Dear Students,

Have you ever watched a professional basketball player seem to float in air as he or she leaps up to dunk the ball in the basket? Or maybe you watched skiers and skaters competing at the Olympics, and wondered “How did they do that?”

Well, our bodies are pretty amazing. And the more we learn about ourselves and how our bodies work, the better we can take care of ourselves and others. And, the healthier we will be—making us better on the ice rink, basketball or tennis court, jumping hurdles, or just walking down the street.

“Gunther von Hagens’ BODY WORLDS: The Anatomical Exhibition of Real Human Bodies” was developed by a German doctor and anatomist to help people understand how their bodies work by letting them look inside real human bodies. When you visit with your school or family, you will see exactly how your brain and your heart look and what happens to them when certain diseases take over. You will see how smoking destroys your lungs, and how your bones, muscles and ligaments all work together so you can shoot baskets, dance, or figure skate.

The activities inside this guide will help you learn more about the human body. Then come visit us to see BODY WORLDS. You’ll really get to know yourself!

Dr. Angelina Whalley
Conceptual Designer for BODY WORLDS and Managing Director of the Institute for Plastination

Getting up close with “The Teacher,” visitors see how complex even the most routine movements are.

Photo by Alexander Laws.

Credits:
The educational supplement “Gunther von Hagens’ BODY WORLDS: The Anatomical Exhibition of Real Human Bodies,” was a collaboration between BODY WORLDS, The Franklin Institute and the News in Education program of The Philadelphia Inquirer.

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Gunther von Hagens' BODY WORLDS exhibits are first-of-their-kind exhibitions. In these groundbreaking exhibitions visitors learn about anatomy, physiology and health by viewing real human bodies preserved through an extraordinary method called "Plastination."

More than 200 authentic human specimens are featured in each exhibit, entire bodies as well as individual organs and transparent body slices.

To date, nearly 20 million people around the world have viewed BODY WORLDS, BODY WORLDS 2 and BODY WORLDS 3.

An amazing idea

The idea for the breakthrough process called Plastination came to Dr. Gunther von Hagens in July 1977.

At the time, von Hagens was working in Germany as a scientist and research assistant at the University of Heidelberg's Institute of Pathology and Anatomy.

He was looking at an anatomy specimen embedded in plastic—something like a cherry frozen inside an ice cube.

Specimens surrounded by plastic made it impossible for students to touch the specimens, or study the placement of the organs properly. But if the plastic was inside the body and not outside it, the specimen would be rigid and much easier to grasp, study and work with. It was a startling idea.

"By inventing Plastination I was only trying to solve a problem," von Hagens says. "I wanted to educate my students so they would become better doctors, as I don't think doctors should be poking around inside your body and operating on you if they don't know important things about it."

Then, something very unusual happened after he began to plastinate organs and specimens. The janitors and secretaries and office workers at the university began to stop by the lab, and they were fascinated by the plastinates. This was when von Hagens began to think of ways to present anatomy for lay people, which is what the BODY WORLDS exhibits do today.

"It is very different from anatomy for medical professionals because it has to be interesting and dynamic and not scary to look at," von Hagens explains.

Replacing fluids

In Plastination all bodily fluids and fat are removed from the bodies to stop decay. Decay is caused by cell enzymes released after death and completed by bacteria that break down tissue. Plastination deprives bacteria of what they need to survive by removing water and fats from tissue and replacing them with silicon rubber and epoxy. These harden with gas, light or heat curing, providing firmness and durability.

At first the plastic is soft and easily shaped. This allows bodies to be placed in different life-like positions, such as The Basketball Player driving to the basket in the BODY WORLDS exhibit. When the plastic hardens, it freezes the bodies in position. It takes 1,500 hours to transform a body into a full-body plastinate.

In March 1978, von Hagens filed a patent for his invention of Plastination with the German Patent Office. However, the refinement of his invention and the creation of the first whole-body plastinate would take 13 more years. Like all pioneering discoveries, Plastination had its share of failures before it became a success. And even now von Hagens says his methods are not yet perfect.

In 1981 von Hagens started his own company, BIODUR Products, which shares technology and equipment for Plastination with medical schools and institutions around the globe.

With Plastination, von Hagens has forever changed traditional anatomy and its audience. "The purpose of Plastination from the beginning was scientific, to educate medical students," he says. "But the interest of lay people in the plastinated specimens inspired me to think of public exhibitions in a way that avoids shock, but captures the imagination."

For more information on BODY WORLDS, the Plastination technique or Dr. Gunther von Hagens, visit www.bodyworlds.com
Children visiting BODY WORLDS—Interview Dr. Gunther von Hagens, Creator of BODY WORLDS & Inventor of Plastination

Were you ever scared to work with dead bodies?

Dr. von Hagens: When I was about six years old, I was very sick and nearly died. I was in hospital for many months and became very comfortable in that environment of the sick and dying. The doctors and nurses who cared for me became my heroes, and I wanted to become like them. Later when I worked in a hospital as an orderly and then a nurse, (long before I became a doctor), one of my duties was to transport the dead to the morgue. Other workers didn’t like this job because it frightened them, but I was never afraid. Being afraid of death is not a good way to live.

Does the laboratory smell?

Dr. von Hagens: I have been working so long in the lab that I don’t notice. When I first invented Plastination, I would work, eat, and sleep in the lab. It was my home; I loved being there, the smell did not bother me, it was like fresh air for me.

Were the people in the exhibit old when they died?

Dr. von Hagens: The people who donated their bodies for Plastination and to educate all of us about health are of various ages. Some were old, but others were young in the prime of their life. Each person is different, not just on the outside but also on the inside. It is very interesting to me that after more than 30 years as an anatomist, I have never seen two hearts that look the same.

Where did the idea for BODY WORLDS come from?

Dr. von Hagens: When I used to teach anatomy to students in medical school in the 1970s, I had to use illustrated anatomy atlases and picture books to show the organs and body systems. I tried to use real human organs and specimens, but at that time the specimens were preserved in blocks of plastic so you could not touch them, or study the placement of the organs properly. I realized one day that if the plastic was inside the body and not outside it, the specimen would be rigid and easy to grasp, and study and work with. I was only trying to solve a problem, I wanted to educate my students so they would become better doctors, as I don’t think doctors should be poking around inside your body and operating on you if they don’t know important things about it. But something very unusual began to happen after I began to plastinate organs and specimens. The janitors and secretaries and office workers at the university began to stop by the lab; they were fascinated by the plastinates. This was when I began to think of anatomy for lay people, which is what BODY WORLDS is. It is very different from anatomy for medical professionals because it has to be interesting and dynamic and not scary to look at.

How long does it take to prepare the bodies for display?

Dr. von Hagens: Plastination takes a very long time. A whole-body can take up to 1500 hours to prepare. At the moment I am working on plastinating an elephant which had died in a German zoo. This will take about three years.

Does working with dead people make you feel happy or guilty?

Dr. von Hagens: I feel that what I do is important work. There are many people who stopped smoking after seeing the blackened lungs of a cigarette smoker at BODY WORLDS. They knew all about the dangers of cigarette smoking for a long time, and knew they had to stop, but BODY WORLDS educated them to do so. There are others who have written to me to say that they resolved to stop drinking or to improve their diet after visiting BODY WORLDS. Many say that until BODY WORLDS, they took their own bodies for granted and didn’t pay much attention to them. I consider this to be a reason to carry on my work, to educate people about health and persuade them to change their opinions, as well as to motivate them to think about life and how short life is.

What happens to the skin once it is removed from the bodies?

Dr. von Hagens: Each body is an anatomical treasure, human remains must be handled carefully and respectfully. All human remains are cremated and buried.

Have you ever been emotionally involved with anyone who he has plastinated?

Dr. von Hagens: The best friend of my youth died of cancer of the kidneys, and before his death he told me that he was too young to go to the cemetery and wanted his body to be of use to science. I carried out the Plastination and I was in mourning for my friend throughout the process. There is a reason that doctors are not allowed to operate on their relatives, it is simply too heartbreaking.

How do you get people to donate their bodies?

Dr. von Hagens: I have never sought body donation. People offer their bodies for Plastination for several reasons: they want to leave a legacy for future generations, they don’t like the effects of decay and decomposition that take place after death, or they don’t like traditional burials.
Dr. Gunther von Hagens’ life has been all about discovery, experimentation and invention. He faced many obstacles in his childhood and in his youth, but persevered in the face of these challenges to become an accomplished scientist.

Anatomist, inventor of Plastination and creator of BODY WORLDS exhibitions, Dr. Gunther von Hagens was born in 1945, in Alt-Skalden, Posen, Poland—which was then part of Germany. When he was a baby his parents placed him in a hand-basket and headed west to escape the Russian occupation of their homeland. The family settled in Greiz, a small town where Gunther von Hagens remained until the age of 19.

As a child, von Hagens was diagnosed with a rare bleeding disorder that restricted his activities and required long hospital stays. At age six, he nearly died from the illness and was hospitalized for several months. He was inspired by the doctors and nurses who treated him, and decided that he would become a physician. He showed an interest in science from an early age, and was highly excited at the prospect of the launch of the Russian Sputnik.

In 1965, Gunther von Hagens entered medical school at the University of Jena. His unique ideas and outgoing personality were even noted in academic reports from the university. The professors talked about his charisma and his imagination. They discussed his unusual practices, but noted that his off-the-beaten-path ways were always in the best interest of the subject and the rest of the student body.

While at the university, Gunther von Hagens began to question Communism and Socialism—politics of the time—and participated in student protests. In January 1969, while attempting to cross the borders into Austria and freedom, he was detained by authorities. Through a series of events, at age 23, Gunther von Hagens was arrested, sent to East Germany, and put in prison for two years. “When they first arrested me, a kind guard felt sorry for me and left a window open so that I could escape. I hesitated and did not take the opportunity. Because of not using my logic, I was locked up for two years. This was a lesson I never forgot: When a good proposition presents itself, seize it, because if you don’t, you may live to regret it,” Dr. von Hagens says.

After West Germany bought his freedom in 1970, Gunther von Hagens enrolled at the University of Lubeck to complete his medical studies.

In 1977 Dr. von Hagens invented Plastination, his groundbreaking technology for preserving specimens which is used to create the BODY WORLDS exhibitions. He patented the method and over the next six years spent all his energy working on his invention.

Cool Fact:
Dr. Gunther von Hagens invented Plastination in 1977.

Eventually, Dr. von Hagens started his own company to share technology and equipment for Plastination with medical schools and institutions around the globe. The products he provides help teach future doctors, and contribute to the overall development and advancement of science.

In 1992, Dr. Gunther von Hagens married Dr. Angelina Whalley, a physician who works as his business manager and is the designer of the BODY WORLDS exhibitions. Dr. von Hagens has three children, Rurik, Bera and Tona.

The BODY WORLDS exhibitions have been seen by over 20 million people across Europe, Asia and North America.
Gunther von Hagens’ BODY WORLDS exhibits use the science of Plastination to let visitors see how human bodies are put together. The exhibit also teaches how different anatomical systems work in the human body. This special student supplement also explores several of the systems featured in the exhibit, including the locomotive system, the respiratory system, the digestive system, the nervous system and the cardiovascular system.

On this page the locomotive system is examined.

The locomotive system is the system in the body that makes movement possible. It consists of the bones that make up the skeleton, the joints that hold the bones together and the muscles that contract and relax to actually make you move.

The skeleton is the framework of the body, and it is made up of bones and cartilage. Bone is made mostly of calcium, which is why it is important to drink milk to keep your bones strong. Milk is a food that is rich in calcium.

Inside the bone is sponge-like matter called bone marrow. This makes bones light so people can move easily, but strong enough to support body weight. Bone marrow also produces red and white blood cells. Red blood cells have hemoglobin and carry oxygen. White blood cells produce antibodies to attack bacteria, infections and diseases.

The skeleton has many jobs. It provides protection to internal organs, it supports the body and gives it its shape, and it provides a place for muscles to attach.

Bones are important to almost every movement we make. Bones couldn’t move a pencil, though, without help from muscles. Muscles consist of cells that contract.

Muscles and bones are connected by tendons, which are something like ropes. When a muscle contracts, it pulls the tendon, which then tugs on the bone, and everything moves.

Although it may seem easy to do something like throw a ball, it’s actually complicated when looked at inside the body. To make the motion of throwing, many muscle groups in the shoulders, arms, chest, abdomen and even legs must be used! Each of these groups must work together with nerves in order for motion to occur. And all this happens in a fraction of a second!

Voluntary muscles are used when you throw a ball. These are the muscles we can control. People also have involuntary muscles, which we cannot control, such as the heart and the stomach.

Another important part of the locomotive system are the joints. Joints are positioned between major bones that come together and help you to move and bend.

There are different kinds of joints, including ball and socket joints in the hips and hinge joints at the knees and elbows. Joints are surrounded by capsules containing fluid that help the bones move smoothly.

At the EXHIBITS

At BODY WORLDS visitors can get detailed looks at how the locomotive system is put together and how it works. Figures like The Cyclist show how the bones, joints and muscles work together to help people move. A display featuring The Muscle Man shows how muscles are connected and layered in people’s bodies, and skeleton exhibits reveal the strength, delicacy and variety of people’s bones.

Cool Fact:

At birth, humans have 300 bones. As a baby grows, however, many of the smaller bones fuse together so that adults have just 206 bones. Half of all people’s bones are in their hands and feet.

Learn with BODY WORLDS

The bones of the human skeleton give the body both strength and structure. A strong and healthy skeleton is important for every person for both work and recreation. Think of three things that you do every day that involve the use of certain bones.
The organs of the respiratory system work together, along with other body systems, to ensure that the cells of the body receive the oxygen they need to live.

When you breathe in, the muscles of your chest expand. Your diaphragm lowers, and creates lower air pressure in your lungs than in the world outside. This causes air to enter through the nose or mouth.

Once air enters, it travels past your esophagus, sometimes called the “foodpipe,” and is moistened as it goes down the trachea, or “windpipe,” into the lungs. As the air enters the lungs, the lungs expand outward.

Once inside the lungs, the air travels through tubes called bronchi, into smaller tubes called bronchioles, which get smaller and smaller until they reach alveoli, which are sacs about the size of a grain of sand.

It is through the walls of the alveoli that the oxygen in the air you breathe enters the body’s blood, which flows past the alveoli. The blood receives the oxygen, and in return passes carbon dioxide into the alveoli.

The cells of your body need oxygen to live, and carbon dioxide is the waste of things the cells do. Your red blood cells are little workers that carry the oxygen to the cells, and take the carbon dioxide away.

Smoking, as we all know, makes the lungs less healthy, and can lead to death.

One of the reasons for this is that smoking makes little structures called cilia stop working. Cilia move within the lungs to help clear things out that enter the lungs. Smoking disables or even kills them. Then harmful particles stay in the lungs.

Another bad effect of smoking is that chemicals from cigarettes will build up in the lungs, and the delicate alveoli can become thickened, swollen, and unable to exchange oxygen and carbon dioxide with the blood in a healthy way. This condition leads to emphysema.

Think about it

Plants take the carbon dioxide that we release and use it, creating oxygen, which we need. We in turn take oxygen and turn it into carbon dioxide, which plants need. This is what is called a symbiotic relationship—one that is good for both organisms. Try to think of other ways in which humans interact with nature in symbiotic relationships.

Cool Fact:
Your left lung is a bit smaller than the right, to leave room for your heart.

At the EXHIBITS

At the BODY WORLDS exhibits, visitors can see first hand the damage that smoking can do to the lungs. Many of the bodies displayed—even those of athletes or dancers—were from people who smoked. The effect of this is dramatic: Lungs that would be pink or white when healthy are turned gray or black by smoking.

Learn with BODY WORLDS

A healthy respiratory system makes it possible for people to live active lives. Smoking causes problems for the respiratory system. Make a list of five reasons why you shouldn’t smoke.
The Strength of a Gymnast

“The Ring Gymnast” is using many body systems to perform this complex pose. Certainly, his nervous, locomotive and cardiovascular systems are working at high levels. Notice that this plastinate has a very strong upper body, one of the reasons he was chosen to show the incredible strength of a gymnast. Compare the appearance of upper-body muscle in this plastinate to that of others in the exhibits.
The human body can be shaped in many different ways through exercise. Look through the newspaper for a story about an athlete. Through reading the article and researching online, find out what kind of training schedule the athlete might follow. Think about what parts of the body it is most important for the athlete to strengthen. Then write a schedule for a week’s worth of training for the athlete in your article.

The Flexibility of a Gymnast

“The Balance Beam Gymnast” is showing great strength and balance as she supports her body on her arms and one leg, but more than that she is a marvel of the flexibility of the human body. Think about what exercise and stretching this woman might have done to prepare her body to be able to perform this pose.
The body’s digestive system converts the food you eat into the energy you need to live.

The journey through your digestive system is a long one for food. It starts in the mouth, where teeth grind and tear the food into small pieces. Saliva then wets and softens the food, and begins to dissolve carbohydrates. Once the food is properly mashed and wet, it is pushed by muscle action into the pharynx, or throat, and down the esophagus, which leads to the stomach.

When food reaches the stomach it is mixed and broken down further by acids the stomach produces. The stomach protects itself from these acids by secreting a layer of mucus that lines the inside of the stomach.

Some things, such as water and sugars, can be absorbed right out of the stomach and into the bloodstream.

The things that need more digestion have further steps ahead of them. When the stomach has made the food a liquid, the food passes through a valve into the small intestine.

The small intestine has a large surface area because it contains villi. Villi are tiny little structures like very short hairs that stick out into the small intestine. Through the walls of the villi nutrients from food pass into the bloodstream. The bloodstream carries the nutrients to your cells so they can live.

Once all the useful nutrients have been taken from food in the small intestine, the unusable parts pass into the large intestine, or colon.

In the large intestine, water is extracted from the waste and the material hardens into feces. The feces are passed out of the body when you go to the bathroom.

Digestive helpers

The pancreas, liver and gallbladder are all organs that do things important to the digestive system. The pancreas makes enzymes that help digest proteins, fats and carbohydrates. The liver makes bile, which helps the body absorb fat. Bile is stored in the gallbladder until it is needed. Enzymes and bile travel into the small intestine through ducts. Interestingly, people don’t really need the gallbladder. If it is removed, the bile just flows right into the small intestine and does its job.
The nervous system is the system of the body that controls movements, thoughts and emotions throughout the body. Without it, you wouldn’t be able to function!

There are two parts to the nervous system: the central nervous system and the peripheral nervous system.

Cool Fact:
The nervous system carries messages from the brain to other parts of the body at more than 100 miles per hour.

The central nervous system includes the brain and the spinal cord. They work together with nerves to send messages back and forth between the brain and the rest of the body.

The brain is the boss. It has five parts: the cerebrum, the cerebellum, the brain stem, the pituitary gland and the hypothalamus.

The cerebrum is the biggest part of the brain and controls thoughts, language and voluntary muscles, which are the muscles you can control. You also use the cerebrum when you think hard in school and when you need to remember things.

The cerebellum is a lot smaller than the cerebrum, but still very important. It controls balance, movement and coordination. If it weren’t for the cerebellum, you wouldn’t be able to stand without falling!

The brain stem connects the rest of the brain to the spinal cord. It’s the part in charge of major things that keep you alive like breathing, blood pressure and digesting food. Unlike the cerebrum, the brain stem controls the involuntary muscles—the ones that work without you thinking about it, such as the heart and stomach.

The tiny pituitary gland produces and releases hormones into the body—hormones like those that help you grow and change.

Finally, the hypothalamus regulates your body temperature, your emotions and hunger and thirst.

The brain has many jobs, but it needs help from nerves and the spinal cord, too. Every action you do happens because your brain, your nerves and your spinal cord work together.

The nervous system includes millions and millions of neurons, which are microscopic cells. When you do something, messages travel from the neurons to your brain.

The peripheral nervous system is composed of the nerves and neurons that go outside the central nervous system to operate the body’s limbs and organs. It is here that everything gets connected.

Next time you take a test, drink a glass of water, laugh or do anything at all, thank your nervous system. Actually, you can thank it right now since it just helped you read this!

Learn with BODY WORLDS

The nervous system carries messages to the brain that make it possible for the body’s five senses to work. The five senses are touch, taste, hearing, sight and smell. Explore the five senses by writing about one of your favorite things for each sense.

For example you may say that you enjoy listening to classical music, because it helps you concentrate. This relates to your sense of hearing.

at the EXHIBITS

At the BODY WORLDS exhibits, displays give a detailed look at how the spinal cord and nervous system connect the different parts of the human body. Two of the most dramatic examples include the whole-body plastinates “The Ponderer” and “The Chess Player.”
Images of hearts are often used to symbolize romance or love.
But actually—and more importantly—the heart is the central organ of the cardiovascular system, and it doesn’t look much like the drawings found on Valentines.
Cardio means heart, and the cardiovascular system is essential to our survival.
The cardiovascular system is sometimes referred to as the circulatory system because it’s responsible for the circulation of blood through the body.

Cool Fact:

At every stage of life, your heart is about the size of the fist you make when you close your hand.

It consists of the heart, which is a muscular pumping device, and a closed system of vessels called arteries, veins and capillaries.
The cardiovascular system’s vital role is to provide a continuous and controlled movement of blood through the thousands of miles of microscopic capillaries that reach every tissue and cell in the body.

Human survival depends on the circulation of blood to the organs, tissues and cells of your body.
Arteries carry blood enriched with oxygen away from the heart, and veins carry blood that has used up its oxygen back to the heart. Through the heart and lungs, the blood gets a fresh supply of oxygen and delivers it to the rest of the body.

Twenty major arteries make a path through the tissues of the body. Then they branch out into smaller vessels called arterioles. These branch further into the capillaries, most of which are thinner than a hair—some so tiny, in fact, that only one blood cell can move through at a time.
Once the blood in capillaries delivers oxygen and nutrients, it picks up carbon dioxide and other waste. Then blood moves back through wider vessels, called venules. These eventually join to form veins, which deliver the blood back to your heart to pick up oxygen.
If all the vessels of this network were laid end to end, they would extend about 60,000 miles, far enough to circle Earth more than twice!

Because all the tissues in the body rely on it, the cardiovascular system appears early in developing embryos—in the fourth week after fertilization—and reaches a functioning state long before any other major organ system.

Learn with BODY WORLDS

The cardiovascular system is a delicate system and can be affected by many things. Fats and cholesterol, for example, can slow or even block the flow of blood in the body. Fats and cholesterol enter the body through foods people eat, and that is one reason people are encouraged to limit the amount of fatty or oily foods they eat. Think of ten fatty foods and ten healthier options. For example, you may think of a doughnut as a fatty food and toast as an alternative.

at the EXHIBITS

In the BODY WORLDS exhibits, displays give a clear picture of how extensive and important the cardiovascular system is to human survival. Some of the most dramatic—and beautiful—displays are the arterial specimens, which show the bright red capillary systems of specimens on display.
The BODY WORLDS exhibits teach a great deal about the science and anatomy of the human body. They also teach about the form and art of the human body.

Studies of anatomy have always been a key part of art education. Artists who know how the human body is put together, and how its muscles work, are better able to portray people in painting, sculpture and other art forms.

This knowledge is important, even if artists choose to represent the human form in abstract ways rather than realistic representation.

In the BODY WORLDS exhibits, Gunther von Hagens has positioned human figures to reveal how the body is put together and how it performs different tasks. He also has presented human figures in ways that highlight different body systems.

A group display called “The Blood Vessel Family,” for example, reveals the human form through its network of blood vessels.

The scientific choices he has made give visitors a new way to understand how human bodies work. At the same time, he has revealed how beautiful the form and systems of the human body are.

As visitors go through the exhibits, they learn the science and biology of anatomy. They also get to experience the artistic qualities of anatomy.

This gives the exhibits appeal to all students, not just those in science classes.

Think like an artist

Like Gunther von Hagens, artists sometimes like to focus on one aspect of a figure. In art, this may be done by emphasizing one feature of a person, or showing the subject from an unusual angle or perspective.

Explore this idea by thinking about someone in your family. Reflect on what this person is like, or what you admire about him or her. Then think about what you would focus on if you were to portray this person in an artwork. Draw a sketch of your artwork and explain your ideas to the class.

Photos as art

Newspaper photographers often are asked to take photo portraits of people in the news. These portraits often could be considered photographic artworks. Look through the news and features sections of The newspaper for several days and clip photos portraying people. Pick the one you like the most and explain to the class what makes the portrayal effective or artistic in your eyes. Finish by giving the photo a title, and explain it to classmates.

Sports anatomy

Coaches need to know how to evaluate the physical skills and talents of players. These talents often are based on anatomy. Pick an athlete you admire. Then think about the different body systems explored in this guide. Write out which systems contribute most to the success of this athlete.

Learn with BODY WORLDS

Understanding how the body works is important in many professions. Think about what you may want to be when you grow up, and write a short sentence or paragraph explaining what about anatomy is important in the job, and why.
All specimens in Gunther von Hagens’ BODY WORLDS exhibits are authentic. They belonged to people who declared during their lifetime that their bodies should be made available after their deaths for the instruction of doctors and the education of the public.

“BODY WORLDS is most of all a collaboration between the donors and myself, and all those who view the exhibit,” von Hagens says. “All of humanity owes the donors a great deal, for without them, there would be no BODY WORLDS.”

To ensure that donors make the decision willingly, von Hagen’s Institute for Plastination requires that all donors sign an official consent form.

In the form, the donors must declare that they have made the decision “freely and voluntarily” to donate their body “for the purpose of anatomical research and education … for students and especially for the general public.”

In addition, they must check off answers to specific questions that have been raised by Plastination so there is no doubt they fully understand their decision.

“I agree for my body to be used for any purposes, provided it is to do with medical research or training” reads one example.

Or “I agree that my plastinated body can be used for the medical enlightenment of laypeople and, to this end, exhibited in public (e.g. in a museum).”

Or “I agree that my body can be used for an anatomical work of art.”

Or “I agree that lay people be allowed to touch my plastinated body” in some exhibits.

Donors to the Institute for Plastination have the option to donate all useable organs to save lives before their bodies are plastinated.

In your discussion:
• Consider what motivates a donor to allow his/her body to be plastinated for education or an exhibit.
• Consider how the friends and relatives of a donor might feel.
• Imagine that a member of your immediate family wanted to be plastinated.
• Consider what you might learn—or did learn—about your own body from viewing the BODY WORLDS exhibits.

Cool Fact:
Plastination takes a very long time. A whole body can take up to 1500 hours to prepare.

Learn with BODY WORLDS

After holding the class discussion, summarize the general feelings of the class in a news story of the style found on the front page of a newspaper. Talk about how newspaper reporters must weigh all information before making a general conclusion. Then compare summaries written by different members of the class. How similar were they? What were some differences? What was the source of those differences?

Thoughts about Plastination and your body

In your discussion:
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