



Dynamic Indicators of Basic Early Literacy Skills 8th Edition

Benchmark

Grade 5

Student Materials

Breathing

Breathing in brings oxygen into our bodies. Oxygen is a colorless, odorless gas that makes up over twenty percent of the earth's atmosphere. It makes up over sixty percent of the human body. Oxygen helps the cells in our bodies make energy. When we inhale, we pull air through our noses or mouths into our lungs. Then it travels through a series of branching tubes to arrive at tiny air sacs. The sacs are covered in tiny blood vessels. The oxygen from the air we breathe passes into the blood stream through these tiny blood vessels. The blood, rich with oxygen, then travels to the heart. The heart pumps it to the rest of the body.

Not only does breathing bring something we need into our bodies, it also removes waste. When we exhale, we get rid of carbon dioxide. Carbon dioxide is a gas produced by cells when they change nutrients into energy. It leaves the body by the same route that oxygen comes in, but in reverse. From the blood, it goes to the tiny blood vessels around the air sacs in our lungs. From the sacs, it goes through the branching tubes in the lungs. From the lungs, it is pushed out of the mouth or nose into the air. In the air, carbon dioxide is available to plants, who need it the way humans and animals need oxygen.

Breathing is so important to our lives that we mostly do it without trying. We can learn to control our breathing to some extent. But we mostly breathe without even being aware that we are doing so. Just imagine if you had to think about breathing every time you took a breath!

Animal Tools

Humans have made and used tools for thousands of years. We have simple tools like screws, wedges, ramps, pulleys, wheels, and levers. We've gotten so good at making and using tools that we've made robots that can create and make tools! However, humans aren't the only animals to use tools.

There are some tame animals that can use tools because we teach them to do so. For example, many people use service animals to help them around the house. Most service animals are dogs, but can also be cats, birds, miniature horses, or even pigs! The owners of these animals can teach them to use tools to open doors, turn on electronic devices, or call for help.

There are other animals in the wild that learn to use natural objects as tools to meet a certain need. Although most animals don't use tools in this way, there is evidence that dolphins, otters, monkeys, apes, rodents, octopuses, elephants, and some birds can and do use tools in the wild.

Many times, wild animals use tools for food. They can use the tools to either catch the food or to open it. Dolphins have been known to use sea sponges to stir up sand at the bottom of the ocean. This helps them uncover food. Crows have been recorded dropping stones into a water pitcher to raise the water level. This makes the water level high enough for them to reach. Various monkeys have been known to use sticks to reach into logs and ant hills to get ants to eat.

Otters, on the other hand, use tools to open their food. Otters love to eat clams and mussels. But the meat of the clams and mussels is hidden inside shells. So, otters use rocks to hammer open the shells. Of course, people are still the most advanced tool users. But imagine an otter using a blender to make a clam smoothie!

The Project Next Door

In the evening, Jasper heard the sound of a hammer knocking in nails, and the skid of an electric drill. He looked out his window, but he could not see where the sounds were coming from. They continued into the night, after he went to bed.

In the morning, when Jasper left his house to walk to school with his dad, he saw a kind of shed, that hadn't been there the day before, on the side of his neighbor's house. The walls were made of plywood and two-by-fours. There were window holes cut into the walls. Mr. Wiseman, their neighbor, was standing on a ladder, and making a roof out of a blue plastic tarp and a length of willow fencing over the top of the shed. He nodded at Jasper and his dad as they passed by.

As they walked along, Jasper and his dad saw a second shed, and then a third and a fourth. By the time they had arrived at school, they had seen ten.

"What are those?" Jasper asked his dad.

Jasper's dad explained that they were sukkah, special huts built by Jewish families to celebrate the harvest festival called Sukkot. During the festival, the families build and decorate their sukkah, and then invite their friends and relatives to visit them and share meals inside.

In the afternoon, on his way home from school, Jasper noticed more sukkah. He saw Jewish fathers and their older children working together to build with wood and nails. He saw Jewish mothers and their babies and small children watching the walls go up. When he went to bed that night, he heard the construction sounds, and told himself, "It's the sound of the sukkah."