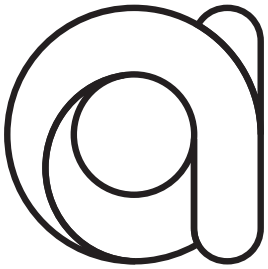

acadience® reading k–6

Student Materials

Grade 4 | Benchmark 2

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Acadience Learning Inc.

For use with remote testing

Your Nervous System

Every day you use your brain to think and to solve problems, but did you know that your brain is constantly doing jobs you never even think about? Your brain makes sense of everything your body experiences. It also directs everything your body does. The brain is part of your nervous system, which also contains your spinal cord and your nerves. This system allows messages to be sent back and forth between the brain and other parts of your body.

Your brain is at the top of your nervous system. It is very soft, and is protected by the hard bones of your head. Connected to your brain is your spinal cord, a long bundle of nerve tissue. It threads through your spine and then branches out to connect to other nerves in your body.

The nerve cells are shaped like long, thin threads. They line up end to end and extend from the spinal cord in your back to every part of your body. The nerve endings in your skin and organs are activated by touch and other sensations. The nerve endings pass the message to the next nerve in line. In a flash, the message is relayed from nerve to nerve until it reaches your brain. The message gives your brain information about what you are touching or sensing. The brain sends back a command telling your body what action to take. If the feeling is harmful, the brain may direct your hand to pull back. If dust blows into your eye, your brain gets the message and instantly directs your eye to blink.

Different parts of the brain handle messages of different kinds. Some parts of your brain control automatic activities in your body, such as your heartbeat and breathing. Other parts direct movement and balance. The front part of your brain thinks and holds memories. It also receives information from your five senses.

Your brain and nerves make you aware and help you live and enjoy life. In short, your nervous system helps make you who you are.

The Story Tree

When you have a lot of relatives you've never met, it's hard to keep them all straight. At least, that's how it seemed to Joseph as he listened to his grandfather's stories. The stories were about Joseph's ancestors from long ago. Many had come to America from Eastern Europe. Some had sailed on the Mayflower! Others faced dangers as they went west in covered wagons. Even though their names were unfamiliar, Joseph loved hearing about their adventures.

One day, Joseph decided to record the names of the people in the stories. Each time Grandpa mentioned a relative, he wrote the name on an index card. If Grandpa knew when the person was born or died, he recorded that, too. On the back, he added interesting details from the person's life.

"You know, we could lay out those cards so you could see how all these people are connected," suggested Grandpa. He helped Joseph match cards that named husbands and wives or brothers and sisters. Soon, there were clusters of cards scattered everywhere. It seemed very complicated, and it was clear that Joseph felt more confused than ever!

Grandpa laughed. "Maybe you should make a card for yourself and arrange the rest to show how everyone is related to you," he said.

"That's a great idea!" said Joseph. "I'll lay out the cards to show our family tree."

First Joseph made a card with his own personal information. Then he rolled out a long piece of brown wrapping paper and drew a tree trunk and branches. He placed his card on the trunk and tried to connect his card to the rest. Right away, he saw that he needed to make cards for his mom and dad to put on the lowest limbs of the tree. Each row of cards above those would represent an earlier generation. With Grandpa's help, Joseph soon found the right location for each of his cards.

"It's like looking at a giant story," said Joseph as he stood back admiring his tree.

"That's exactly what it is," said Grandpa. "This tree is the story of you!"

A Grand Old Clock

One summer morning, a team of rope climbers put on their gear and tackled an unusual assignment. They weren't climbing a rocky cliff in the wilderness. They were in downtown London about to climb down the face of the giant clock known as Big Ben.

Big Ben is one of the most famous landmarks in England. It is a clock tower on the building where English lawmakers meet. The clock has four faces, so the time can be seen from any direction, and each glass face is more than twenty feet across. The numbers on the clock are two feet tall, and the minute hand is as long as a car. The clock's great bell is suspended high in the tower above the clock face. It weighs thirteen tons. The bell bongs every hour, and smaller bells chime every quarter hour.

So who were the climbers on Big Ben's face? They were members of a team that cleaned and repaired the clock inside and out. Engineers inspected all of the machinery that makes the hands of the clock move, as well as the parts that control the bell and chimes. Workers cleaned the works and replaced worn parts. They wanted the clock to be at its best for its birthday. Big Ben was about to turn one hundred and fifty years old.

During the seven weeks it took to complete the project, the famous clock was stopped and did not chime. This was a rare event. Big Ben has chimed almost every hour since it was first built. It has only been stopped a few times, and seldom for more than a few days.

When all the work was completed, engineers made sure the clock was keeping perfect time and that the bells were set to ring just when they should. At last, the clock was restarted. Local people and tourists alike were glad to hear the familiar chimes ringing through London once again. With the special care it receives, Big Ben is ready to chime the hours for another one hundred and fifty years.

2

Name: _____

Practice 1

After playing in the dirt, Sam went [home / summer / was] to wash her hands.

Practice 2

On her way home, she [chair / sleep / saw] an ice cream truck.

STOP

C: _____

I: _____

AS: _____

G4/Benchmark 2

A Leaning Tower

The country of Italy is home to a building you may recognize. It is called the Leaning Tower of Pisa, and it [is / much / first] one of the most recognized buildings in the [world / is / began]. The building is an eight-story, [white / see / lasted], round tower with large bells at the [able / all / top]. Thousands of tourists visit the building [each / other / open] year. People stand at the bottom and [view / look / years] up. As they do this, their [marble / heads / stopped] tilt to match the leaning of the [plans / south / building].

Construction of the remarkable building began over [home / stories / eight] hundred years ago, in 1173, and [hundred / lasted / columns] many years. Workers had finished three of the [building's / slightly / recognized] eight marble stories when they noticed [vertical / little / something] odd. The building was leaning! It [was / halt / idea] sinking into the ground. The engineer in [charge / added / tried] changed the building's plans. The next [fifteen / spiral / stories] that were added were slightly taller on [one / farther / so] side. The idea was to even out the [leaning / continued / where]. But the heavy marble only made the [still / destroyed / tower] sink farther into the soil. Work [ground / was / many] stopped at the time, but started [century / be / once] again and continued off and on for [bracing / many / public] years. It was finally done in the [some / engineers / sixteenth] century, and the tower still leaned.

At [sink / almost / one] point, the tower leaned so much that the [top / heads / if] was about fifteen feet farther south [than / inches / side] the bottom. People tried many ways to [feet / correct / now] it, including bracing the building with [charge / knew / support] columns. Nothing seemed to correct or [three / when / halt] the leaning. One attempt to straighten it [nothing / almost / not] destroyed the tower. The building leaned [construction / farther / called] and farther.

In 1990, engineers worried that the [building / match / time] was unsafe, so they closed it and [building / ways / began] work to correct some of the [leaning / finished / seemed]. This time, they dug some of the [only / was / unstable] soil out from underneath the building's [sinking / worried / foundation] on one side. When they removed the [soil / attempt / visit], that side of the building came down a [little / leads / something]. The workers were able to steer the [make / building / white] where they wanted it, but they [tilt / knew / removed] they would not straighten it entirely. After [all / leaned / soil], it would no longer be the Leaning Tower of Pisa [foundation / if / remarkable] it were vertical.

The building straightened [bells / several / world] inches and finally stabilized entirely for the [taller / eight / first] time.

Now, the building is once [again / large / odd] safe and open to the public. You [way / came / can] climb the almost three

hundred stairs that [recognize / make / engineer] up the spiral staircase that leads [made / do / all] the way to the top. From [country / there / noticed], you can see a view of Italy that [round / is / year] like no other.