self as a unique and worthy person
    - PS:A1.2 Identify values, attitudes and beliefs
  - o PS:A2 Acquire Interpersonal Skills
    - PS:A2.2 Respect alternative points of view
    - PS:A2.3 Recognize, accept, respect and appreciate individual differences
    - PS:A2.4 Recognize, accept and appreciate ethnic and cultural diversity
    - PS: A2.6: Use effective communication skills
    - PS: A2 7: Know that communication involves speaking, listening, and non-verbal behavior
    - PS: A2.8: Learn how to make and keep friends

# 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.
  - 1.2.2: Recognize that there are multiple dimensions of health. (CDC)
- **Standard 2:** Students will analyze the influence of family, peers, culture, media, technology, and other factors on health behaviors.
  - o 2.2.1: Identify how the family influences personal health practices and behaviors. (CDC)
  - o 2.2.3: Describe how the media can influence health behaviors. (CDC)
- **Standard 4:** Students will demonstrate the ability to use interpersonal communication skills to enhance health and avoid or reduce health risks.
  - 4.2.1: Demonstrate healthy ways to express needs, wants, and feelings. (CDC)
  - 4.2.2: Demonstrate listening skills to enhance health. (CDC)

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