An anatomical illustration of a human figure from the waist up, showing the muscular system in red, the skeletal system in white, and the circulatory system with blue and red vessels. The figure is shown in a dynamic pose, with the right arm raised and the left arm extended. The background is a light, neutral color with some faint anatomical structures visible.

ANATOMY and PHYSIOLOGY

CAROLINA[®]

CAROLINA®

The content, the workload, and the requirements are all demanding. Yet, it's more than that. Many of your students have career goals that don't allow them to sidestep anatomy and physiology. They've got to make the grade before they can move on. That's why A&P is a high-stakes class for them . . . and for you.

In this catalog, you'll discover a curated selection of high-quality lab products. Carolina® materials are designed to deliver consistent lab results and take the complexity out of planning and setup, so you can focus on helping your students understand the concepts they need to win in A&P.

Browse our complete line of A&P products at Carolina.com. We have products specific to each body system as well as products that focus on the whole body.

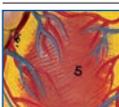
And if you need additional information about any of our products or the ordering process, don't hesitate to contact us. We're just a call and click away at 800.334.5551 or Carolina.com. Our team of technical experts can help you optimize the teaching and learning experience.

"It really comes down to the fabulous customer service at Carolina that makes us return to them time and again.

I always feel like I can reach out, not just to our rep for information and suggestions, but really everyone is so professional and expedient in their responses! Carolina stands behind their products, and if we have any issues, they help address them immediately. They have helped our rapidly expanding A&P program with supplies and models that were very needed in an economical way. I highly recommend working with Carolina Biological."

-Heidi, Professor of Instruction and Laboratory Coordinator, University of Tampa

CONTENTS

	Whole Body	2
	Integumentary System	8
	Skeletal System	10
	Muscular System	16
	Nervous System	20
	Senses	26
	Endocrine System	32
	Cardiovascular System and Blood	34
	Lymphatic System	40
	Respiratory System	42
	Digestive System	46
	Urinary System	50
	Reproductive System	54

DISCOVER FREE RESOURCES

Designed for Instructors and Lab Managers

Quality products can boost student success and make teaching less stressful, but you need more than just the right specimens, models, and kits. You need a partner that understands your challenges. Carolina is ready to help you:



SAVE TIME →

← REDUCE LAB ORDERING STRESS



MAXIMIZE YOUR BUDGET →

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to get free supplemental resources designed for high school and college A&P instructors and lab managers.

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- Lesson Planning Ideas
- Advice on Lab Techniques
- Some Inspiration for the Tough Times

Our Carolina team is here to help you throughout the year with tips, guidance, and support. Visit Carolina.com/anatomy to get started.

Whole Body

The human body is a complex system of organs and organ systems, each with specific independent structures and processes working in concert with the rest. While studying a specific system provides detailed examples of structure and function, developing a whole-body model with explanations of system interactions and interdependencies is an important goal. Carolina provides integrated products to help reach that goal.

Preserved Organisms



Carolina's Perfect Solution® Cat ¹ ⚠

Cat preserved in safe, nontoxic Carolina's Perfect Solution®. Specimen is 18"+ and double injected (red arteries, blue systemic veins). One specimen is single packed and shipped in a vacuum-sealed bag.

228021

¹ California Proposition 65
⚠ WARNING: Cancer – www.P65Warnings.ca.gov



Carolina's Perfect Solution® Rabbit ^{▲1}

Mature rabbit preserved in safe, nontoxic Carolina's Perfect Solution®. Specimen has no color injection (plain). One specimen is single packed and shipped in a vacuum-sealed bag.

228205

For more size and injection options, visit Carolina.com.



Carolina's Perfect Solution® Pig ^{▲1}

Pig preserved in safe, nontoxic Carolina's Perfect Solution®. Specimen is 14"+ and double injected (red arteries, blue systemic veins). One specimen is single packed and shipped in a vacuum-sealed bag.

228396

^{▲1} California Proposition 65
[▲] WARNING: Cancer – www.P65Warnings.ca.gov

“Very effective to use for teaching Anatomy and Physiology. The efficient packing of the cats was highly effective for both receiving and storage purposes.”

- College Lab Manager, Florida (Carolina's Perfect Solution® Cat)

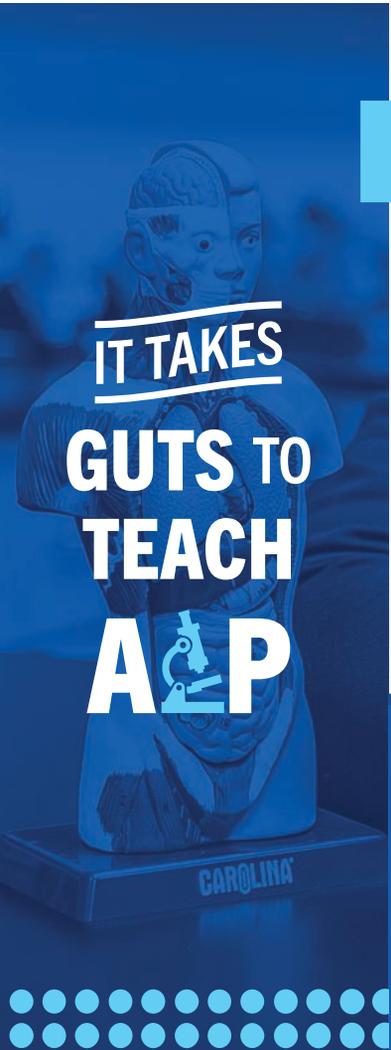


Carolina's Perfect Solution® Rat

White rat preserved in safe, nontoxic Carolina's Perfect Solution®. Pail packed. Size, 7"+. Specimen has no color injection plain.

228304

 **California Proposition 65**
 **WARNING: Cancer** – www.P65Warnings.ca.gov



The Challenge

of Students Failing or Dropping Out

Whether you're teaching anatomy and physiology in high school or college, the course poses challenges for a higher-than-average number of students. Some struggle with the volume of course material, and some don't complete the course. Engage your students and deepen their understanding of key concepts with these tips:

Tip 1

Use models they can manipulate to learn body systems. If your students don't already have designated times to access models outside of class, consider creating opportunities to study with the models right before or after class and lab, or at the start or end of the school day.

Tip 2

Encourage students to create and join study groups that meet regularly (rather than cram for tests).

Tip 3

Bring clarity to dissection activities with double- or triple-injected preserved specimens. Color injections help students better understand specific systems, including the circulatory and hepatic systems.

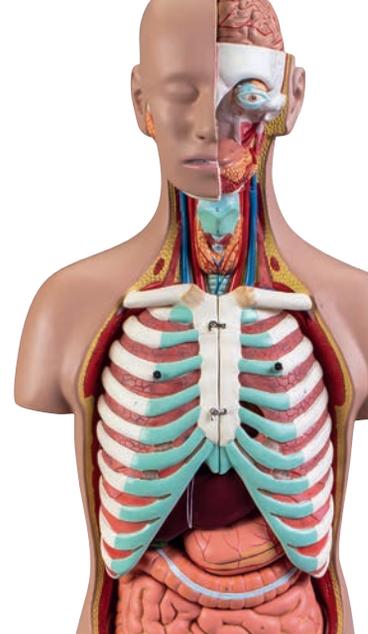




Carolina® Human Dual Sex Torso with Open Back

Life size. With this model students can study multiple body systems and see the proximity of anatomical structures. The 22 removable pieces allow more detailed observation of internal structures of organs such as the heart and stomach. Male and female pelvic inserts are bisected to simplify study of internal and external reproductive structures. With numbered key. Mounted on blue base. Size, 33" H x 14¹/₂" W x 9" L.

569522



Models



Somso® Human Male and Female Torso

Life size. Dissectible into 20 parts. This museum-quality model features interchangeable female (2-part) and male (4-part) genitalia. The removable female thoracic wall depicts the external breast on the left and the mammary glands and musculature on the right. Half of the head is dissected to reveal the brain and skull. The eye, including the optic nerve and muscles, can also be removed. Mounted on green base. Size, 40 x 26 x 92 cm.

566530



Altay® Deluxe Human Male and Female Torso

Life size, 27-part torso features open back with musculature, vertebral column, paravertebral nerve branches, and removable vertebra with section of spinal cord. Additional features include interchangeable male and female urogenital inserts (4 parts each); partial dissection of head showing anatomy of buccal cavity, including vasculature, muscles, glands, and osseous structures; and half of brain is removable. Significant structures are numbered and referenced on the accompanying key. Mounted on a sturdy polymer base. Size (without base), 90 x 23 x 26 cm.

566619B



Carolina® Human Micro Sexless Torso with Open Back

Miniature torso features removable organs and exposed musculature on the right side of the body. The right side of the brain and the bones of the face are also exposed. The back is dissected, revealing the muscular layers, vertebral column, spinal cord, and nerve branches. Separates into 14 pieces. On blue base. Size (with base), 10¹/₂ x 4¹/₂ x 4¹/₂" (26.7 x 11.4 x 11.4 cm).

569502

Microscope Slides

Introductory Histology Set

This set of 25 microscope slides includes representatives of the major tissue types. Ideal for advanced high school courses and beginning college histology courses. Includes study guide.

311974



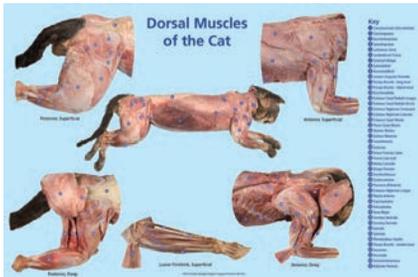
Epithelium Types Set

Eleven microscope slides representing the major types of epithelium.

312016



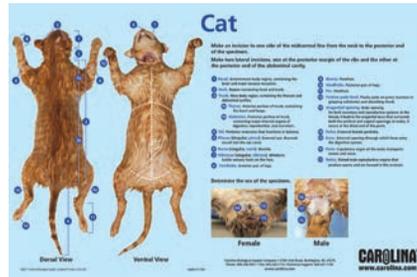
Teacher Resources



Carolina® Muscles of the Cat Dissection Mat

The Carolina® Muscles of the Cat Dissection Mat is specially designed to aid in your study of cat musculature. This large, double-sided vinyl mat resists spills and wipes clean easily. Includes detailed color photographs that help students examine and identify superficial and deep muscles while working with their specimens.

229907



Carolina® Cat Dissection Mat

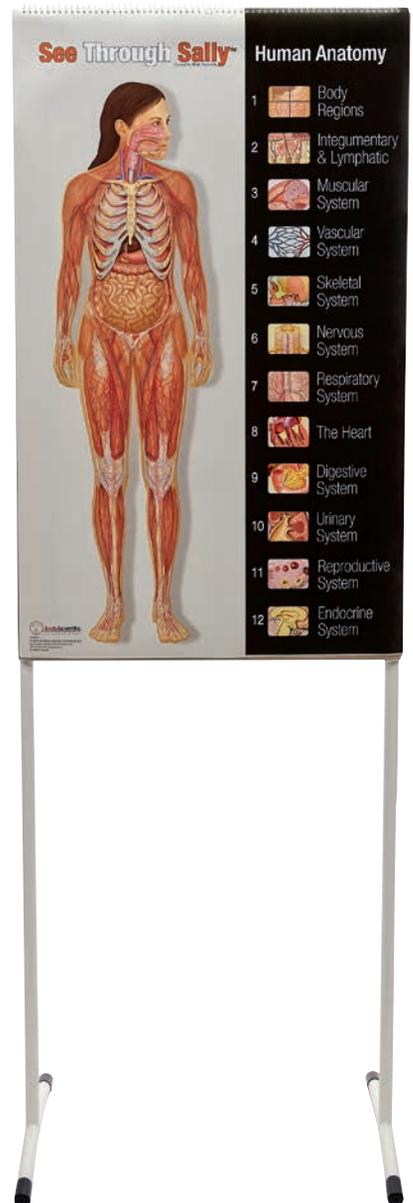
The Carolina® Cat Dissection Mat is specially designed with clear, concise, step-by-step instructions to guide your dissection and aid in your study of the cat. This large, double-sided vinyl mat resists spills and wipes clean easily. Includes detailed color photographs that help students examine and identify both internal and external structures while working with their specimens.

229905

See-Through Sally™ Human Anatomy Chart Set ³

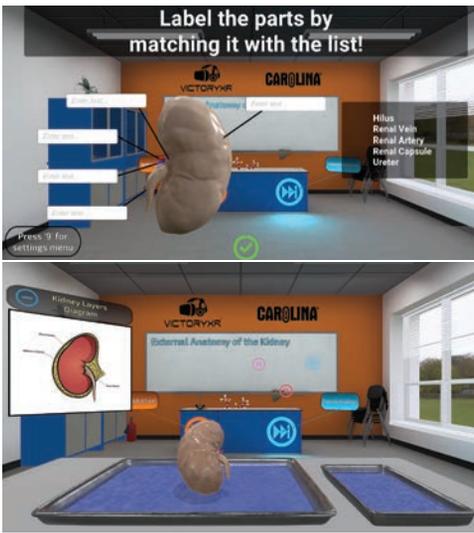
See-Through Sally™ is a set that consists of 12 spiral-bound anatomy charts, each representing a different area of the body, mounted on a rigid metal frame and floor stand. The set is arranged according to both how the body presents its anatomy as if you were removing 1 layer at a time and how systems and organs are sequentially taught in some human anatomy and physiology classes. Chart dimensions, 22" W x 36" H; stand height, 66" H.

576720



³ California Proposition 65

⚠ WARNING: Cancer and Reproductive Harm – www.P65Warnings.ca.gov



Digital Dissection: Mammalian Organs

In this interactive, web-based dissection alternative for your classroom, students learn the anatomy of 4 popular mammalian organs—the brain, eye, heart, and kidney. A teacher guides the students through each separate, engaging experience as they learn the structural anatomy and corresponding functions of the internal and external anatomy; answer assessment questions to check for understanding; and can pause, rewind, or repeat scenes to maximize their comprehension (user-paced). Each step of the dissection procedure is thoroughly covered. This 32-user, per seat license, gives up to 32 individual users the right to use the software. The license duration is 12 months from the date of purchase. **Requirements:** Internet connection; optimized for desktop computers, laptops, and Chromebook® computers. Chromebook® users should see Carolina.com for more information; preferred browser is Google Chrome™. This is a digital product located on CarolinaScienceOnline.com. Once you purchase the license, you will receive an email with an activation code within 24 hours. Visit Carolina.com for more licensing and activation details.

399601

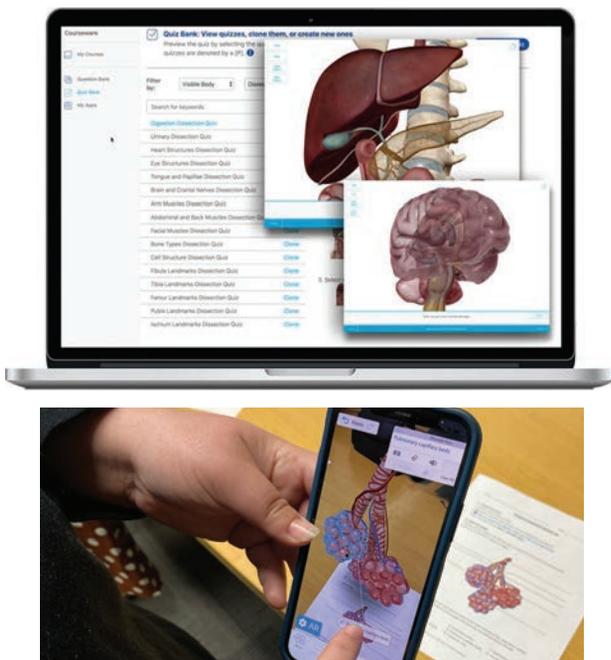
Virtual Reality Cat Dissection: Purr-fect Procedure

Learn the fundamentals of cat anatomy in this fully immersive VR experience. A digitized version of a licensed science teacher appears as a hologram, guiding users throughout the entire process. Thoroughly covers each step of the procedure, just as students would do if they were dissecting a specimen in the classroom. This software license is a 1-year subscription for up to 10 VR-ready computers or VR headsets.

399270



Our Digital Cat Dissection (item #399616) is also available online!



Visible Body® Suite

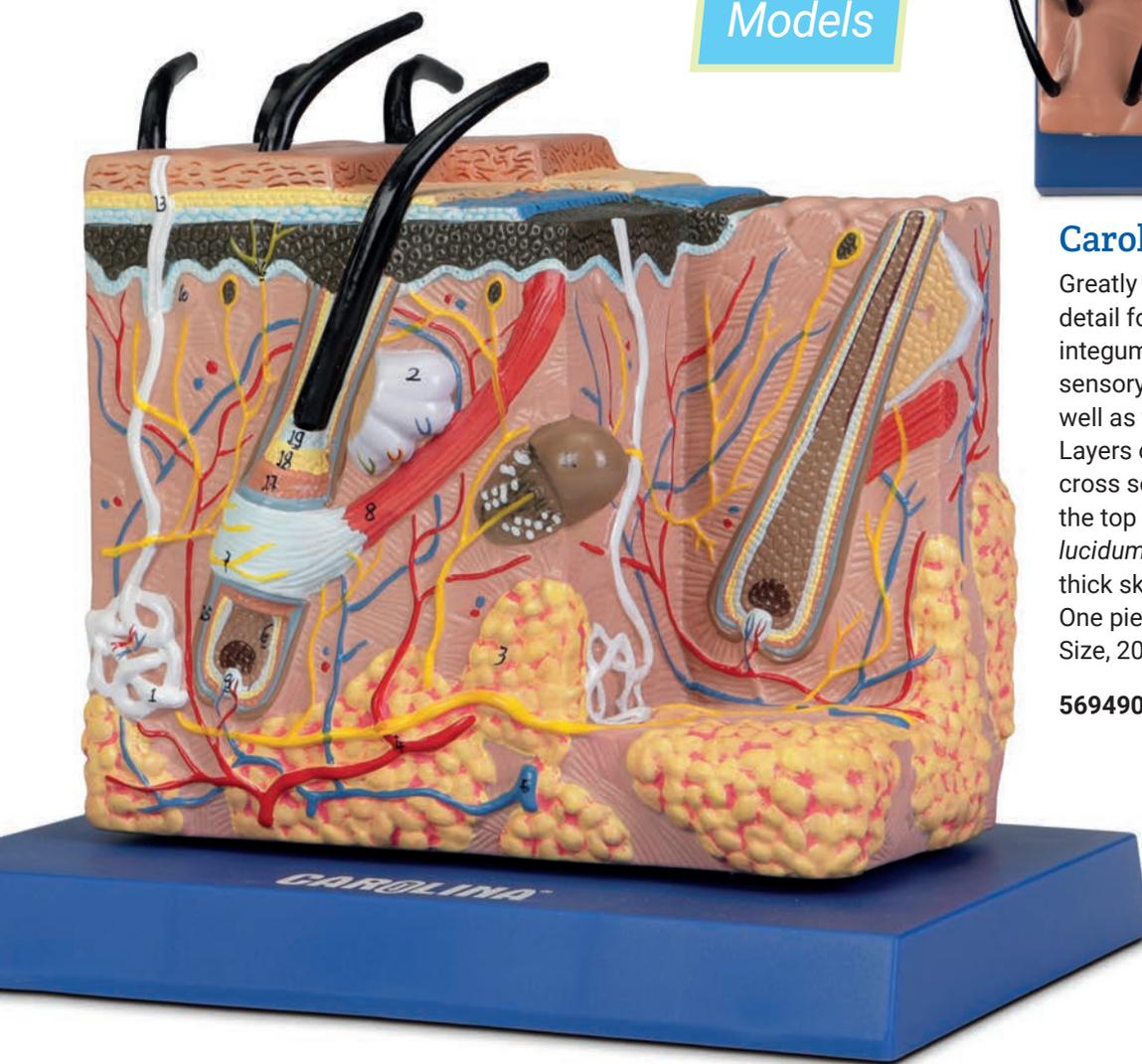
Visible Body® Suite provides a web-based, comprehensive 3D exploration of health science and general biology—no safety goggles or fancy equipment required! With its full 3D dissectible anatomy and biology models, interactive physiology simulations, short animations, self-paced A&P bootcamp, and flashcards for studying, VB Suite is the ultimate one-stop shop for learning and understanding the life sciences. This software license is a 1-year subscription for 1 to 150 users. For more details and licensing options, visit visiblebody.com/carolinalabs.

493765

Integumentary System

Explore the structures and functions of the integumentary system, the interface with the external environment. Our products allow students to examine skin anatomy on macroscopic and microscopic levels while exploring receptor location and function.

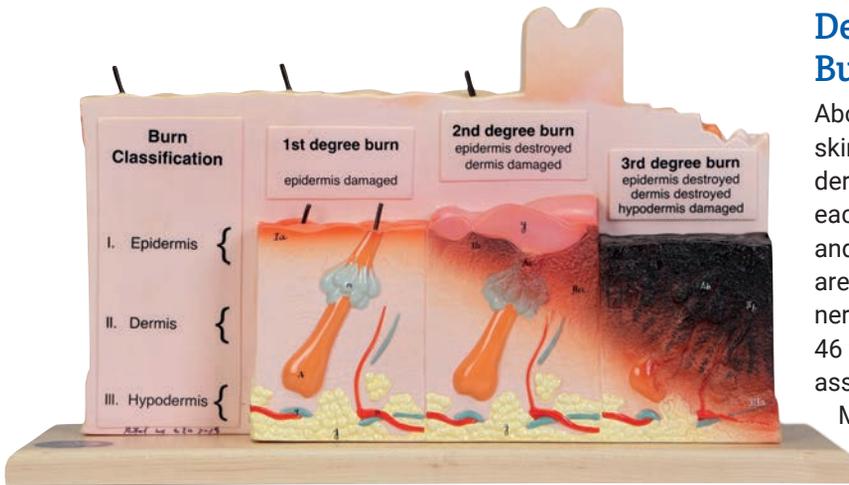
Models



Carolina® Enlarged Skin

Greatly enlarged. Provides enhanced detail for students studying the integumentary system. A variety of sensory receptors are shown, as well as the structure of a hair follicle. Layers of the skin can be seen as a cross section and as cutaways at the top of the model. The *stratum lucidum* is also included to represent thick skin. Laminated key included. One piece. Mounted on blue base. Size, 20 × 22.5 × 15.5 cm.

569490



Denoyer-Geppert Human Skin with Burn Pathologies ¹

About 75x life size. Full relief model shows human skin sections from 3 regions. All strata of epidermis, dermis, and hypodermis with glands characteristic of each region (eccrine sweat glands, sebaceous glands, and apocrine glands) are present. Also represented are blood vessels, hair follicles with hair shafts, nerve fibers, and sensory receptors. Key identifies 46 features. Reverse side illustrates tissue damage associated with first-, second-, and third-degree burns. Measures 16 x 3 x 10".

567666

Microscope Slides

Integumentary System Slide Set

Explore heavily pigmented skin, sweat glands, Meissner's corpuscles, and more with this set of 8 slides. A pathology slide showing severe frostbite is also included.

312090



Types of Skin Set

The 8 microscope slides in this set show samples of skin from various regions of the body, including samples of pigmented and nonpigmented skin.

312094



Teacher Resources

Carolina[®] Cutaneous Sensations Kit

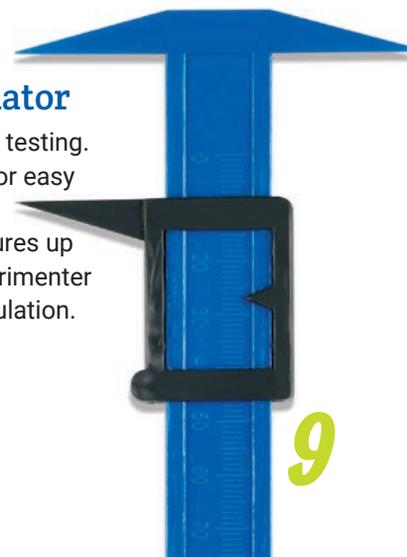
The Carolina[®] Cutaneous Sensations Kit is perfect for a class of 24 students working in small groups. Using an inked grid stamp and specialized stimulator probes, students investigate and compare the density and distribution of sensory receptors for touch, pressure, heat, and cold at various skin locations. With detailed instruction booklet.

695200

Carolina[®] 2-Point Discriminator

Ideal apparatus for cutaneous sensation testing. Durable and economical design allows for easy measurements of 2-point threshold. Molded scale for easy readability; measures up to 100 mm. Additional point allows experimenter to alternate between 1- and 2-point stimulation.

696417



¹ California Proposition 65

¹ WARNING: Cancer – www.P65Warnings.ca.gov

Skeletal System

Study the key functions of the skeleton, bone tissue, and cartilage while examining the biomechanics of joints with models, kits, and microscope slides. Students can work with life-size skeletal models to record comparative bone data; to simulate flexion and extension; and to understand the relationship among tendons, ligaments, and bones.

Altay® Human Muscular Skeleton

Plastic. Get a good-quality skeleton at a good price. This replica of a life-size human skeleton shows all parts in detail. The main joints are articulated; the upper and lower limbs are easily removable. Detachable parts include the skull, cranium, jaw, arms, and legs. On the left side of the skeleton, the points of origin (red) and the points of insertion (blue) of the muscles are shown. Includes hang-up stand and the *Human Anatomy Manual*.

246885

Skeletons

3B® Disarticulated Human Skeleton with Storage Case

Plastic. Life-size, disarticulated full human skeleton consisting of 53 durable plastic pieces. One hand and foot are articulated on wire, while the other pair is loosely articulated on nylon filament. The vertebral column is also strung on nylon filament. Includes a black plastic storage case (item #249890A) with carrying handle and snap fasteners. Use with the 3B® Smart Anatomy App.

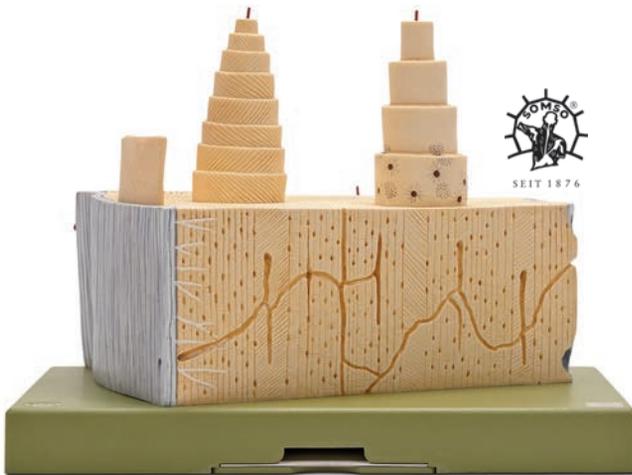
246777



3B® Human Rod-Supported Skeleton

Plastic. Articulated to show normal posture, it features removable extremities and a detachable skull with a cut calvarium. This human skeleton model has 32 teeth with a spring-held lower jaw. It's mounted using a metal rod extending from the sacrum and includes a plastic dust cover, a *Human Anatomy Manual*, and a quadropod base and casters. Use with the 3B® Smart Anatomy App.

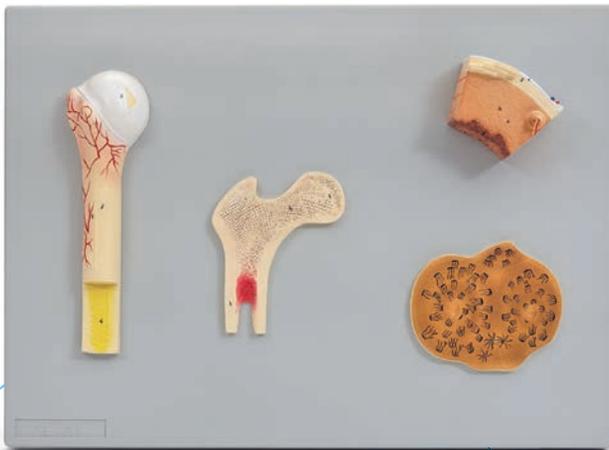
246875



Somso® Human Bone

Greatly enlarged. Cross and longitudinal sections of the compact portion of a long bone. Size, 39 × 26 × 28 cm H. On green base.

567375



Altay® Human Bone Structures

Plastic. Students can learn the major structures of human bone with this quality model. It shows the femur's external and internal structures, including the periosteum, blood vessels, spongy bone, compact bone, and Haversian system. Mounted on a base; size, 20 × 15". Includes a key to identify each numbered structure.

247822





Carolina® Human Skull

Plastic. This life-sized, unmounted model is color-coded to simplify identification of the bones of the skull. Separates into 3 pieces, and the jaw and skullcap are removable. Includes key to identify bones and structures.

569400

Skull

Altay® Human Skull

Plastic. With all structures accurately shown, this is a detailed reproduction of an adult human skull. The calvarium is removable to show internal structures. The mandible is articulated and removable. All joints, sutures, fissures, foramina, and processes are reproduced with utmost accuracy. Includes a key to identify each numbered structure. Comes with *Human Anatomy Manual*.

246950



Limbs

Carolina® Human Skeletal Foot

Plastic. Approximately life size. This model represents the right foot. Bones of the toes, foot, and ankle are represented as are the distal ends of the tibia and fibula. Wired joints allow some movement. One piece, on a blue base. Includes laminated key. Size, 21.5 × 11.5 × 18 cm.

569416



Carolina® Human Skeletal Hand

Plastic. Approximately life size. This is a model of the right hand. The bones of the fingers, hand, and wrist are wired to allow for some movement of the joints, and the distal ends of the ulna and radius are included. One piece, on a blue base. Includes laminated key. Size, 11.5 × 11.5 × 23 cm.

569415



Pelvis

Carolina® Human Female Pelvis

Plastic. Approximately life-sized representation of the female skeletal pelvis, made in 1 piece and unmounted. Included key identifies the 36 labeled structures.

569411



Carolina® Human Male Pelvis

Plastic. Approximately life-sized representation of the male skeletal pelvis, made in 1 piece and unmounted. Included key identifies the 36 labeled structures.

569410



Spinal Column

Altay® Human Flexible Vertebral Column, Color Coded

Plastic. This fully flexible, life-sized vertebral column displays the occipital plate; cervical, thoracic, and lumbar vertebrae; sacrum; coccyx; and complete pelvis. Vertebral arteries, spinal nerves, and a prolapsed L3–L4 intervertebral disc are also shown. The regions of the vertebral column are color coded for easy identification. Includes metal stand for hanging and *Human Anatomy Manual*.

247572



Altay® Human Spine and Thorax

Plastic. Good quality. This complete spinal column features ribs and sternum, associated structures, occipital plate, clavicle, and *scapula*. It is articulated and flexible to show vertebral movements and alignments. Includes the pelvis with ischium, ilium and pubis, sacrum, coccyx, and symphysis. Comes with metal stand and *Human Anatomy Manual*.

247482





Altay® Human Shoulder Joint

Plastic. This model of a flexible shoulder joint with ligaments is life size. It includes the *scapula*, clavicle, and upper part of the *humerus*. Mounted on a base. Includes *Human Anatomy Manual*.

247704

Altay® Human Hip Joint

Plastic. This single-piece life-sized model realistically illustrates the right hip joint with ligaments. Includes *Human Anatomy Manual*.

247940



Joints

Altay® Human Elbow Joint

Plastic. This single-piece life-sized model is a realistic representation of the human elbow with ligaments. Includes *Human Anatomy Manual*.

247712



Altay® Human Knee Joint

Plastic. Representing a functional knee joint, this life-sized model includes the lateral and patellar ligaments and meniscus. Mounted on a base. Includes *Human Anatomy Manual*.

247932



Microscope Slides

Skeletal System Slide Set

Explore the histology of the skeletal system with this set of 7 microscope slides. Students examine the microanatomy of bone and cartilage, as well as intramembranous ossification.

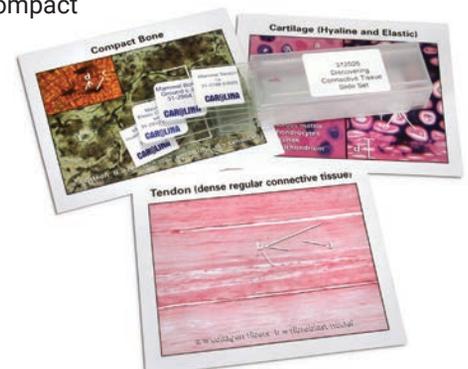
312030



Discovering Connective Tissue Self-Study Unit

This set of 4 microscope slides is designed to aid your study of connective tissue histology. Represented are compact bone, tendon, and elastic and hyaline cartilage. Three self-study cards with a labeled color photograph and background information about compact bone, tendon, and cartilage are also included.

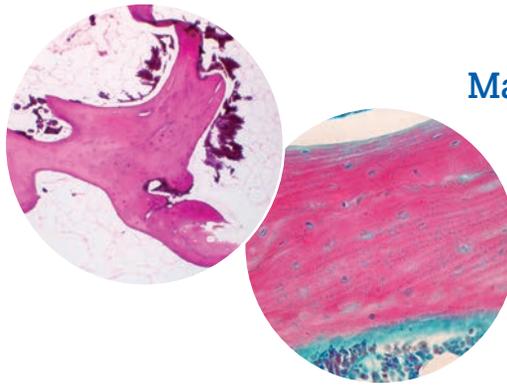
312026



Human Spongy Bone Slide

Stained to show general structures. Thickness, 7 μm , sec. Stain, hematoxylin and eosin.

312946



Mammal Fibrocartilage

Shows tissue from the intervertebral disc or pubic symphysis. Thickness, 10 μm , sec. Stain, hematoxylin and eosin.

312922



Investigating the Interactions of Muscles and Bones Kit

Kits

Students study biophysics of human movement using an ingenious model that simulates the human arm and elbow joint. The cooperation between agonistic and antagonistic muscle groups to create movement is remarkably clear. Examining various types of levers found within the musculoskeletal system, students measure changes in mechanical advantage caused by altering the points of attachment of "muscles" to "bones." The kit contains everything you need for class demonstration or 1 group of students.

696406A



The Challenge

of Students Grasping How Parts Work Together

Many students think they can get through anatomy and physiology by relying on the power of memorization. As every A&P educator knows, it takes more than a sharp memory to make the grade. Physiology demands that students understand how body parts or systems work together. Try these tips to help students grasp the connections:

Tip 1

Use kits that help students visualize body mechanics such as lung volume function, kidney filtration, or the full circulatory system.

Tip 2

Try dissection mats that include concise, step-by-step instructions and detailed color photos to help students conduct dissections and identify internal and external structures.

Tip 3

Get students to show you or another student what they've learned by using models or by creating color-coded drawings.

IT TAKES
GUTS TO
TEACH
A&P

CAROLINA

Muscular System

There are over 600 skeletal muscles in the human body, making identification and memorization a challenge for students. With Carolina® products—such as models, prepared slides, and kits—students can study and review muscle tissue, individual muscles, and how muscles interact to allow the body to move.

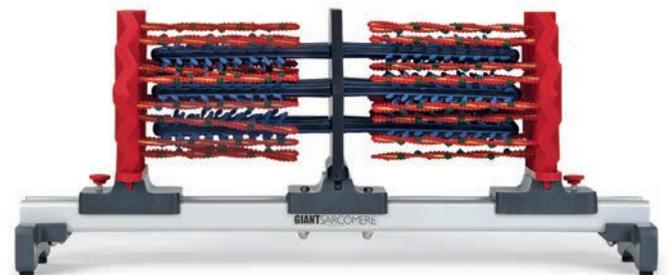
Models

Altay® Miniature Human Muscular Figure

About 1/4× life size. Compact, highly detailed human figure gives excellent overview of superficial musculature. All muscles are positioned and sized to correct scale. Mounted on a durable polymer base. Includes numbered key with 51 identified structures. Size, 25 × 18 × 40 cm.

566644

⚠️ California Proposition 65
⚠️ WARNING: Cancer – www.P65Warnings.ca.gov



Functional Sarcomere ⚠️

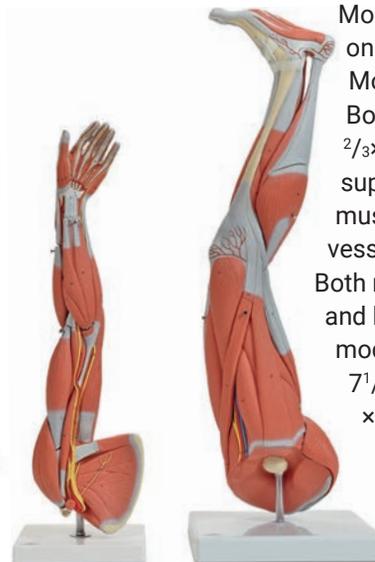
This innovative model illustrates the sliding filament theory of skeletal muscle contraction in a dramatic and understandable manner. Includes a complete sarcomere with the configuration and function of thin filaments (actin, troponin, and tropomyosin) and thick filaments. The M-line and Z-line are readily identifiable. Size, 56 × 15 × 20 cm.

563026

3B® Human Limb Set

Set includes one 3B® Human Left Arm Model (item #566715) and one 3B® Human Left Leg Model (item #566717A). Both models are about 2/3× life size and feature superficial and deeper muscles as well as tendons, vessels, nerves, and bones. Both models are dissectible, and both are on a stand. Arm model size, 23³/₅ × 7¹/₁₀ × 7¹/₁₀". Leg model size, 30³/₁₀ × 10¹/₅ × 10¹/₅". Use with the 3B® Smart Anatomy App.

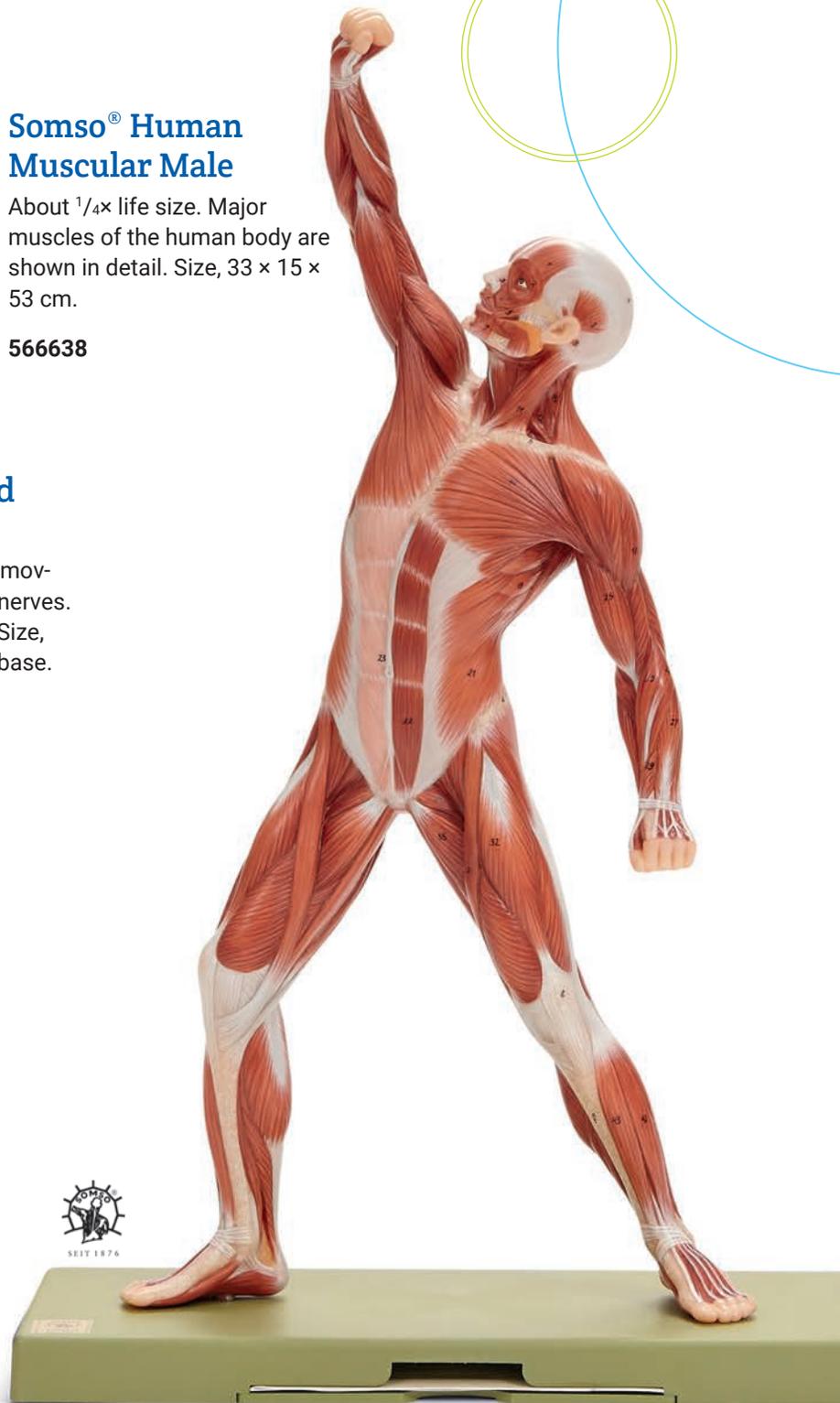
566784



Somso® Human Muscular Male

About 1/4× life size. Major muscles of the human body are shown in detail. Size, 33 × 15 × 53 cm.

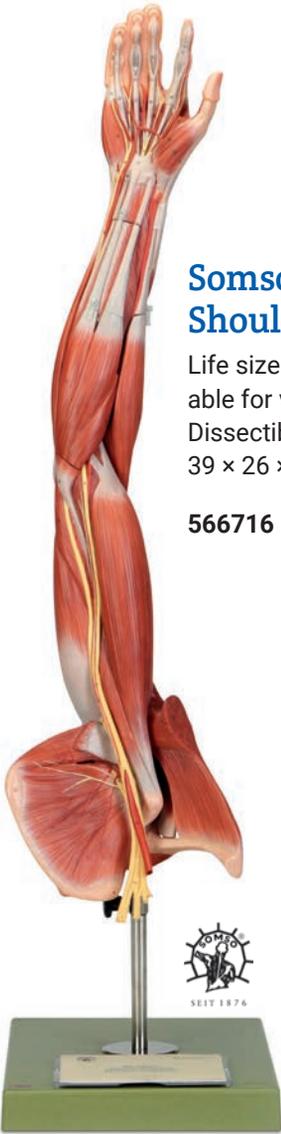
566638



Somso® Human Arm and Shoulder Girdle

Life size. Top layer of muscles is removable for viewing blood vessels and nerves. Dissectible into 6 parts. Rotatable. Size, 39 × 26 × 105 cm H. On stand with base.

566716



Somso® Human Leg and Portion of Pelvis

Life size. Surface muscles are removable for study of blood vessels and nerves. Dissectible into 10 parts. Rotatable. Size, 39 × 26 × 108 cm H. On stand with base.

566717

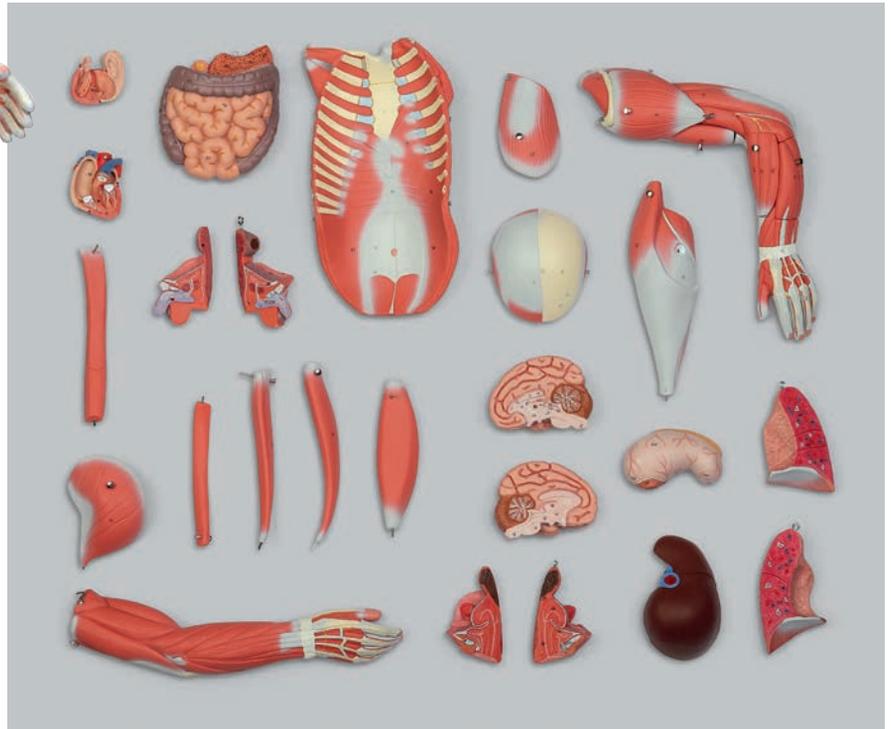




3B® Human Muscular Male and Female

About 1/2× life size. Dissectible into 33 parts. Shows superficial and deep muscles, blood vessels and nerves, and internal organs, which can be partially dissected. Male and female genital organs are interchangeable. On stand with base. About 84 cm tall. Use with the 3B® Smart Anatomy App.

566643A



Microscope Slides

Muscular System Slide Set

Learn the microanatomy of skeletal, smooth, and cardiac muscle with this hand-crafted slide set. These 5 slides are great for your study of the muscular system. Tissues are mammal or human.

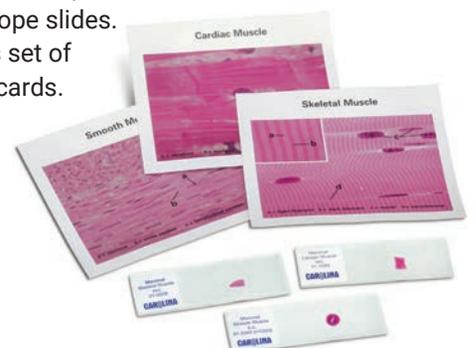
312060



Discovering Muscle Types Self-Study Unit

Smooth, skeletal (striated), and cardiac muscles are represented in this set of 3 microscope slides. Includes set of 3 study cards.

312058



ATP Muscle Kit

Grade 9–College. This activity is designed for minimal prep time and can be completed in 1 class period. Students observe and measure the contraction of real muscle tissue using the materials included. The kit features glycerinated (preserved) muscle tissue that amazingly retains the ability to contract when ATP and the appropriate ions are added. The glycerinated muscle is processed from striated muscle tissue. Materials are sufficient for 16 to 32 students and include FREE 1-year access to digital resources that support 3-dimensional instruction.

203526

Kits



Teacher Resources



Hand Dynamometer ³

For evaluating the strength of the hand and forearm and the progressive nature of muscular fatigue. Durable, enameled steel dynamometer has adjustable grip span. Measures grip strength up to 100 kg.

696962

³ California Proposition 65
WARNING: Cancer and Reproductive Harm – www.P65Warnings.ca.gov

DISCOVER FREE RESOURCES

Designed for Instructors and Lab Managers



SAVE TIME



MAXIMIZE YOUR BUDGET



REDUCE LAB ORDERING STRESS



EVALUATE STUDENT SUCCESS

Quality products can boost student success and make teaching less stressful, but you need more than just the right specimens, models, and kits. You need a partner that understands your challenges. Carolina is ready to help you:

Visit carolina.com/anatomy to get free supplemental resources designed for high school and college A&P instructors and lab managers.

- Instructional Content
- Budgeting Tips
- Advice on Lab Techniques
- Extensive Supply Lists
- Lesson Planning Ideas
- Some Inspiration for the Tough Times

Our Carolina team is here to help you throughout the year with tips, guidance, and support.

Visit Carolina.com/anatomy to get started.

Nervous System

Focus on how the central and peripheral nervous systems work together with activities that include dissections, investigations, and model manipulations. Ensure students can explain how the central and peripheral nervous systems work together to collect and interpret data from the body's internal and the external environments.

Preserved Organisms

Carolina's Perfect Solution® Sheep Brain ^{▲1}

Sheep brain with dura mater, hypophysis (pituitary gland), and cranial nerve roots intact. Specimen is preserved in safe, nontoxic Carolina's Perfect Solution® and has no color injection (plain). One specimen is single packed and shipped in a vacuum-sealed bag.

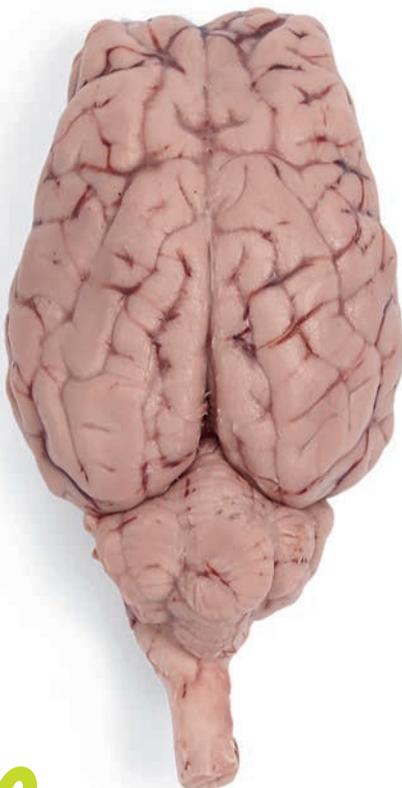
228718



Carolina's Perfect Solution® Sheep Brain ^{▲1}

Sheep brain with dura mater removed and optic chiasma intact, preserved in safe, nontoxic Carolina's Perfect Solution®. Specimen has no color injection (plain). One specimen is single packed and shipped in a vacuum-sealed bag.

228704



^{▲1} California Proposition 65
▲ WARNING: Cancer – www.P65Warnings.ca.gov



Carolina's Perfect Solution® Cow Spinal Cord ¹

Cow spinal cord preserved in safe, nontoxic Carolina's Perfect Solution® and shipped immersed in preservation fluid in a sealed pail. Specimen is a 4 portion and has no color injection (plain).

228924

Models

Carolina® Human Brain with Arteries

About life size. Dissectible into 8 parts. Comes with numbered key that identifies 32 structures, including the main arteries, lobes of the brain, and many internal structures. On blue base. Size (with base), 14.5 × 20 × 17 cm.

569422



Altay® Human Regional Brain

Life size. Two-part brain is color coded to identify primary functional areas within the cerebral cortex. Origins of cranial nerves are prominently identified. Stands upright in contoured storage cradle. Includes numbered key. Size (without base), 16 × 13 × 12 cm.

566790C

¹ California Proposition 65

WARNING: Cancer – www.P65Warnings.ca.gov



Somso® Human Brain Ventricles

Life size. Size, 12 × 12 × 15 cm H.
On stand with base.

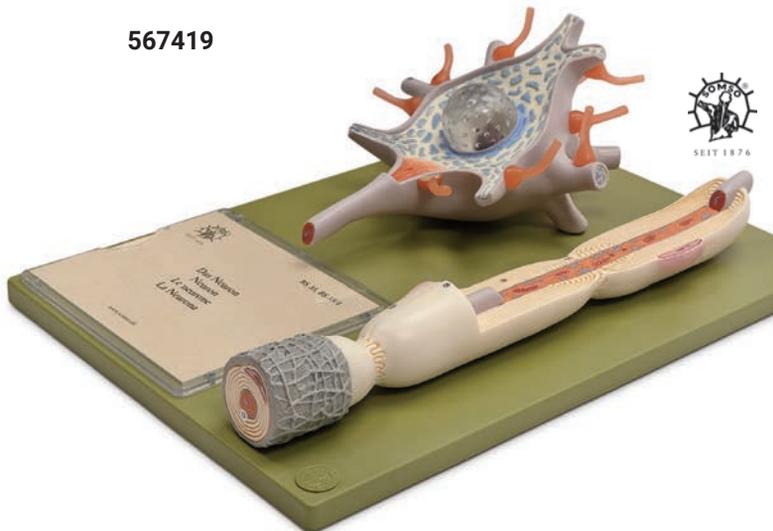
566786



Somso® Human Neuron

Schematic representation of the nerve cell and axon with medullary sheath and Schwann's sheath. On base. Size, 28 × 14 × 40 cm.

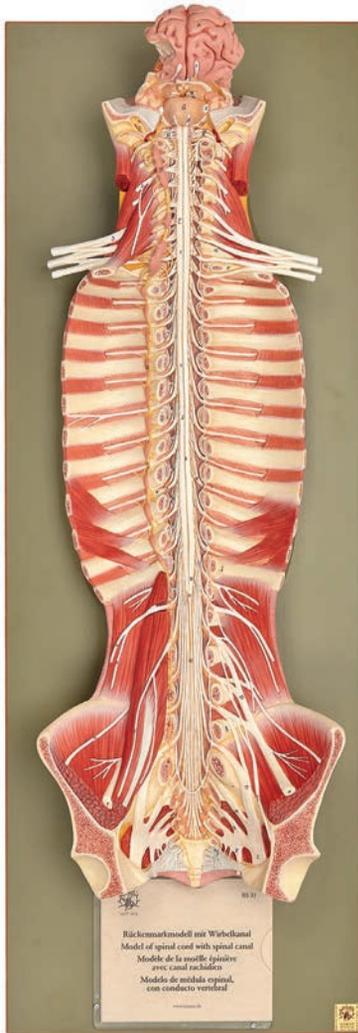
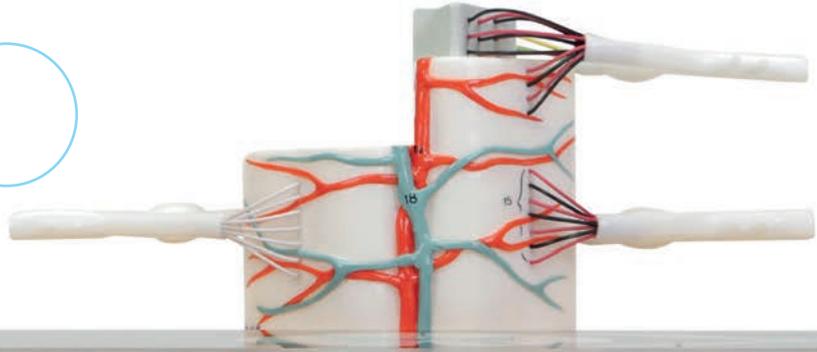
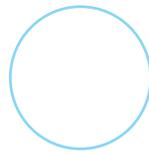
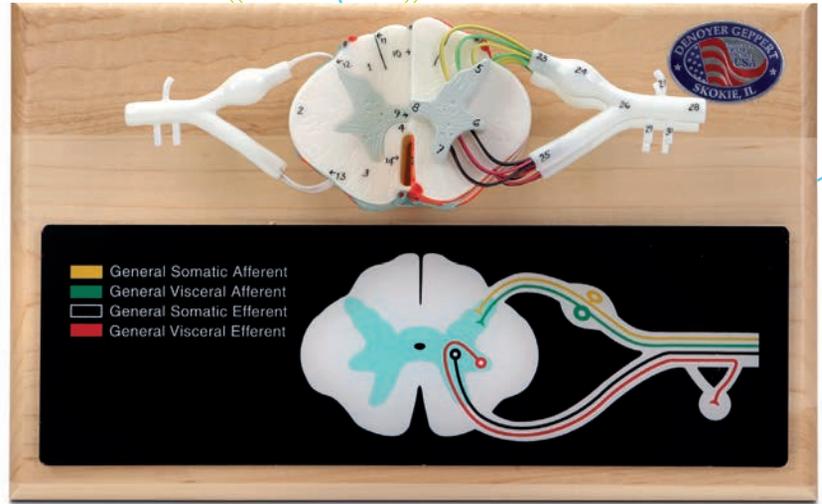
567419



Denoyer-Geppert Deluxe Spinal Cord ¹

Scaled to 6× life size, this vinyl plastic model replicates a segment of the upper thoracic spinal cord. Sectioned both longitudinally and in cross section, a portion of the white matter of the right half has been cut away to expose the anterior and posterior nerve roots which have been color-coded. A color-keyed circuitry schematic is mounted along with the model on the hardwood base. Size, 12 × 8 × 5" (30 × 20 × 13 cm).

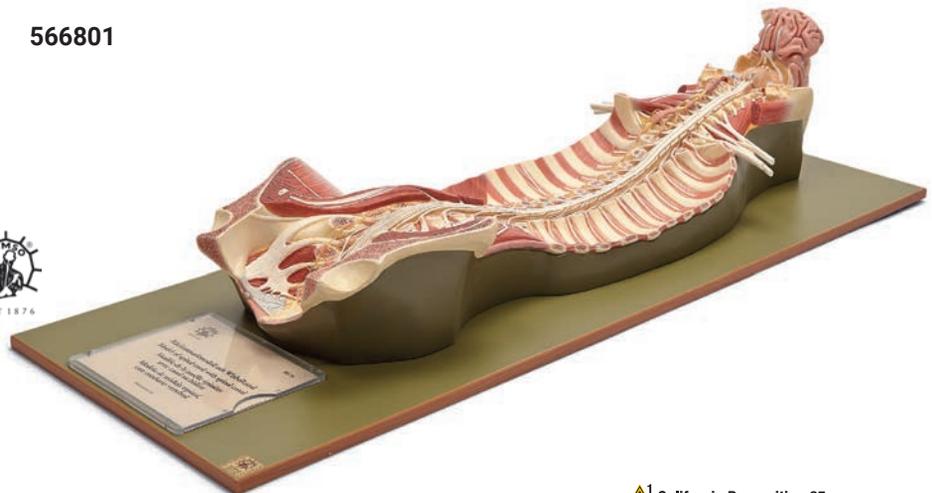
566798A



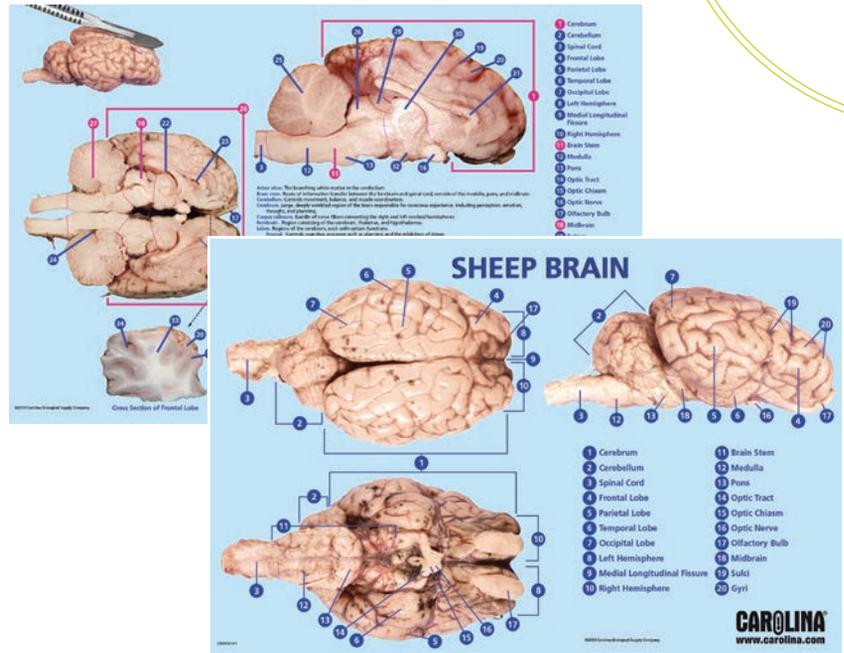
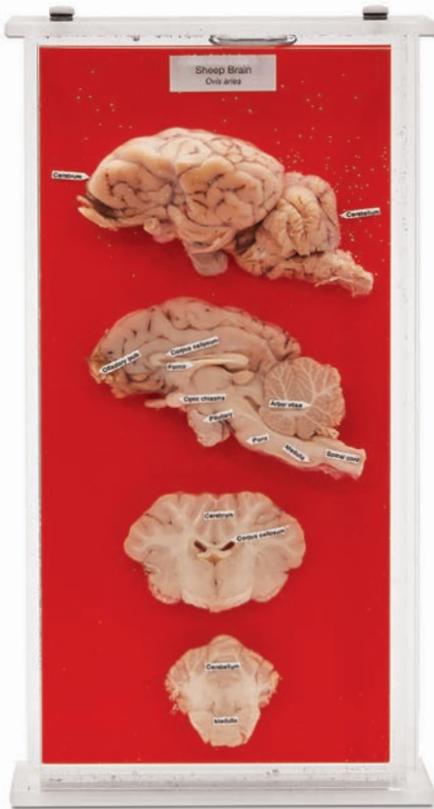
Somso[®] Human Nervous System

Life size. Brain, brain stem, spinal cord, and spinal nerves are shown in position in vertebral column. The sympathetic trunk is shown on left side. On base. Size, 32 × 19 × 90 cm.

566801



¹ California Proposition 65
 WARNING: Cancer – www.P65Warnings.ca.gov



Sheep Brain Biosmount™

Biosmount™ preparation. Preserved sheep brain dissected with external and internal views exposed. Two median sagittal sections and 2 transverse sections are firmly secured to a plastic plate and mounted in a clear acrylic container. Container is filled with a safe, propylene glycol solution and sealed. Labeled. Size, 5 × 10¹/₂".

265310

Carolina® Brain Dissection Mat

The Carolina® Brain Dissection Mat is specially designed with clear, concise, step-by-step instructions to guide your dissection and aid in your study of the brain. The large, double-sided vinyl mat resists spills and wipes clean easily. Includes detailed color photographs to help students examine and identify internal and external structures while working with their specimens. Size, 11 × 17".

229910

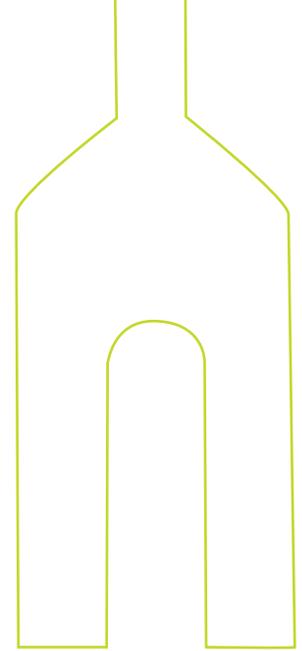
Carolina offers several different types of preserved sheep brains. Choose from specimens with or without the dura mater, injected, in the cranial case, and more. See our full offering at Carolina.com.

"I have used the [Carolina's Perfect Solution® preserved] sheep brains the past few years in my Anatomy and Physiology class during our Nervous System Unit. The students definitely get excited and are very engaged with this dissection. . . . It is also helpful to use the Carolina® [Brain] Dissection Mat to go along with the sheep brain dissection. The large, colorful pictures help students with identification."

- High School Instructor, Illinois

Senses

Senses gather information from the external environment for processing by the brain, helping organisms survive. Carolina has a variety of dissection specimens and models to assist students in learning the structure of sense organs as well as a variety of investigations to help students explain the function of each.



Kits

Carolina BioKits®: Exploring Human Senses ⚠

Grade 9–College. Provide students with materials and procedures to explore the human senses of sight, hearing, touch, taste, and smell. The experiments in this kit explore the reception of stimuli by various sense organs and interpretation of this data by the brain. Students test their own senses as they rotate through 10 stations. Each activity takes about 15 min; the activities can be spread out over multiple class periods. Kit includes materials for 30 students working in groups of 3.

694502



⚠ California Proposition 65

⚠ WARNING: Cancer – www.P65Warnings.ca.gov

26

CAROLINA® | Better labs, better results.





Carolina® Sense of Hearing Kit

Students rotate through 10 activity stations to analyze their own hearing while studying the physiology of human hearing and the physics of sound. Using their classmates as subjects, students perform tests for bone conduction, auditory acuity, and sound localization. For a class of 30 students working in groups of 3.

694742

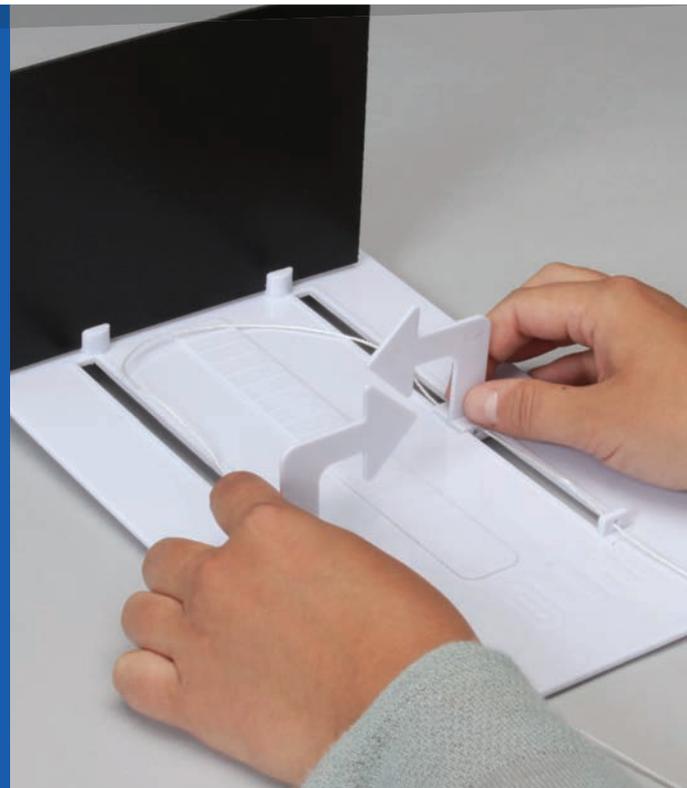
Carolina® Visual Perception Kit

For a class of 30 students working in small groups. This comprehensive kit enables students to investigate many of the physiological processes involved in human vision. Featured activities include testing for visual acuity, depth perception, peripheral vision, color vision, and astigmatism; positive and negative afterimages; optical illusions; and more.

694527

“The students in my Anatomy class loved the [Carolina®] Visual Perception Kit. We liked the variety of the activities involved. Students were able to understand what the activities we were checking [are]. I would highly recommend this lab for other classes.”

- High School Instructor, Tennessee





Altay® Human Eye

6× life size. Vitreous humor, lens, and iris are removable. A section of the surface is dissected to show vascular distribution to choroid and retina; extrinsic eye muscles are well represented. The interior view features *fovea centralis*, optic nerve, and ciliary muscles. On stand with base. Size (without stand), 18 × 17 × 15 cm.

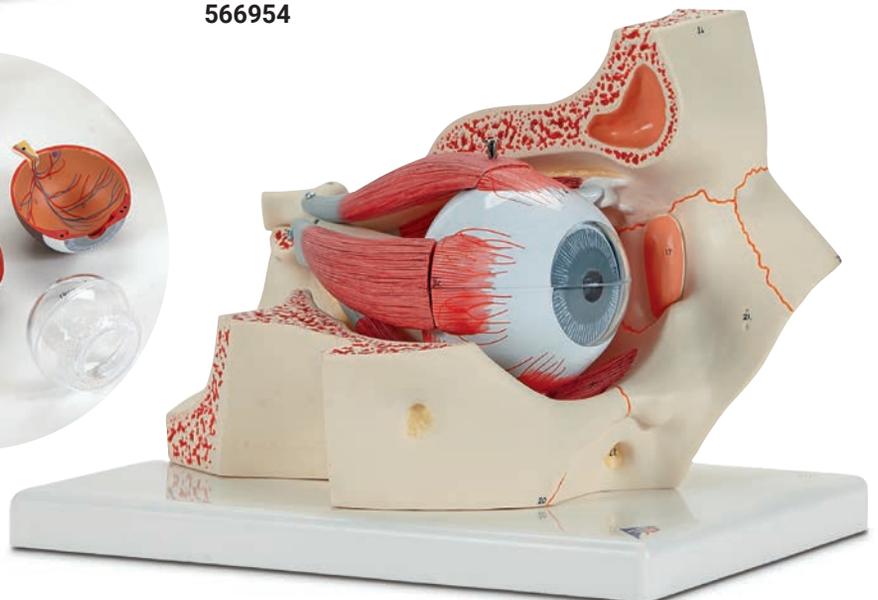
566945A

Models

3B® Human Eye in Orbit

3× life size. This 7-part model is positioned realistically in the bony orbit, complete with extraocular muscles and optic nerve. Use with the 3B® Smart Anatomy App.

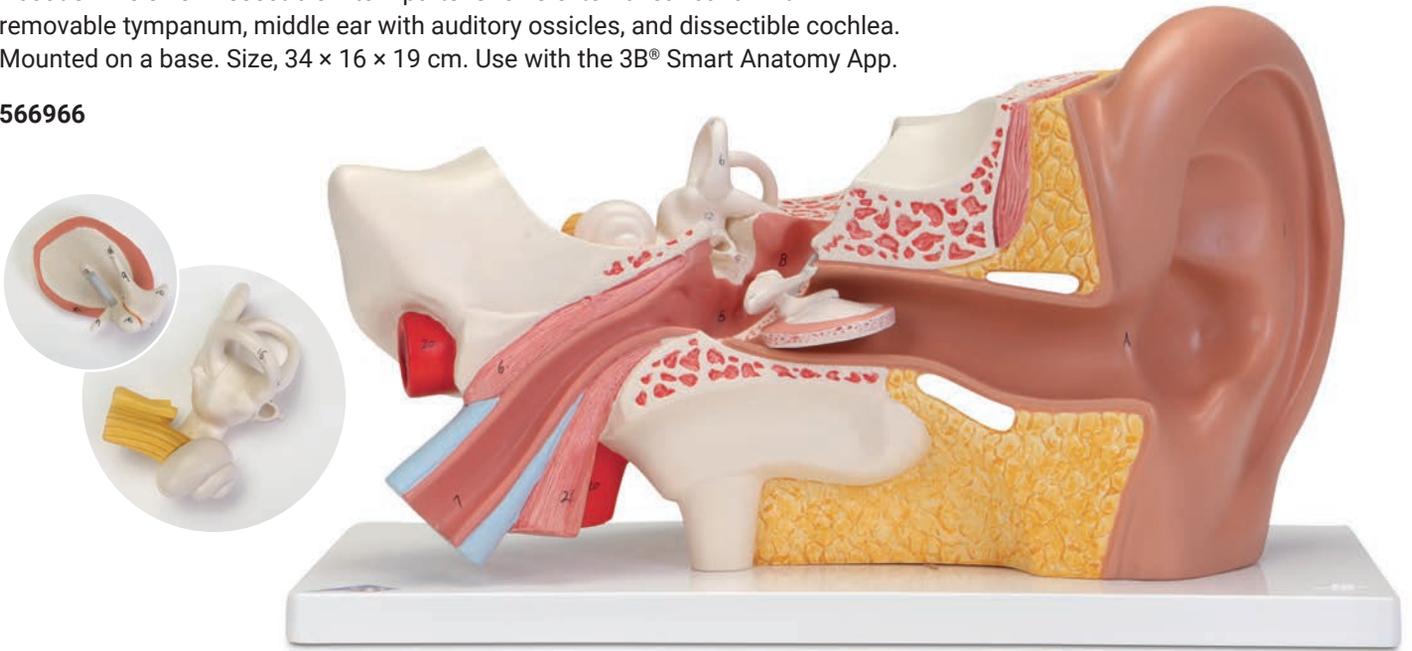
566954



3B® Human Ear

About 3× life size. Dissectible into 4 parts. Shows external ear canal with removable tympanum, middle ear with auditory ossicles, and dissectible cochlea. Mounted on a base. Size, 34 × 16 × 19 cm. Use with the 3B® Smart Anatomy App.

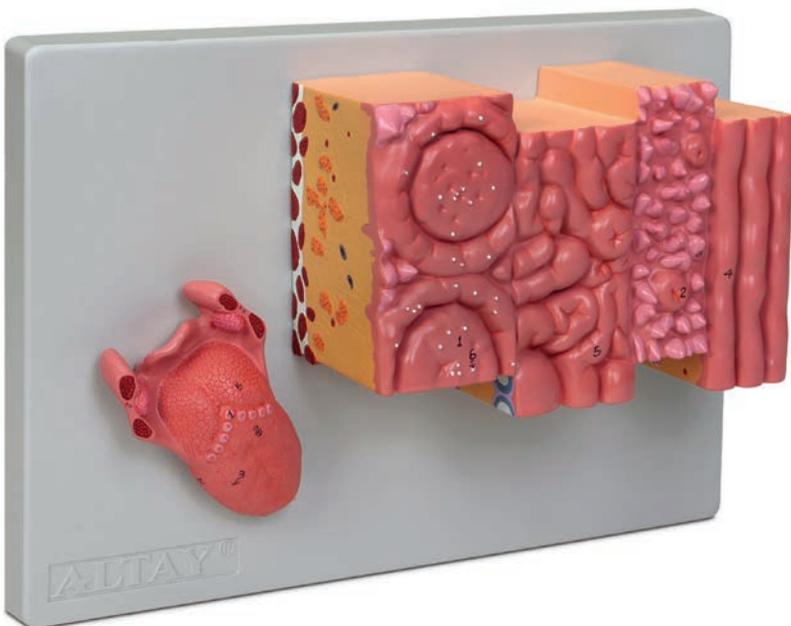
566966



Altay® Microstructure of the Human Tongue

About 20× life size. Histological features of the tongue are shown, including taste buds, lingual and mucous glands, and fine structure of the musculature. A separate life-sized model of the intact tongue—featuring the palatine and lingual tonsils and the epiglottis—is included. Mounted on a durable polymer base. Includes numbered key. Size, 33 × 23 × 11 cm.

567466



Altay® Human Nasal Cavity

Life size. Depicts a section of the nasal cavity. The sinus cavities are also shown.

566747



Mammal Cochlea Slide

Shows a longitudinal section of the mammal cochlea. Stained to show the general structure of the inner ear. Thickness, 7 μ m, l.s. Stain, hematoxylin and eosin.

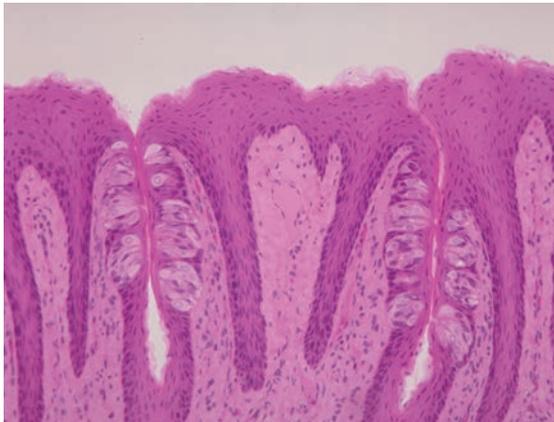
313830



Mammal Eye Slide

Shows a median longitudinal section of the mammal eye. Stained to show general structures. Thickness, 7 μ m, median l.s. Stain, hematoxylin and eosin.

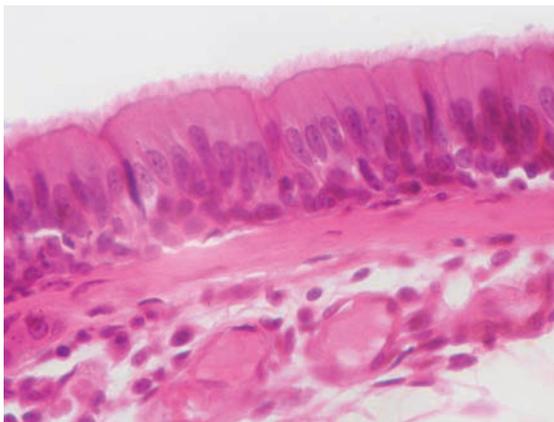
313842



Mammal Tongue Slide

Section of rabbit tongue shows the foliate papillae or taste buds. Thickness, 7 μ m, sec. Stain, hematoxylin and eosin.

314758



Mammal Olfactory Epithelium Slide

Shows mammal olfactory epithelium. Stained to show general structures. Thickness, 7 μ m, sec. Stain, hematoxylin and eosin.

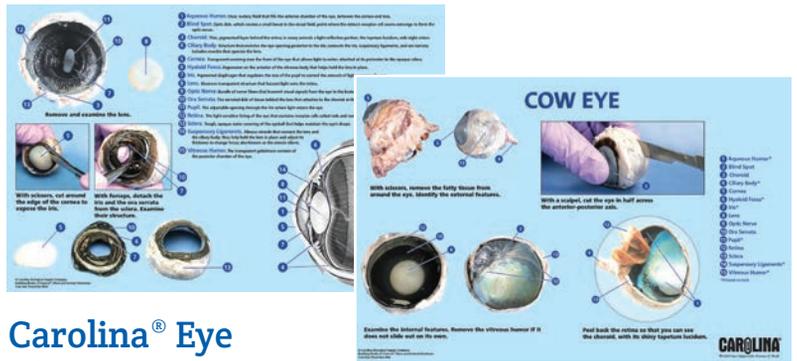
315610

Preserved Organisms

Carolina's Perfect Solution® Cow Eye [▲]1

Cow eye preserved in safe, nontoxic Carolina's Perfect Solution® and shipped immersed in preservation fluid in a sealed pail. Specimen has no color injection (plain). Prices listed are for 1 specimen.

228903



Carolina® Eye Dissection Mat

The Carolina® Eye Dissection Mat is specially designed with clear, concise, step-by-step instructions to guide your dissection and aid in your study of the eye. The large, double-sided vinyl mat resists spills and wipes clean easily. Included on the mat are detailed color photographs to help students examine and identify internal and external structures while working with their specimens. Labeled and defined key structures promote a better understanding of the eye. Size, 11 × 17".

229930

Teacher Resources



Student Otoscope Set

Durable plastic otoscope features high-intensity illumination; molded optical lens gives clear, amplified macro view of ear canals or nasal passages. Comes with 3 ear specula and 2 nasal specula. Powered by 2 AAA batteries (included).

694738



Snellen Eye Examination Chart

High-quality wall chart for use at 20 ft; students can check their visual acuity while they study vision physiology. Instructions included. Pack includes 3 charts.

694611

[▲]1 California Proposition 65
[▲]WARNING: Cancer – www.P65Warnings.ca.gov

Endocrine System

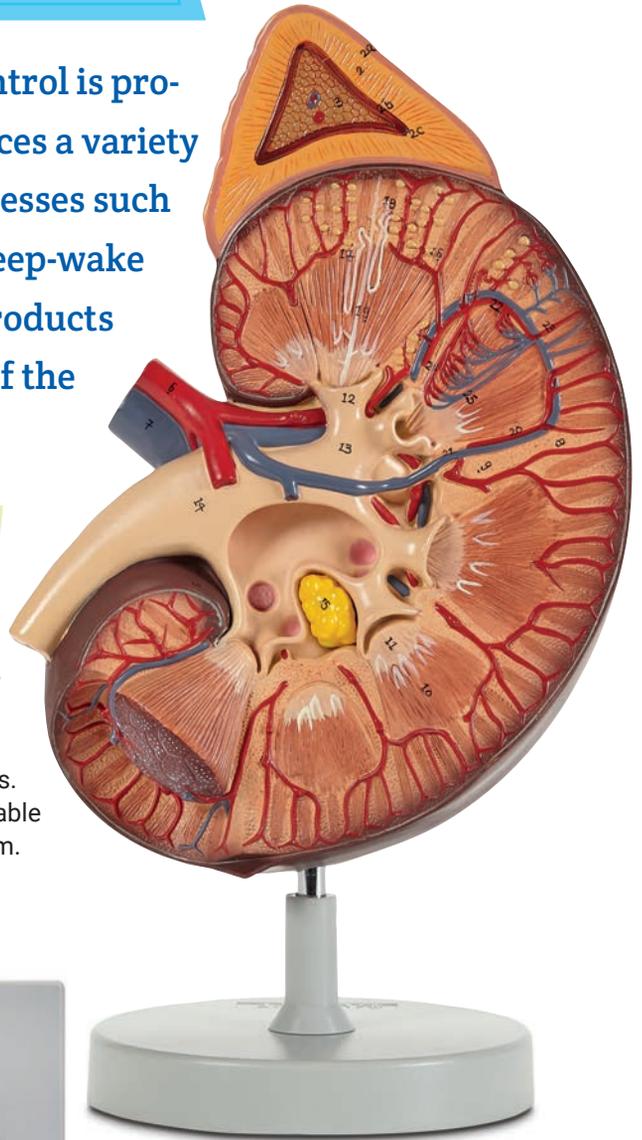
The human body's internal physiological control is provided by the endocrine system, which produces a variety of hormones responsible for regulating processes such as growth, heart rate, blood pressure, the sleep-wake cycle, metabolism, and reproduction. Our products help students understand the complexities of the physiology and feedback loops within the endocrine system.

Models

Altay® Deluxe Kidney and Adrenal Gland

About 4× life size. A median section provides a detailed internal view of the human kidney and adrenal gland, including vascular, filtration, and urinary collection structures. The model mounts on a pole stand for display and is removable for examination. Includes numbered key. Size, 28 × 17 × 8 cm.

566921B



Altay® Human Endocrine Organs

About life size. This plaque mount features individual representations of pituitary, adrenal, thyroid, and parathyroid glands, plus a testis and a dissected ovary with fallopian tubes and associated structures. With key. Size, 53 × 38 cm.

566933



Microscope Slides

Endocrine System Slide Set

Tissues of the pituitary (hypophysis), thyroid, parathyroid, and adrenal glands, along with the pancreas are included in this set of 5 slides.

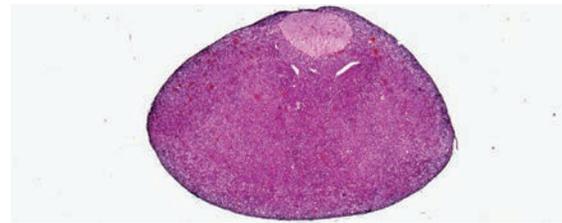
312021



Mammal Hypophysis Slide

Shows pituitary gland. Stained to show general structures. Thickness, 7 μm , sec. Stain, hematoxylin and eosin.

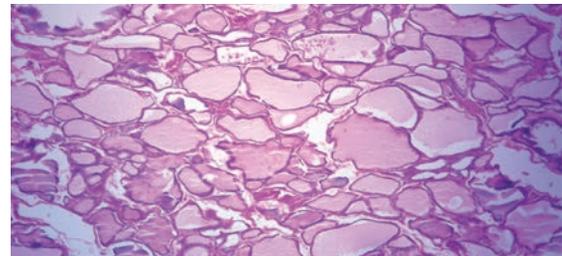
316670



Human Thyroid Gland Slide

Stained to show general structures. Thickness, 7 μm , sec. Stain, hematoxylin and eosin.

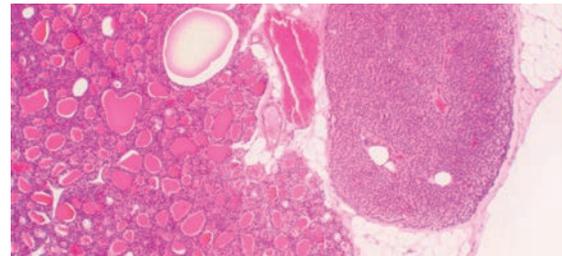
316700



Mammal Thyroid and Parathyroid Glands Slide

Stained to show general structures. Thickness, 7 μm , sec. Stain, hematoxylin and eosin.

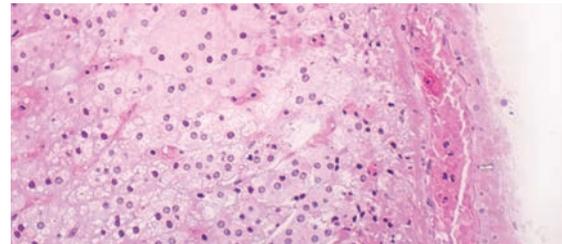
316718



Mammal Adrenal Gland Slide

Shows mammal adrenal (suprarenal) gland. Stained to show general structures. Thickness, 7 μm , sec. Stain, hematoxylin and eosin.

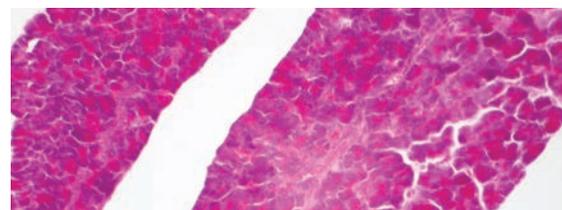
316750



Human Pancreas Slide

Stained to show general structures. Thickness, 7 μm , sec. Stain, hematoxylin and eosin.

315466



Cardiovascular System

Use models, preserved specimens, and kits to increase student understanding of the cardiovascular system. Students study the anatomy of the heart, observe agglutination reactions in blood typing, explore blood components, and identify different cardiovascular and blood pathologies with Carolina® materials.

Preserved Organisms

Carolina's Perfect Solution® Sheep Heart ^{▲1}

Sheep heart preserved in safe, nontoxic Carolina's Perfect Solution® and shipped immersed in preservation fluid in a sealed pail. Specimen has no color injection (plain).

228773

^{▲1} California Proposition 65

[▲] WARNING: Cancer – www.P65Warnings.ca.gov

"Great quality hearts. The convenient pail allows our institution to buy in bulk and store remaining specimen[s] between semesters. The specimen[s] stay fresh, and clean-up is incredibly easy. Carolina has fantastic specimen[s], which augment instruction for any A&P or biology course."

- College Lab Manager, Georgia

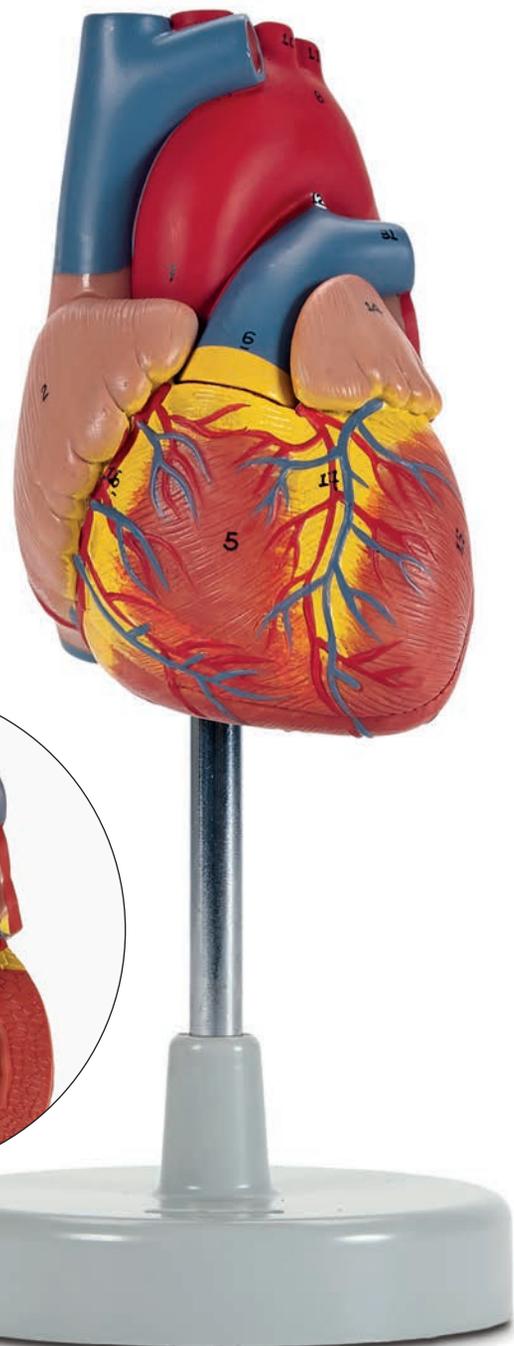




Carolina® Human Heart

2x life size. This 3-piece model is enlarged for enhanced detail of internal and external structures. Comes with numbered key that identifies 30 structures, including the coronary arteries and veins. The anterior portions of the ventricles and the atria are removable. On blue base. Size (with base), 15.75 x 19 x 17.5 cm.

569440



Models

Altay® Human Heart

Life size. Dissectible into 2 parts. Clearly shows internal and external anatomy including valves, cardiac chambers, and pulmonary and systemic vascular structures. All significant features are numbered; key included. Mounted on stand. Size (without stand), 14 x 10 x 9 cm.

566903A



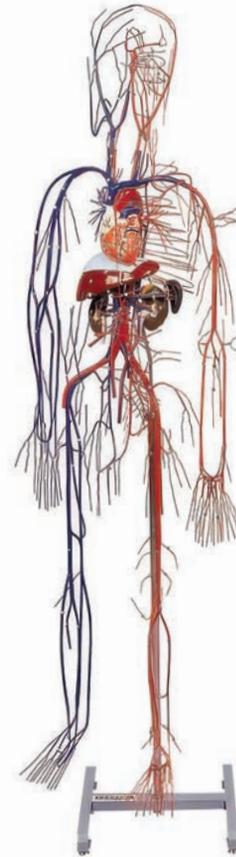
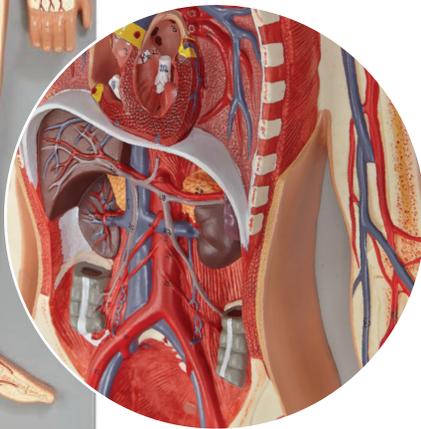


Altay® Human Circulatory System

About 1/2× life size. This generalized representation of the human circulatory system includes a 2-part heart, lungs, liver, spleen, kidneys, and circuitry of the pulmonary and systemic circulatory pathways. With key. Mounted on a durable polymer base.

Size, 32 × 90 × 12 cm.

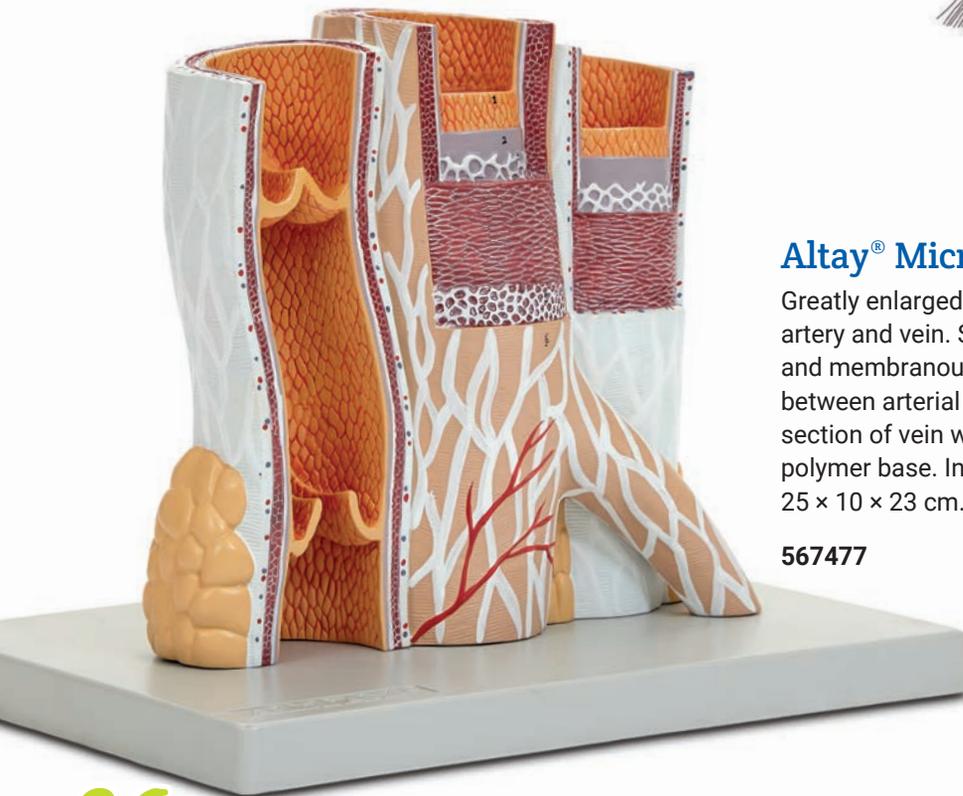
566841A



Human Full-Figure Circulatory System

Kyoto Kagaku. 3/4× life size. Internal organs are accurately positioned and blood vessels are differentiated, with arteries (red) shown on left side and veins (blue) on right side. With model key. Crafted using hardened plastic-coated metal wire. Supported by metal rod; mounted on stand.

566848



Altay® Microstructure of Artery and Vein

Greatly enlarged block model shows anatomical details of artery and vein. Serial sectioning exposes sequential muscular and membranous layers and illustrates the differences between arterial and venous wall thickness. Included is a cut section of vein with venous valves. Mounted on a durable polymer base. Includes numbered key. Size (without base), 25 × 10 × 23 cm.

567477

Carolina STEM Challenge®: Circulatory System Kit

Student teams compete to model the heart's pumping action and gain a better understanding of how blood circulation works in the body. Students construct models and perform a series of increasingly complex design challenges to demonstrate their knowledge of how vessels, heart valves, and contracting chambers work together. This 8-station kit is designed for a class of 32 students working in groups of 4. FREE 1-year access to digital resources included. Supports NGSS and 3-dimensional instruction. Learn more about Carolina Kits 3D® labs at Carolina.com/3D.

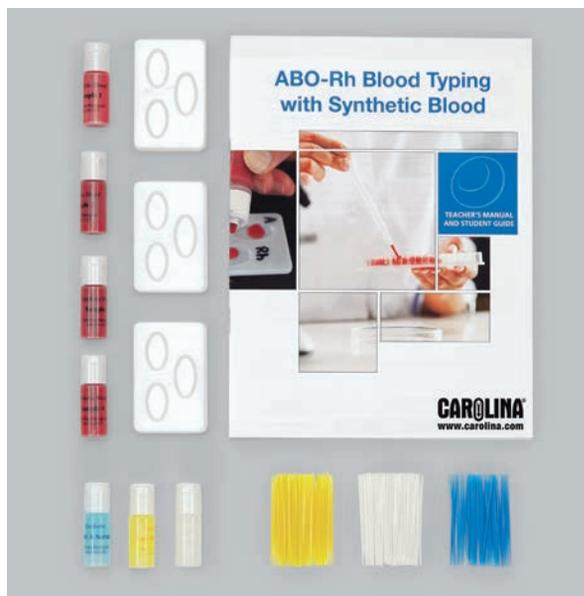
691003



Carolina® ABO-Rh Blood Typing with Synthetic Blood Kit

Students experience realistic blood typing without any of the risks. Our ABO-Rh blood typing kit uses Carolina's exclusive synthetic blood products, which offer the authenticity of real blood without any of the risks. Students test 4 unknown blood samples as they explore basic concepts of immunology. Kit comes with enough materials for 30 students working in pairs. Refill (item #700102) is also available.

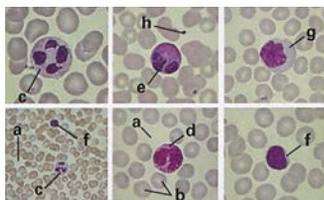
700101



Carolina BioKits®: Wright Readi-Stain® ²

For a class of 30 students to stain blood smears and observe white blood cells. No blood required.

700380



² California Proposition 65
 WARNING: Reproductive Harm – www.P65Warnings.ca.gov



MaLa Scientific Leukemia and Blood Cell Modeling Kit

Give your students the opportunity to learn about difficult concepts with a hands-on approach. Using petriscope models, they are able to observe and recognize a variety of blood disorders, including lymphatic leukemia, myeloid leukemia, and monocytic leukemia. Then they synthesize a model of normal or diseased blood using disposable beads. Models are analyzed on a magnified hemocytometer chart for diagnosis.

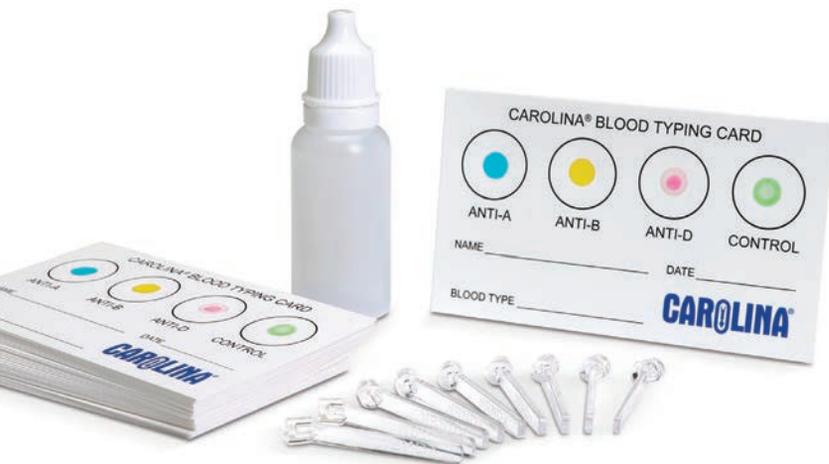
695110

Teacher Resources

Carolina® Blood Typing Cards

Students can test their own blood samples for ABO/Rh blood types with these typing cards. Each card features dried antisera, making it easy to type blood without the mess and concerns about using and storing liquid antisera. Simply add a drop of the blood sample to each of the designated circles on the card using the included blood-typing sticks. This pack of 30 cards includes 3 resealable, 10-card pouches with desiccant packs.

700574



Bisected Mammal Heart Biosmount™

Biosmount™ preparation. The mid-sagittal dissection separates the preserved heart into 2 halves showing the 4 chambers, valves, papillary muscles, interventricular septum, aorta, etc. The specimen is firmly secured to a plastic plate and mounted in a clear acrylic container filled with a safe propylene glycol solution and sealed. Labeled. Size, 5 × 10¹/₂".

265248

Microscope Slides

Cardiovascular System Slide Set

Students study the histology of veins, arteries, blood, and more with this comprehensive set of 9 slides. A pathology slide showing atherosclerosis in an artery is also included.

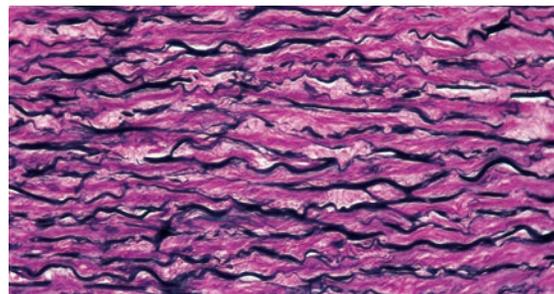
312048



Human Aorta Slide

Shows a cross section of the human aorta. Stained to show general structures. Thickness, 7 μm , c.s. Stain, Verhoeff.

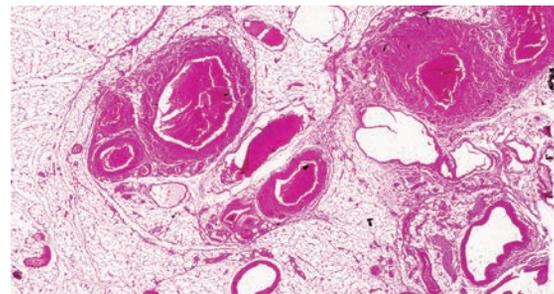
314010



Human Artery and Vein Slide

Shows a cross section of both a human artery and vein. Stained to show general structures. Thickness, 7 μm , c.s. Stain, hematoxylin and eosin.

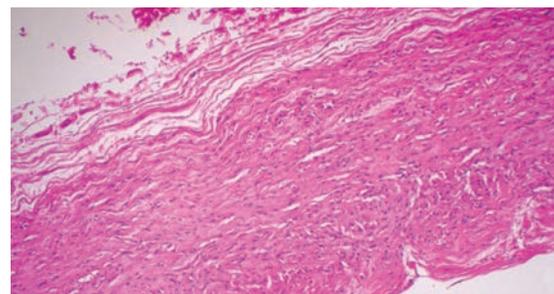
314094



Human Vena Cava Slide

Shows the smooth muscle that makes up the vena cava, as well as major structures such as the *tunica media* and *tunica adventitia*. Thickness, 7 μm , c.s. Stain, hematoxylin and eosin.

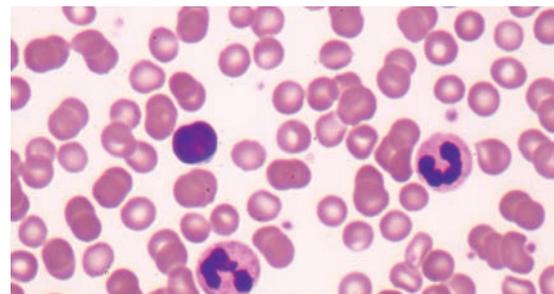
314046



Human Blood Film Slide

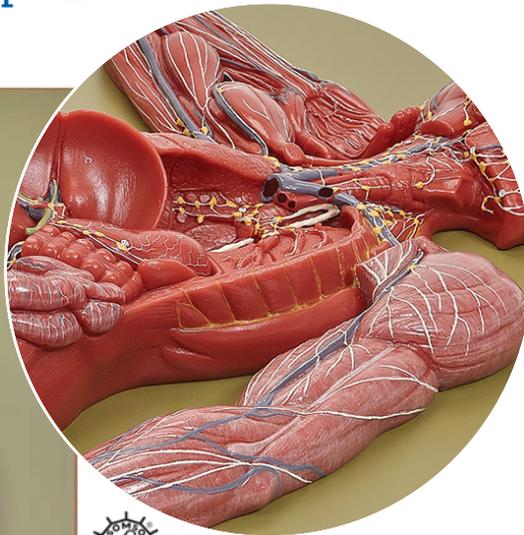
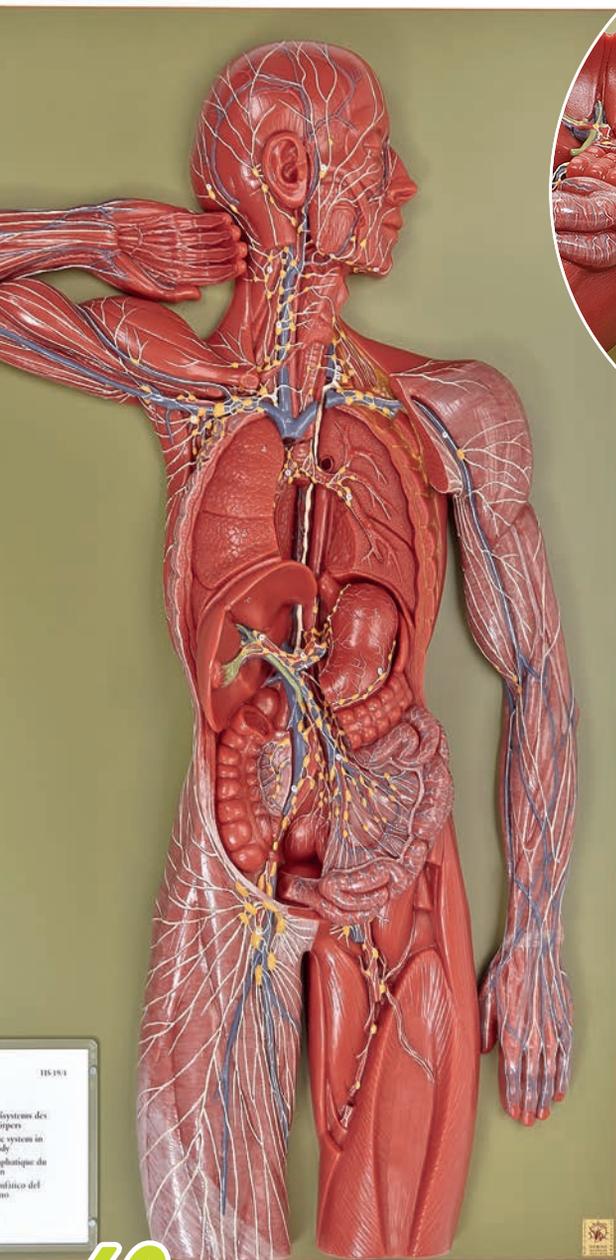
Our most popular blood microscope slide. Shows human blood cells stained with Wright stain.

313158



Lymphatic System

The lymphatic system plays a vital role in the body's immunity to disease and pathogens. It's responsible for allergic reactions as well as fighting diseases that range from the common cold to cancer. Help students understand the body's immune response with Carolina® kits, models, and prepared microscope slides.



Somso® Human Lymphatic System

$\frac{2}{3}$ × life size. Relief model depicting lymphatic vessels, ducts, and lymph nodes with numbered key. On green base. Size, 84 × 54 × 12 cm.

566842

Models



Eisco® Human Lymph Node

Greatly enlarged. Shows incoming lymph vessel, germinal center, sinus, outgoing lymph vessel, capsule, trabecula, incoming blood supply artery, and vein for outgoing blood. Identification key card included. Mounted on base. Size, 61 × 38 × 24 cm.

566844

Kits

Carolina BioKits®: Immunodetective Investigation

For a class of 30 students, working in teams of 2. Students use the double diffusion technique in agar gel to study the antigen-antibody reaction. **Note:** Contains perishable items; please give use date on order. Sold only to schools and businesses.

202100



Microscope Slides

Lymphatic System Slide Set

Study the histology of the lymphatic vessel, lymph node, tonsil, spleen, thymus, and ileum showing Peyer's patches with this set of 6 microscope slides.

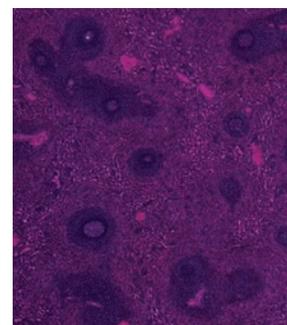
312023



Human Spleen Slide

Stained to show general structures. Thickness, 7 µm, sec. Stain, hematoxylin and eosin.

314346



Mammal Lymphatic Vessel Slide

Shows a whole mount of lymphatic vessel in mammalian mesentery and valve. Stain, Mayer's Paracarmine.

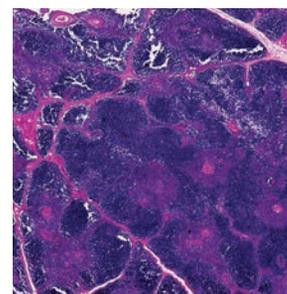
314250



Human Thymus Slide

Stained to show general structures. Thickness, 7 µm, sec. Stain, hematoxylin and eosin.

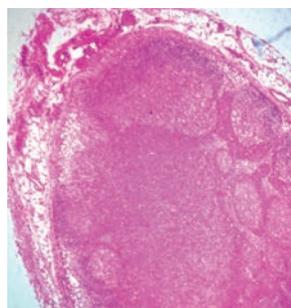
314382



Mammal Lymph Node Slide

Shows a mammalian lymph node from a cat or dog. Stained to show general structures. Thickness, 7 µm, sec. Stain, hematoxylin and eosin.

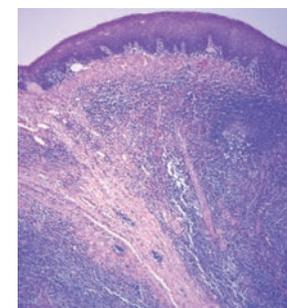
314256



Human Palatine Tonsil Slide

Stained to show general structures. Thickness, 7 µm, sec. Stain, hematoxylin and eosin.

314298



Respiratory System

The respiratory system—comprising lungs, conducting airways, and the diaphragm—is responsible for gas exchange in the body. Lung dissections and models help students understand the structure of the respiratory system. Investigations of the breathing mechanism help students explain the biomechanics and biochemistry of the process. Carolina has the materials you need to support learning.



Portable Dry Spirometer

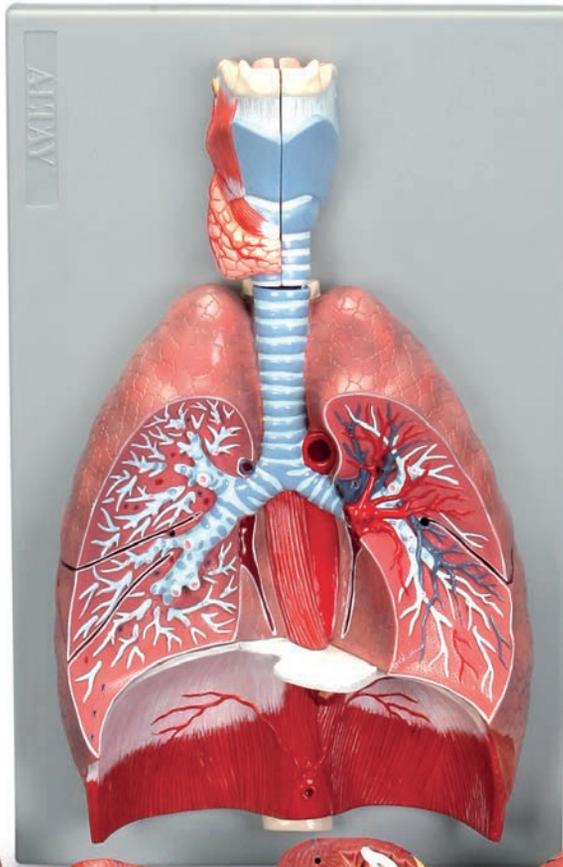
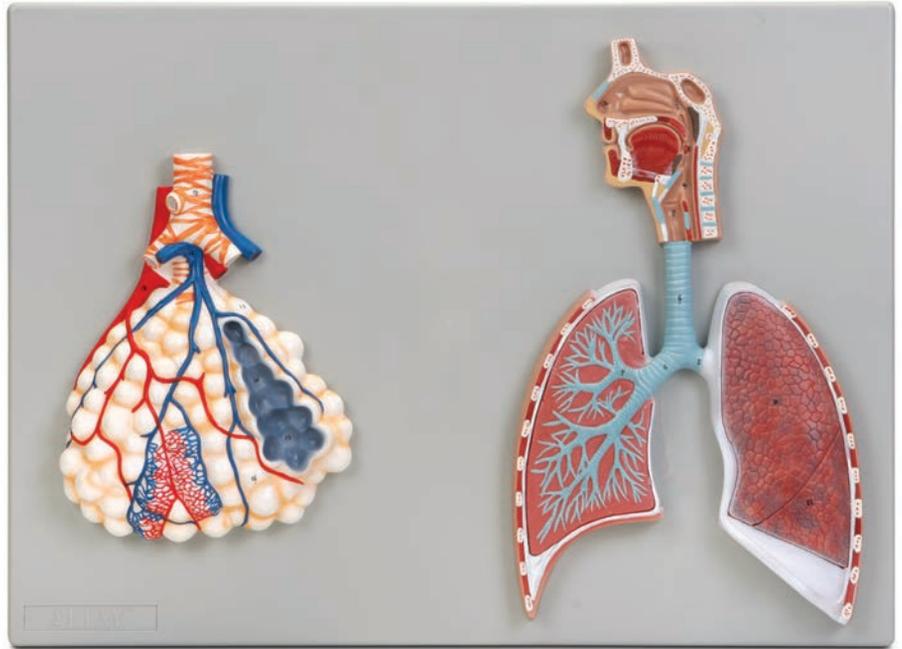
Easily demonstrate and measure lung function in your classroom with this accurate, handheld, dry gas meter. It measures vital capacity, tidal volume, and expiratory reserve volume. Students can then calculate inspiratory reserve volume and inspiratory capacity from these values. The gauge is calibrated to 7 L in 100-cc increments. Includes 50 reusable mouthpieces, $\frac{7}{16}$ " ID.

692670

Altay® Human Respiratory System

Two-part model shows respiratory airway structures from the nasopharynx to the terminal bronchioles of the right lung. Surface view of left lung shows superior and inferior lobes. Highly magnified representation of pulmonary alveoli shows association with terminal bronchioles and capillary bed. Structures are numbered and referenced on the accompanying key. Plaque mounted. Size, 53 × 38 cm.

566915B

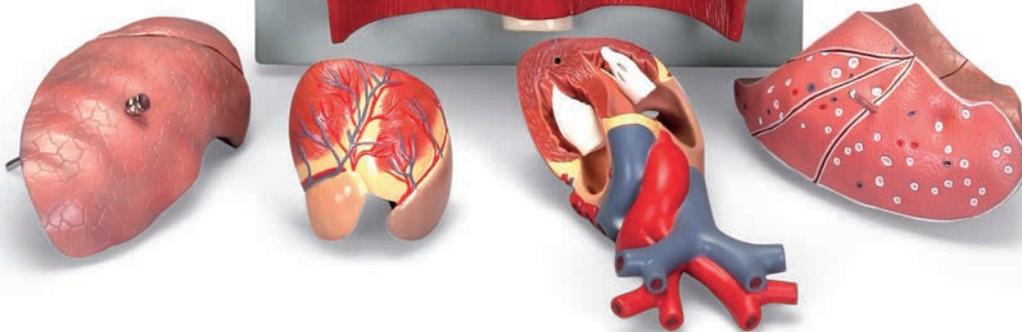


Models

Altay® Human Respiratory System

Life size. Dissectible into 7 parts. Heart (2 parts), larynx (2 parts), and lungs are shown with great attention to detail. A portion of the diaphragm is included. Mounted on a base. Size (without base), 36 × 20 × 12 cm.

566915C



Microscope Slides

Respiratory System Slide Set

This set of 5 microscope slides includes the olfactory epithelium, larynx, trachea, and lung. A pathology slide showing anthracosis, or black lung, is also included. All slides are from mammalian or human tissue.

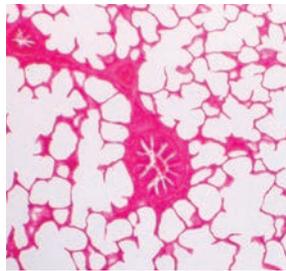
312100



Human Lung Slide

Shows a section of a normal, healthy human lung. Stained to show general lung tissue structures. Thickness, 7 μ m, sec. Stain, hematoxylin and eosin.

315670



Mammal Larynx Slide

Shows a section of mammalian larynx. Stained to show general structures. Thickness, 7 μ m, sec. Stain, hematoxylin and eosin.

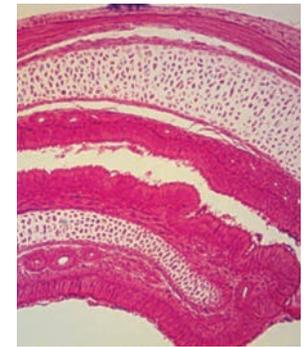
315620



Mammal Trachea Slide

Shows a cross section of mammalian trachea. Stained to show general structures. Thickness, 7 μ m, c.s. Stain, hematoxylin and eosin.

315612



Teacher Resources

Lung Function Model

Classical bell jar model demonstrates the role of diaphragmatic contraction in causing the lungs to inflate. Includes shatter-resistant plastic bell jar (8 x 8") with rubber "diaphragm" and balloon "lungs." **WARNING: CHOKING HAZARD—Children under 8 yrs. can choke or suffocate on uninflated or broken balloons. Adult supervision required. Keep uninflated balloons from children. Discard broken balloons at once.**

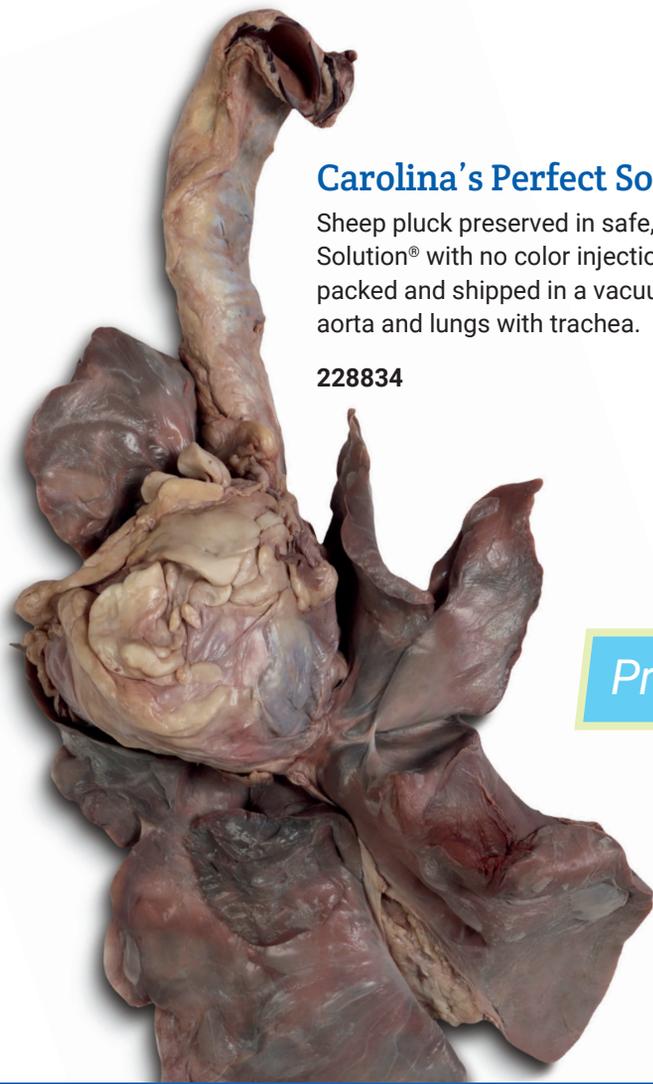
692636



Lung Volume Bag Set

For determining maximum lung volume (vital capacity). Student exhales fully into a bag, then squeezes the expired gas into the bottom of the bag. Vital capacity is read directly from wall of the bag (marked in 100-mL increments up to 6 L). Set includes 4 heavy-gauge plastic reusable bags with mouthpiece holders and 30 disposable mouthpieces. Mouthpiece Replacements (item #692647) are available separately.

692645



Carolina's Perfect Solution® Sheep Pluck [⚠]

Sheep pluck preserved in safe, nontoxic Carolina's Perfect Solution® with no color injection (plain). One specimen is single packed and shipped in a vacuum-sealed bag. Includes heart with aorta and lungs with trachea.

228834



Preserved Organisms

[⚠] California Proposition 65

[⚠] WARNING: Cancer – www.P65Warnings.ca.gov

The Challenge

of Students Following Correct Lab Techniques

Anatomy and physiology educators know the drill: you explain correct lab techniques over and over again. Even with the best of teaching and repeated demonstration, some students continue to struggle with proper lab techniques. Try these tips to help students grasp the connections:

Tip 1

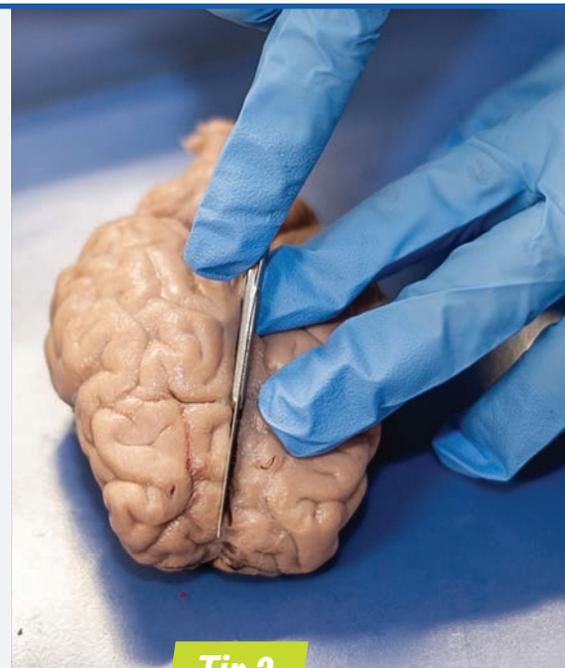
Save yourself time and avoid frustration by using videos to explain lab techniques.

Tip 2

Make a video of yourself demonstrating proper lab techniques, or take advantage of free online videos.

Tip 3

Explore Carolina's videos on effective lab techniques at Carolina.com/anatomy.



IT TAKES
GUTS TO
TEACH
ANATOMY

CAROLINA

Digestive System

The digestive system breaks down food into smaller molecules so that nutrients can be easily absorbed. Using Carolina® models and prepared microscope slides, students explore the anatomy of digestive organs, such as the stomach, liver, and small intestine. Demonstrate the process of digestion with Carolina® kits.

Kits



Carolina BioKits®: Digestion ^{▲2}

Introduce students to the role of gastric and intestinal enzymes in digestion. Students test the effect of pH, temperature, and concentration on the enzymatic processes and the need for digestion before absorption. Materials are sufficient for 32 students working in groups of 4. Contains perishable items to be refrigerated upon arrival.

202340

^{▲2} California Proposition 65

[▲] WARNING: Reproductive Harm – www.P65Warnings.ca.gov

Microscope Slides

Digestive System Slide Set

This set of 16 microscope slides takes you on a histological tour of the digestive system. Mammalian or human tissue from all the main organs and accessory organs are included. Also contains a pathology slide showing human carcinoma of the stomach.

312108



Discovering Intestine Tissues Self-Study Unit

Contains a single slide featuring the 3 regions of the small intestine (duodenum, jejunum, and ileum) and 3 self-study cards (one for each region), each featuring labeled color photographs and background information.

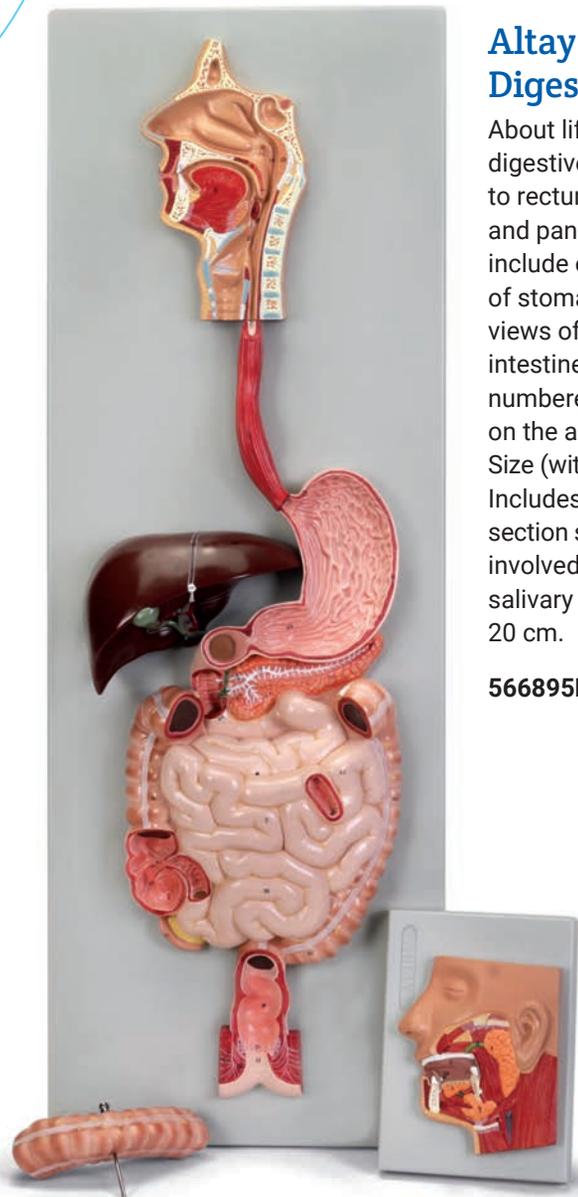
315000



Altay® Human Digestive System

About life size. Shows entire digestive tract from mouth to rectum including the liver and pancreas. Features include open dissection of stomach and interior views of small and large intestines. All structures are numbered and referenced on the accompanying key. Size (with base), 92 × 32 cm. Includes a separate head section showing musculature involved in mastication and salivary glands. Size, 15 × 20 cm.

566895B



Somso® Human Stomach

Life size. Dissectible into 2 parts to show the internal and external anatomy of the human stomach. Includes a numbered key. Size, 19 × 18 × 34 cm.

566896

3B® Microanatomy of the Digestive System

3B® Scientific. Greatly enlarged. Fine tissue structure of esophagus, stomach, small intestine, and large intestine are shown in open histological section. Mounted on a base. Size, 26 × 29 × 18.5 cm. Use with the 3B® Smart Anatomy App.

567460



Altay® Liver and Gall Bladder with Pancreas and Duodenum

About life size. Liver and gall bladder are sectioned sagittally. Pancreas and duodenum are opened to show routing of pancreatic and bile ducts. Spleen, stomach, and jejunum are present for positional reference. Hepatic, mesenteric, and splenic vasculature are well represented. Includes numbered key. Mounted on a durable polymer base. Size (without base), 19 × 14 × 4 cm.

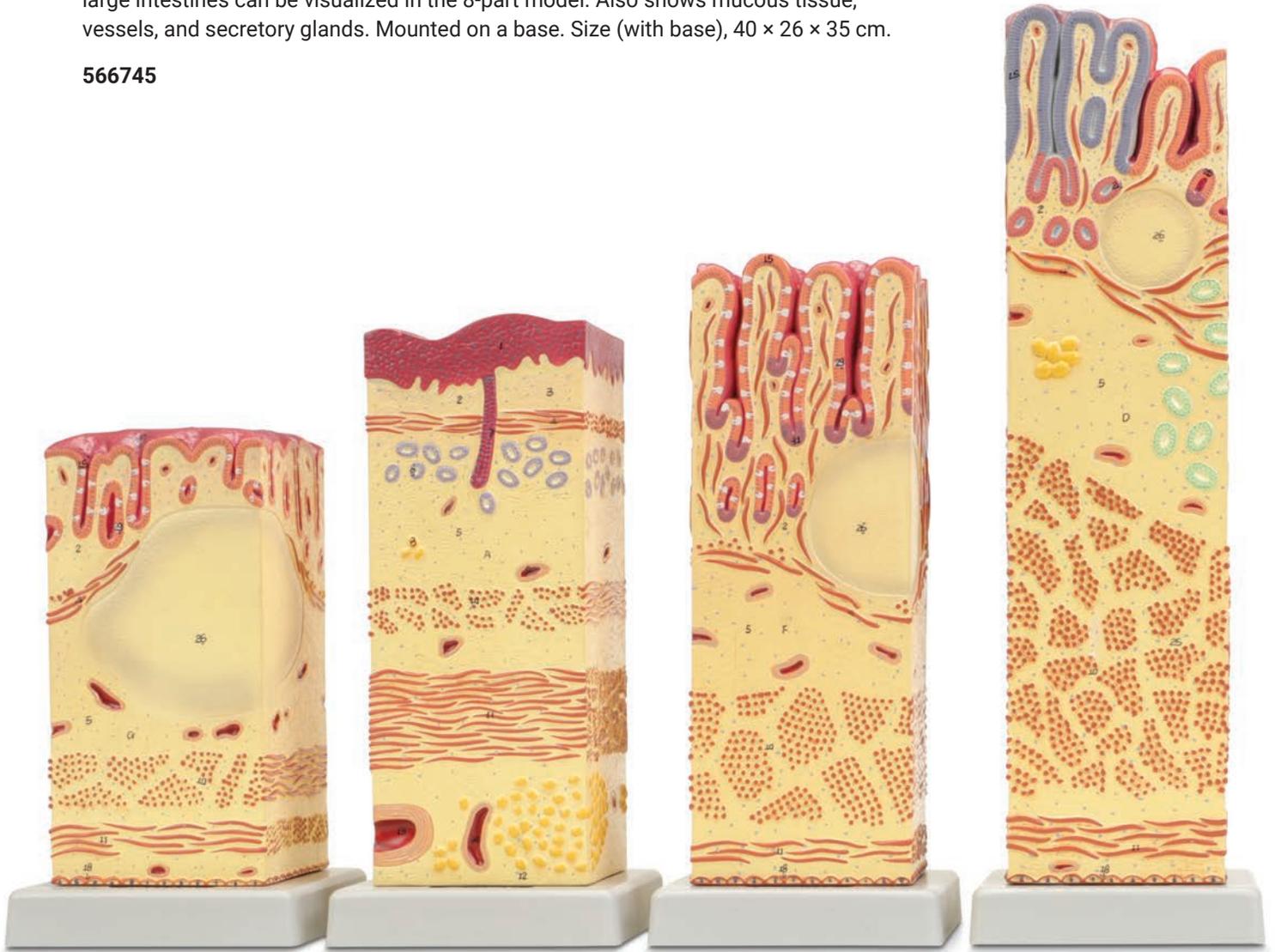
566905A



Altay® Human Comparative Digestive Tissue

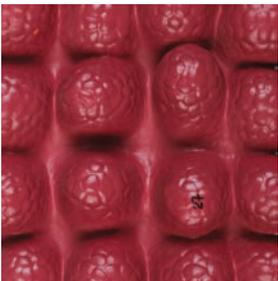
Greatly enlarged. Offers students a close-up view of tissues within the digestive system. The microanatomy of tissues from the esophagus, stomach, and small and large intestines can be visualized in the 8-part model. Also shows mucous tissue, vessels, and secretory glands. Mounted on a base. Size (with base), 40 × 26 × 35 cm.

566745



Insets (*below*) show top view of the corresponding model (*above*).





Urinary System

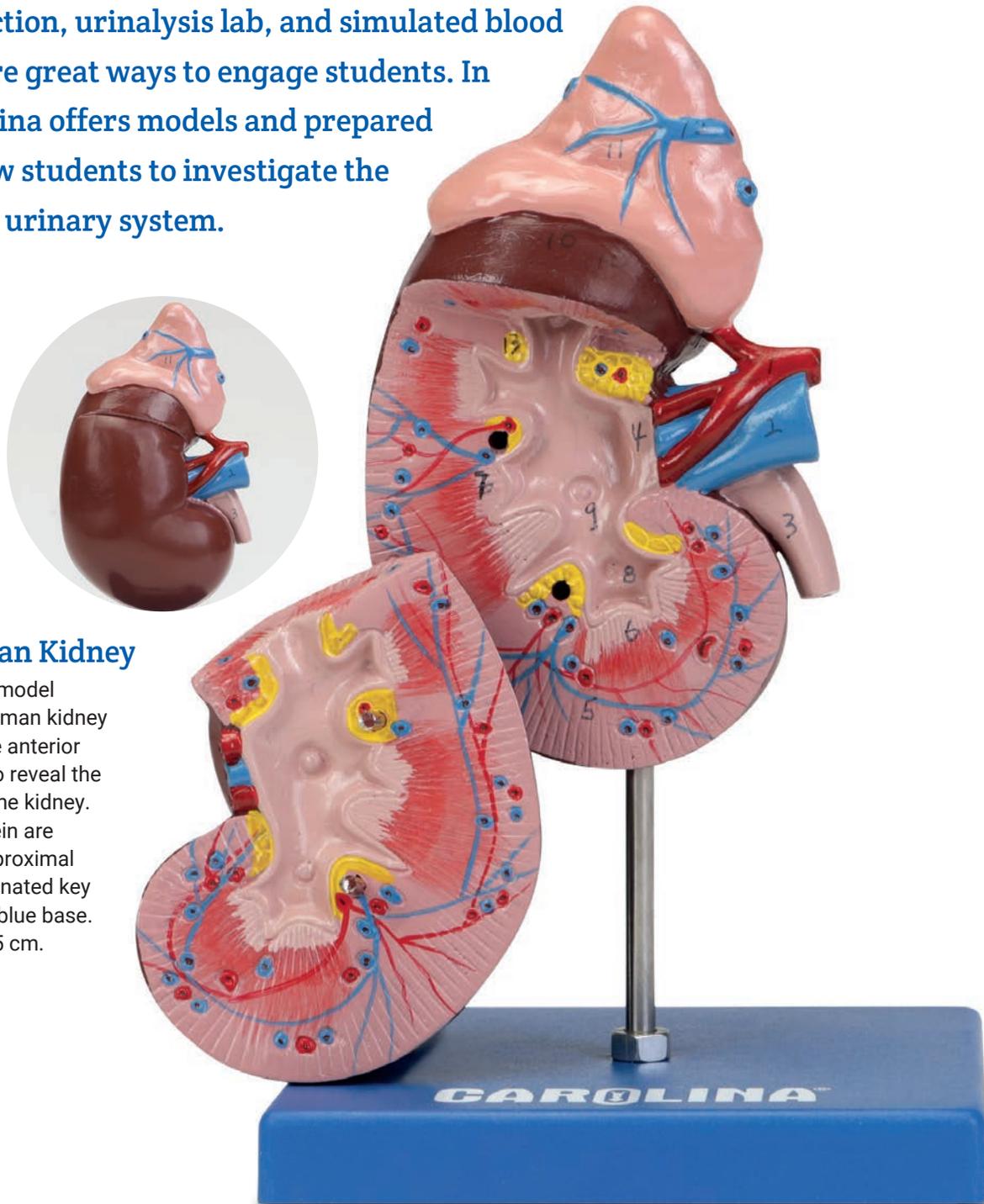
The function of the urinary system is to maintain proper fluid balance inside the body. The kidneys intertwine with arteries and veins to filter various waste products, such as salts and proteins, from the bloodstream. A kidney dissection, urinalysis lab, and simulated blood filtration lab are great ways to engage students. In addition, Carolina offers models and prepared slides that allow students to investigate the anatomy of the urinary system.

Models

Carolina® Human Kidney

Life size. This 2-piece model represents the right human kidney and adrenal gland. The anterior portion is removable to reveal the internal structures of the kidney. The renal artery and vein are shown, as well as the proximal end of the ureter. Laminated key included. Mounted on blue base. Size, 19.5 × 11.5 × 11.5 cm.

569460



Altay® Human Kidney, Nephron, and Renal Corpuscle

Greatly enlarged. Plaque-mounted series of 3 models, including a 2¹/₂× life-size dissection of the kidney and adrenal gland; schematic enlargement showing anatomical details of an individual nephron; and a renal corpuscle with Bowman's capsule, glomerulus, and juxtaglomerular apparatus. Size (overall), 69 × 29 × 10 cm.

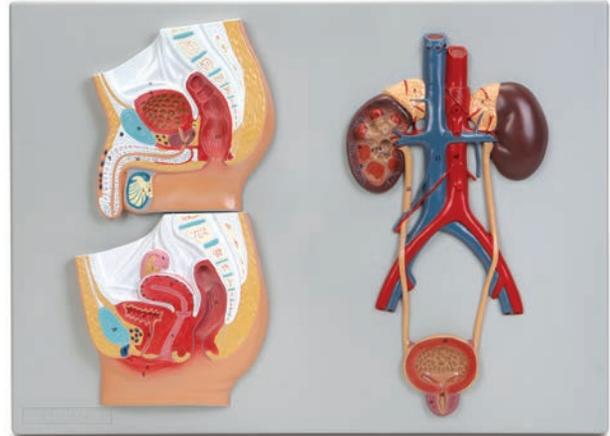
566923A



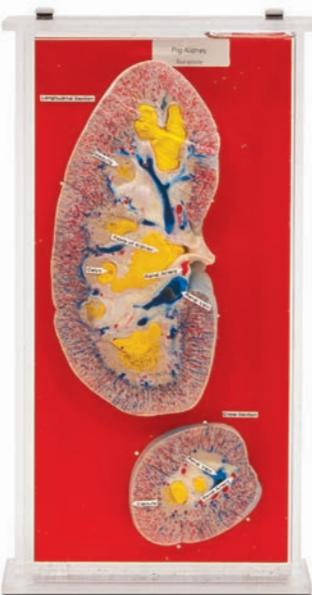
Altay® Human Male and Female Urogenital Systems

About 3/4× life size. This 3-part plaque mount features detailed sagittal sections of male and female pelvises, highlighting major urogenital structures of each. In addition, a generalized urinary system is shown, including renal artery and vein, kidneys (right side showing interior anatomy), ureters, and urinary bladder with urethra. Mounted on a durable polymer base. Overall size, 53 × 38 × 3 cm.

566927A



Teacher Resources



Injected Pig Kidney Biosmount™

Biosmount™ preparation. Preserved pig kidney injected with 3 colors of latex and dissected. One sagittal and one transverse section are firmly secured to a plastic plate and mounted in a clear acrylic container. Container is filled with a safe, propylene glycol solution and sealed. Labeled. Size, 5 × 10¹/₂".

262524



Urinary Glucose Test Strip

Semi-quantitative test for urinary glucose requires no specific equipment; simply place a drop of urine on the indicator spot and wait 1 min. Color change indicates presence of glucose. Vial of 100 test strips.

695960



Simulated Urine, Normal

Can be used as a normal control for pH, specific gravity, glucose, protein, and ketones. Methodologies and assay values included. 500 mL per bottle.

695955

Preserved Organisms

Carolina's Perfect Solution® Pig Kidney ^{▲1}

Pig kidney preserved in safe, nontoxic Carolina's Perfect Solution®. Each specimen is single packed and shipped in a vacuum-sealed bag.



Item No.	Name	Package Type	Color Injection
228574	PS Pig Kidney	1 Per Bag	Plain
228577	PS Pig Kidney	1 Per Bag	Double
228587	PS Pig Kidney	1 Per Bag	Triple

Color Injection:

Plain: No color injection

Double: Red arteries, blue systemic veins

Triple: Red arteries, blue systemic veins, yellow uriniferous tubules



Examine the internal structure more closely. Look for collecting ducts in the medulla.

- 1 Arcuate artery: A branch from an interlobular artery, generally follows the curving boundary between the cortex and medulla and leads to another branch, supplying the renal capsule.
- 2 Arcuate vein: A curving vein that generally follows the boundary between the cortex and medulla, receiving blood from tiny nephrons in an interlobular vein.
- 3 Collecting duct: A tube that collects the urine output of several nephrons; collecting ducts merge into larger papillary ducts that form the renal sinus in the pyramids.
- 4 Hilum: Depression where the renal artery enters and the renal vein and ureter exit the kidney.
- 5 Interlobular artery: Artery between two lobes, bringing blood to the branching arcuate arteries.
- 6 Interlobular vein: Vein between two lobes, draining blood from arcuate veins.
- 7 Major calyx: One of a few large tubes that collect urine from a group of minor calyces and transport it to the renal pelvis.
- 8 Minor calyx: A tube that collects urine from a renal papilla and transports it to a major calyx.
- 9 Nephrons: The functional unit of kidney, where water and dissolved

MAMMALIAN KIDNEY

Carefully make a lateral, longitudinal cut, opening the kidney into two halves. Identify the basic internal structures.

Examine the external features of the kidney.

Anterior view of left kidney

Posterior view of hilum

- 1 Arcuate artery*
- 2 Arcuate vein*
- 3 Collecting duct*
- 4 Hilum
- 5 Interlobular artery*
- 6 Interlobular vein*
- 7 Minor calyx*
- 8 Nephron*
- 9 Renal artery
- 10 Renal capsule
- 11 Renal column
- 12 Renal cortex
- 13 Renal tube*
- 14 Renal medulla
- 15 Renal papilla
- 16 Renal pelvis
- 17 Renal pyramid
- 18 Renal sinus
- 19 Renal vein
- 20 Ureter

*Present in both.

CAROLINA
www.carolina.com

Carolina® Kidney Dissection Mat

The Carolina® Kidney Dissection Mat is specially designed with clear, concise, step-by-step instructions to guide your dissection and aid in your study of the kidney. Large, double-sided vinyl mat resists spills and wipes clean easily. Included on the mat are detailed color photographs to help students examine and identify internal and external structures while working with their specimens. Size, 11 x 17".

229940

^{▲1} California Proposition 65

WARNING: Cancer – www.P65Warnings.ca.gov

Urinary System Slide Set

Explore sections of the kidney, bladder, and male and female urethra with this set of 7 microscope slides. A pathology slide of chronic pyelonephritis is also included. All tissues are mammalian or human in origin.

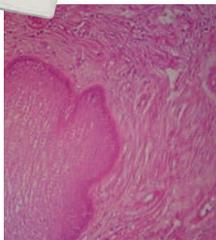
312110



Mammal Bladder Slide

From cat or dog. Stained to show general structures. Thickness, 7 μm , sec. Stain, hematoxylin and eosin.

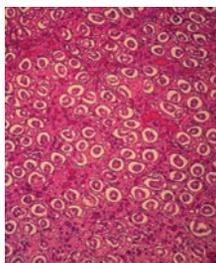
315860



Human Kidney Slide

Stained to show general structures. Thickness, 7 μm , sec. Stain, hematoxylin and eosin.

315818



Microscope Slides

Mammal Kidney Slide

Shows a median sagittal section of mammal (cat or rat) kidney. Stained to show the medulla and cortex. Thickness, 7 μm , sag. sec. Stain, hematoxylin and eosin.

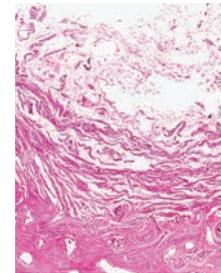
315776



Female Mammal Urethra Slide

Shows a cross section of a female mammal urethra. Stained to show general structures. Thickness, 7 μm , c.s. Stain, hematoxylin and eosin.

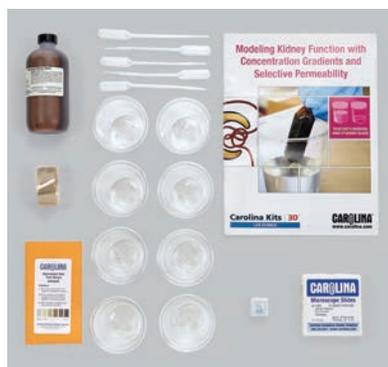
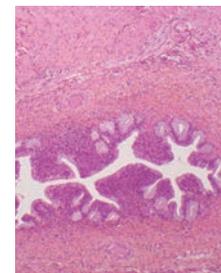
315840



Human Male Urethra Slide

Shows a cross section of the human male urethra as it passes through the prostate gland. Stained to show general structures. Thickness, 7 μm , c.s. Stain, hematoxylin and eosin.

316559



Modeling Kidney Function with Concentration Gradients and Selective Permeability Kit ³

Students construct a model of a kidney and observe filtration of simulated kidney blood. Using a semipermeable membrane, students filter simulated kidney blood, and test the solutions with simulated salt test strips. Kit contains enough materials for 15 groups of students and contains a 1-year teacher subscription to digital resources. Supports NGSS and 3-dimensional instruction. Learn more about Carolina Kits 3D[®] labs at Carolina.com/3D.

695801

Kits



Carolina BioKits[®]: Urine Examination

For a class of 30. Examination of the urine is an essential procedure for diagnosing human disease. With this kit, students test normal and abnormal simulated urine specimens and determine probable disorders. Included are tests for color, pH, specific gravity, glucose, and protein.

695830

³ California Proposition 65

WARNING: Cancer and Reproductive Harm – www.P65Warnings.ca.gov

Reproductive System

The male and female reproductive systems are controlled by hormones produced by the pituitary gland and the reproductive organs themselves. Organs in the reproductive system make, mature, and store gametes, which provide genetic variation through sexual reproduction. Carolina has a variety of models, preserved specimens, and microscope slides to facilitate student learning.

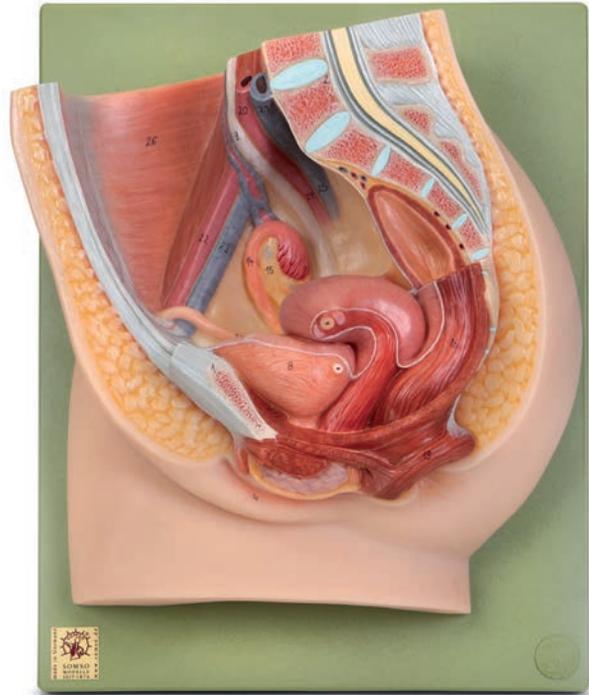
Models



Somso® Human Male Half Pelvis

Life size. Right half of pelvis shows rectum and urinary bladder as well as male reproductive organs. Three parts are removable to expose internal reproductive structures. On base. Size, 33 × 27 × 14 cm.

566725A



Somso® Human Female Half Pelvis

Life size. Right half of pelvis shows female reproductive organs. Left side of bladder, uterus, rectum, and ovary are removable. On base. Size, 27 × 12 × 33 cm.

566725



Altay® Human Ovary

About 5× life size. An ovary with removable fallopian tubule shows vascular and suspensory structures. The ovary is sectioned to show follicles at various stages of maturation, from the primary ovarian follicle to the *corpus luteum* and *corpus albicans*. A primary follicle is cross-sectioned to reveal details of the oocyte and zona pellucida. Mounted on a durable polymer base. Includes numbered key. Size, 33 × 23 × 21 cm.

566934A



Altay® Spermatogenesis

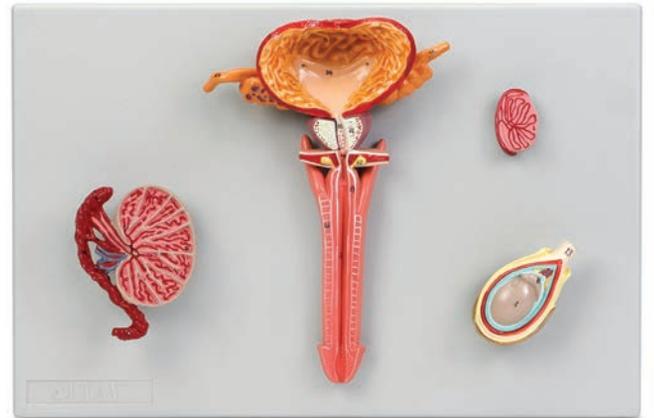
Enlarged about 10,000×. Shows the process of spermatogenesis from spermatid to the mature spermatozoon. With key. Mounted on a durable polymer base. Size, 53 × 38 × 5 cm.

563118

Altay® Female Pelvis with Embryo

Life size. Dissectible into 3 parts. Model gives an internal view through the median sagittal section of the pelvis. It shows the internal organs of the female urinary and reproductive systems with an 8-week embryo in utero. On base. Size, 25 × 18 × 27 cm.

566756



Altay® Human Male Reproductive System Set

This set of 4 plaque-mounted models illustrates the interior anatomy of the male reproductive tract. The urinary bladder, prostate gland, and penis are sectioned longitudinally to reveal the internal features. The testis is shown in 3 perspectives: in situ within a life-sized scrotum; as a life-sized longitudinal dissection; and as a 2× life-sized dissection with the epididymis, seminiferous tubules, tunica albuginea, and other significant structures. With key. Size (each), 50 × 26 × 8 cm.

566941

Microscope Slides

Reproductive System Slide Set

The set includes 8 slides from the male reproductive system, 8 slides from the female reproductive system, and 1 pathology slide showing endometriosis of the ovary. Includes mammal and human tissues.

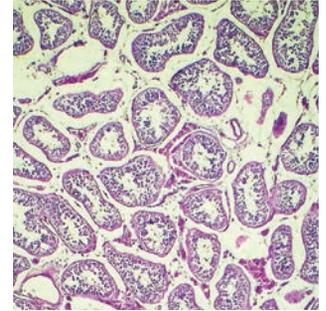
312111



Human Testis Slide

Stained to show general structures. Thickness, 7 μm , sec. Stain, hematoxylin and eosin.

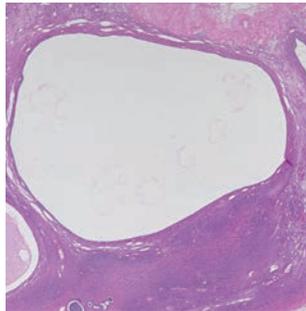
316434



Human Ovary Slide

Shows a human ovary. Stained to show general structures. Thickness, 7 μm , sec. Stain, hematoxylin and eosin.

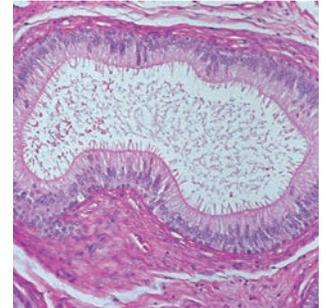
316024



Human Epididymis Slide

Stained to show general structures. Thickness, 7 μm , sec. Stain, hematoxylin and eosin.

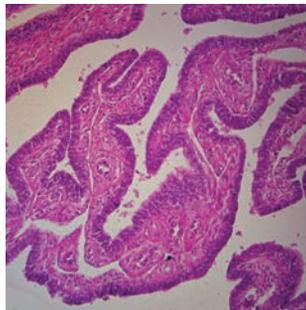
316476



Human Fallopian Tube Slide

Stained to show general structures. Thickness, 7 μm , c.s. Stain, hematoxylin and eosin.

316102



Human Penis Slide

Stained to show general structures. Thickness, 7 μm , c.s. Stain, hematoxylin and eosin.

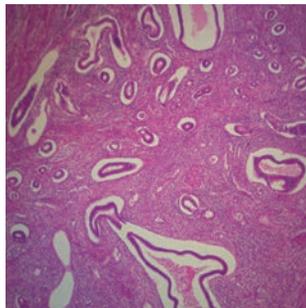
316566



Human Uterus Slide

Shows a section of the human uterus. Stained to show general structures. Thickness, 7 μm , sec. Stain, hematoxylin and eosin.

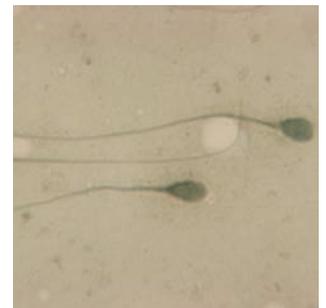
316174



Human Sperm Slide

Shows a smear of human sperm. Stained to show general structures.

316590



Formalin Pregnant Pig Uterus [⚠]¹

Pregnant pig uterus preserved in formalin with no color injection (plain).
Shipped immersed in Carosafe® in a sealed pail.

228600



Preserved Organisms

Formalin Bull Testicle [⚠]¹

Adult bull testicle preserved in formalin with no color injection (plain). One specimen is single packed and shipped in a vacuum-sealed bag.

228931



[⚠]¹ California Proposition 65
[⚠] WARNING: Cancer – www.P65Warnings.ca.gov

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