Программа «Cyber Science 3D»

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Cyber Science 3D это всеобъемлющая серия подробных, интерактивных виртуальных 3D моделей органов животных и человека, помогающих в изучении предметов естественной анатомии и биологии.

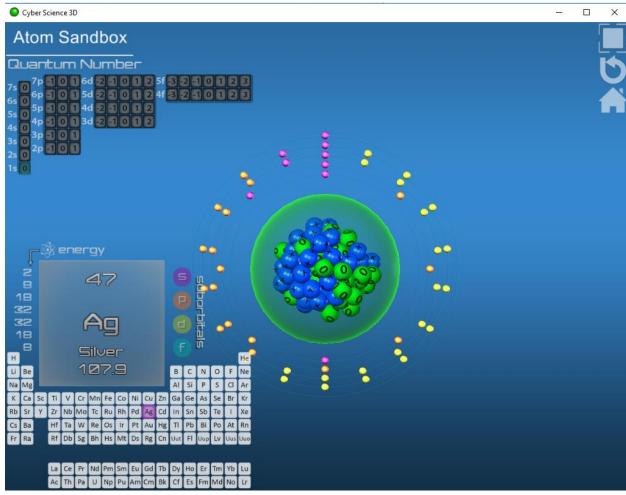
Пользователи Cyber Science 3D имеют возможность для детального изучения как внешних, так и внутренних характеристик стереоскопических моделей, кроме того, имеется возможность путешествовать по нервной или пищеварительной системам, разъединять мышцы по слоям или проникать внутрь клетки, убирать внешние оболочки для детального изучения внутренностей объекта, а также ставить собственные метки на отдельные части для более глубокого понимания объекта.

Интерактивность является важным методом обучения, так как биологические объекты очень трудно визуализировать, анатомирование животных и растений доступно не для каждого студента, невозможно исправить ошибку, начав препарацию органа заново, пластиковые сборные модели биологических объектов являются очень дорогостоящими предметами, а для подробного изучения биологического объекта, как правило, текста и картинки не достаточно.

Cyber Science 3D представляет собой всеобъемлющий пакет подробных, интерактивных виртуальных препарированных биологических объектов, помогающих в обучении и изучении предметов естественных наук.

- Cyber Science YouTube Channel
- Cyber Science 3D for zSpace
- VIVED Science for zSpace Tutorial 1 Home Menu
- VIVED Science for zSpace Tutorial 2 Authoring
- VIVED Science for zSpace Tutorial 3 Viewing





Библиотека объектов программы «Cyber Science 3D» включает в себя следующие предметы естественных наук:

Astronomy

Астрономия



- Sun
- Mercury
- Venus
- Earth
- Moon

- Mars
- Jupiter
- Saturn
- **Uranus**
- NeptunePluto

Botany

Ботаника

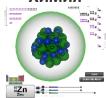


- Cactus
- Corn
- Cotton
- Dicot
- Fern
- Geranium
- Ginkgo Tree

- Mushroom
- Orchid
- Pinecone
- Plant Cell
- Seed
- Sponge
- Wheat

Chemistry

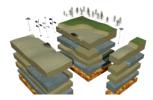
Химия



- Atom Sandbox
- Molecules
- Periodic Table
- **Quantum Shells**

Earth Science

Наука о Земле



- Aquifer
- Cave
- Geyser
- Glacier

- Photosynthesis
- Volcano
- Water Cycle

Human Anatomy

Анатомия человека



- Alveoli
 - **Blood Vessel**
 - **Bone Cross Section**
 - Brain
 - Cervical Vertebrae
 - Digestive System
 - Ear
 - Egg
 - Eye
 - **Eye Gross Section**
 - Female Pelvis
 - Heart Human Cell
 - Intro Human
 - Lower Limb
 - Nephrom

- Muscle Cross Section
- Nerve
- Nerve Cell
- Ovarian Cycle
- Red Blood Cell
- **Respiratory System**
- Skeleton
- Skin
- Skull
- Sperm
- Synapse
- Teeth & Gums
- Tooth
- **Upper Limb**
- **Urinary System**
- Uterus

Mechanical

Прикладная механика



- Auto Transimission
- Bloodhound Vehicle
- Car Battery
- Car Chassis
- Car Differential
- DC Motor
- Diesel Engine

- Hydrogen Fuel Cell
- Manual
 Transmission
- Steam Trap
- Turbine Engine
- V8 Engine
- Wind Turbine

Microbiology

Микробиология



- Bacillus
- Bird Flu Virus
- Bordetella Pertussis
- C. Botulinum
- C. Diphtheriae
- Chromosome
- Coronavirus
- DNA
- E. Phage T4
- Echovirus
- Escherichia Coli
- F. Nucleatum

- Halteria
- Helicobacter Pylori
- Herpes
- HIV
- K. Pneumoni
- Karyotype
- L. Pneumophila
- M. Tuberculosis
- Nomega Virus
- Osteocyte
- S. Epidermis
- Tapeworm

Paleontology

Палеонтология



- Allosaurus
- Diplodocus
- Human Evolution
- Mammoth
- Pterosaur
- Triceratops
- Trilobite
- T-Rex

Zoology

3оология



- Adult Pig
- Butterfly
- Cat
- Cow
- Deer
- Dolphin
- Earthworm
- Fetal Pig
- Fly
- Frog
- Frog Evolution
- German Shephard
- Horse
- Jellyfish

- Kudu Skeleton
- Lobster
- Mahi Mahi
- Mosquito
- Owl Pellet
- Rat
- Rhino Beetle
- Screech Owl
- Sponge
- Starfish
- Strombus Gigas
- Tarantula
- Termite Life Cycle

<u>Astronomy</u>

Aquarius Satellite Aquarius Satellite	Astronomy
Calipso Satellite Calipso Satellite	Astronomy
CloudSat CloudSat	Astronomy
Earth Dissectible third plant of our solar system with crus molten iron-nickel core, and solid iron-nickel core	Astronomy st, mantle,
EchoStar EchoStar	Astronomy
Google Satellite Google Satellite	Astronomy
GPS Satellite GPS Satellite	Astronomy
Jupiter Dissectible fifth plant of our solar system with layer hydrogen and helium gas/liquid	Astronomy s of



Mars

Astronomy

Dissectible forth plant of our solar system with crust, mantle, and core



Mercury

Astronomy

Dissectible first plant of our solar system with silicate crust and mantle and iron core



Milstar

Milstar

Astronomy



Moon

Astronomy

Dissectible moon which orbits the Earth including the basalt mantle, basalt crust, and metallic core



Neptune

Astronomy

Dissectible eighth plant of our solar system with cloud layer, gas atmosphere, liquid layer, and frozen core



Omid Satellite

Astronomy

Omid Satellite



Pluto

Astronomy

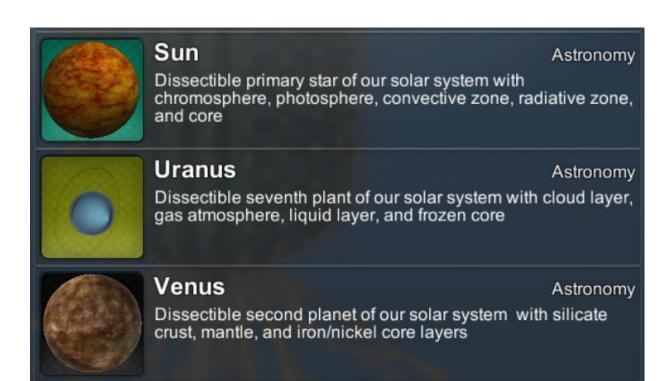
Dissectible former plant, now planetoid of our solar system with crust, mantle, and core



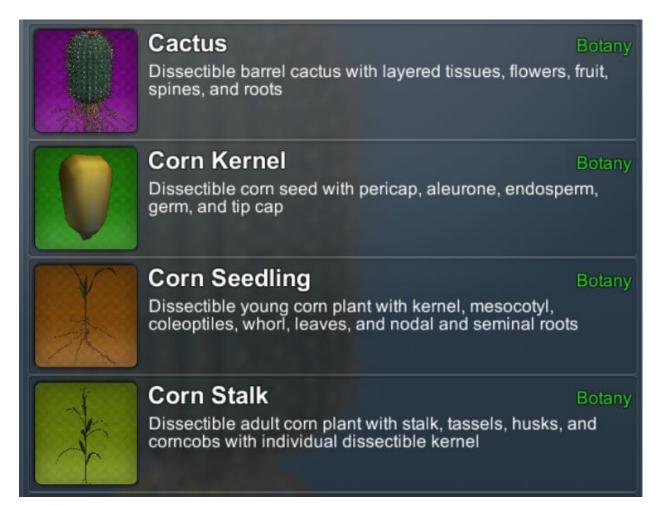
Saturn

Astronomy

Dissectible sixth plant of our solar system with layers of hydrogen and helium gas/liquid and icy core



Botany





Cotton

Botany

Dissectible cotton leaf including a stem, leaf, and boll



Dicot

Botany

Dissectible flower with petals, stem, filaments, style, and reproductive system



Fern

Botan

Dissectible fern with root system and dissectible leaves



Geranium

Botany

Dissectible geranium including root system, petals, carpals, calyx,blades, buds, and more



Ginkgo leaf

Botany

Dissection of a Ginkgo leaf with Petiole, leaf cross secion, veins, and blad lobes



Ginkgo Leaf Cross Section

Botany

Dissectible microscopic cross section of ginkgo leaf that includes, cuticle, dermis, and palisade and spongy mesophyll



Ginkgo Tree

Botany

Ginkgo tree with dissectible root system, branches, trunk, and leaves



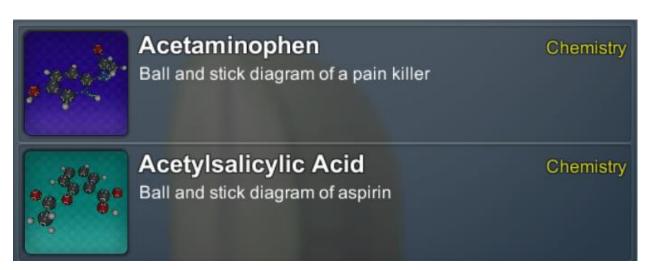
Mushroom

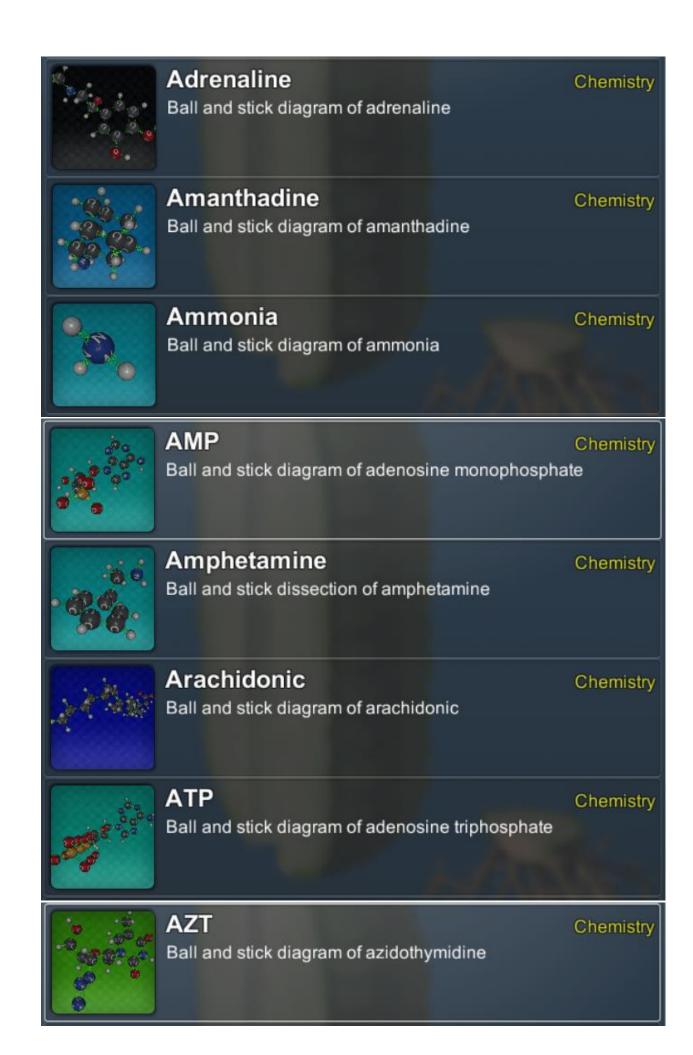
Botany

Dissectible amanita muscaria fungus with cap, gills, stem, annulus



Chemistry





**************************************	Caffeine Ball and stick diagram of caffeine	Chemistry
	Carbonic Acid Ball and stick diagram of carbonic acid	Chemistry
	Cytidine Ball and stick diagram of cytidine	Chemistry
	D-Glucose Ball and stick diagram of d-glucose	Chemistry
	DLPE Ball and stick diagram of phosphatidylethanolamin	Chemistry
	D-Mannose Ball and stick diagram of d-mannose	Chemistry
30	DPPC Ball and stick diagram of colosceril palmitate	Chemistry
	D-Xylose Ball and stick diagram of d-xylose	Chemistry

	Fructose Ball and stick dissection of a fruit sugar fructose	Chemistry
* & & & & & & & & & & & & & & & & & & &	GDP Ball and stick diagram of guanosine diphosphate	Chemistry
	H2O Ball and stick diagram of a water molecule	Chemistry
999	Linoleic Acid Ball and stick dissection of linoleic	Chemistry
	LSD Ball and stick diagram of lysergic acid diethylamide	Chemistry
	Oleic Acid Ball and stick diagram of oleic acid	Chemistry
San Barrell	Palmitic Acid Ball and stick diagram of palmitic	Chemistry
- 33 % - 33 % - 33 % - 33 % - 34	Penicillin Ball and stick dissection of penicillin	Chemistry

. 66.00 . 66.00 . 66.00	Penicillin Ball and stick dissection of penicillin	Chemistry
	Stearic Acid Ball and stick dissection of stearic acid	Chemistry
	Sucrose Ball and stick diagram of the sugar sucrose	Chemistry
60°00 00°00 00°00	THC Ball and stick diagram of tetrahydrocannabinol	Chemistry
	VX Ball and stick diagram of a lethal nerve agent	Chemistry
88800	Zolpidem Tartrate Ball and stick diagram of a sleep aid	Chemistry

Earth Science



Aquifer

Earth Science

Underground layer of water-bearing permeable rock with wells and piezometric surface



Cave

Earth Science

Dissectible cave network that includes many different rock formations



Geyser

Earth Science

Dissectible geyser with rock layers, magma, hot spring, mud pot, sinter, and fumaroles



Glacier

Earth Science

Dissectible glacier that includes zones of accumulation and ablation, kettle lakes, and outwash plain



Photosynthesis

Earth Science

Dissectible plant model with photosynthesis simulation with oxygen, carbon dioxide, nutrients, and water representations



Tectonic Plates

Earth Science

Tectonic Plates



Volcano

Earth Science

Dissectible composite volcano that includes ash cloud, magma chamber and conduit, lava fountain and bombs



Water cycle

Earth Science

Dissectible Water Cycle featuring each phase of the process



Alveoli

Human Anatomy

Dissectible alveolus with alveolar sacs and capillary beds



Blood Vessel

Human Anatomy

Dissectible blood vessel with red blood cells, lymphocytes, phagocytes, and auxiliary cells



Bone Cross Section

Human Anatomy

Dissectible femur that includes the layers of the bone down to lamella and osteon



Brain

Human Anatomy

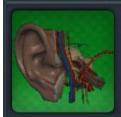
Dissectible brain including the lobes and midbrain



Cervical Vertebrae

Human Anatomy

Dissectible region of the spine including atlas, ligaments, disc, and spinal cord



Ear

Human Anatomy

Dissectible detailed human ear that includes the incus, malleus, and stapes bones and surrounding tissue and vessels



Eye

IFICUINNELIN (AVNIGREDINNIY

Dissectible eye that includes layers of the retina and lens, optic nerve, and muscles



Eye Cross Section

Human Anatomy

Dissectible microscopic cross section of the retina including rods, cones, cones, and other cells



Female Pelvis

Human Anatomy

Dissectible female pelvis region including fat, muscles, skeleton, and reproductive system



Female Reproductive

Human Anatomy

Dissectible female reproductive system with surrounding skeleton, nervous, and circulatory system



Human Digestive

Human Anatomy

Dissectible detailed human digestive system including layers of stomach and intestines, liver, gallbladder, and pancreases



Human Heart

Human Anatomy

Dissectible heart with the four chambers and aortic arch, vena cava, abdominal aorta, subclavian, and brachiocephalic vessels



Human Respiratory

Human Anatomy

Dissectible human lungs with encasing tissue, trachea, and bronchial tree



Human Skeleton

Human Anatomy

Dissectible skeleton with all 209 bones of the human body with ligaments



Human Skull

Human Anatomy

Dissectible skull with occipital, temporal, parietal, sphenoid, ethmoid, frontal, nasal, lacrimal, maxilla, zygomatic, and mandible bones



Human Uterus

Human Anatomy

Dissectible human uterus featuring the ovaries, vaginal tube, perimetrium, myometrium, fallopian tube, endometrium and cervix



Lower Limb

Human Anatomy

Dissectible human right leg with muscular, skeletal, and nervous systems



Male Reproductive

Human Anatomy

Dissectible male reproductive system with surrounding skeletal, nervous, and circulatory system



Muscle Cross Section

Human Anatomy

Dissectible bicep on skeleton with muscle layers from epimysium to myofibril



Nephron

Human Anatomy

Dissectible renal nephron with tubule and arterial and veinous vessels



Osteocyte

Human Anatomy

Dissectible bone cell that includes the adjoined osteocytes and organelles encased in bone



Ovarian Cycle

Human Anatomy

Dissectible ovary with the different stages of egg development



Red Blood Cell

Human Anatomy

Dissectible red blood cell with membrane and hemoglobin



Skin

Human Anatomy

Dissectible cross section of human skin that includes the layers of the epidermis, dermis, and hypodermis, sweat, hair, nerves, and vessels



Synapse

Human Anatomy

Dissectible microscopic neuronal junction with synaptic gap between axon and dendrite, neurotransmitters, transporters, mitochondria, and vesicles



Teeth and Gums

Human Anatomy

Dissectible adult human dental model with all 32 teeth with surrounding tissue



Tooth

Human Anatomy

Dissectible cross section of a tooth with alveolar bone, gingiva, enamel, detin, ondotoblast, pulp, cementum, and periodontal ligament



Upper Limb

Human Anatomy

Dissectible human right arm with muscular, skeletal, and nervous systems



Urinary System

Human Anatomy

Dissectible human urinary system with surrounding skeletal structure

Mechanical



1100cc V-Twin

Mechanical

V-Twin motorcycle engine with transmission and Desmodromic valve system



4 Cylinder Airplane Engine

Mechanical

Engine commonly used in light aircraft, modeled after a Rotax



4 Cylinder Boxer

Mechanical

Boxer engine with exposed Rockers and Pushrods



Mechanica

Simple pushrod V8 engine



AC Motor

Mechanical

Animated alternating current electric motor with controllable rate of rotations



Alternator

Mechanica

Animated alternator with controllable rotations per minute to convert mechanical energy into electrical energy commonly used in automobiles



Angle Valve

Mechanica

Animated angle valve with controllable flow where the inlet and outlet ports are aligned at a 90 degree angle with respect to each other



Beetle Engine

Mechanical

1960's air cooled boxer-4



Beveled Gear

Mechanica

Animated straight beveled gear with controllable power input and measured power output



Bloodhound

Mechanical

Dissectible car that was built to break the land speed record



Brushless DC Motor

Mechanical

Animated synchronous motor powered by a direct current source with controllable rate of rotations of the permanent internal magnet



Car Battery

Mechanical

Dissectible car battery with casing, handle, caps, and positive and negative plates and bridges



Car Chassis

Mechanical

Dissectible car chassis that includes detailed frame suspension, and engine components



Clock

Mechanica

Animated clock with controllable speed at which the weight's energy is released by the escapement mechanism



Clutch

Mechanical

An interactive models demonstaring a clutch.



DC Motor

Machanica

Animated brushed direct current electric motor with controllable rotation speed of the armature inside the stationary magnet



Dependent Suspension

Mechanical

Animated oldest and simplest suspension with controllable flex commonly found on the rear axle of large commercial vehicles



Diesel engine

Mechanical

Detailed diesel engine featuring a dissectible engine block, piston assembly, drive train, and turbos



Disc Brake

Mechanical

Animated disc brake assembly with controllable friction to slow speed of rotation



Dnepr Engine

Mechanica

Engine modeled after a Ukrainian motorcycle engine from the 60's



DOHC V8
Oppenens Digiti

Mechanica



Double Wishbone Suspension

Mechanica

Animated independent suspension with two A-arms with controllable flex and steering



Four Stroke Engine

Mechanica

Animated internal combustion engine with a single four stroke cylinder with controllable speed



Fuel Cell

Mechanica

Dissectible Hydrogen fuel cell that includes aluminum end plate, anode plate and lead, cathode plate and lead, O and H flow fields, and particle exchange membranes



Fuel Injected V10

Mechanica

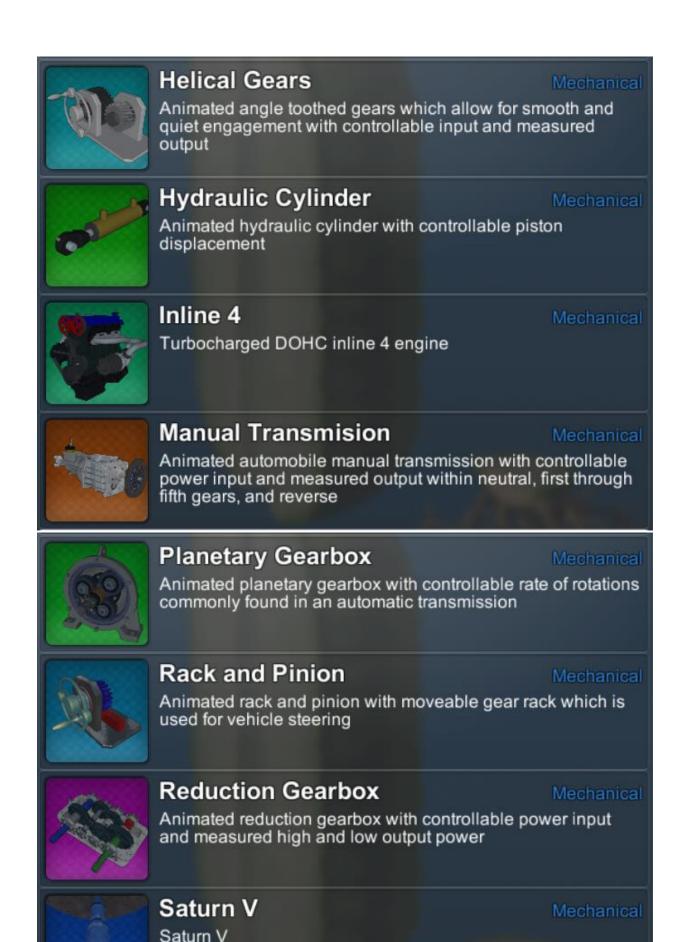
High output V10 engine.



Gearbox and Motor

Mechanica

Animated high torque output electric motor and gearbox with controllable power input and measured output





Sequential Transmission

Mechanica

Animated manual transaxle with controllable power input and measured output within neutral, first through sixth gears, and reverse



Simple Inline 4

Mechanical

Inline 4 engine pared down to just the essentials



Single Cylinder 2 Stroke

Mechanical

2-stroke single cylinder engine used in RC cars and other model vehicles



Steam Engine

Mechanica

Animated double-acting steam engine with controllable speed



Steam Trap

Mechanica

Dissectible steam trap featuring valve, trap, gasket, gate, fuffer, chamber, bolts and more



Straight 8 Engine

Mechanica

Inline 8 Cylinder engine used in race cars and premium cars until the 50's



Torsen Differential

Mechanica

Animated torsen differential with controllable power input and torque bias and measured output



Turbine Engine

Mechanica

Animated turbine engine with controllable thrust commonly used on jet aircrafts



Turbo

Mechanical

Animated twin scroll turbo charger used to increase the horsepower in a engine with controllable rate of rotation



Two Speed Gearbox

Mechanica

Animated two speed gearbox with controllable power input and measured output within neutral, first gear, and second gear



Two Stroke Engine

Mechanical

Animated two stroke cross flow engine with controllable rotations per minute



Univerasal Joint

Mechanica

Animated universal joint with controllable flex and rate of rotation



V2 Engine

Mechanica

Very detailed animated V Twin engine



V8 engine

Mechanical

Dissectible V8 engine which includes detailed engine block, distributor, carborator, cam shaft, and more



W16 Engine

Machanica

The W16 is essentially two V8's attached to one crankshaft. It is currently used in one of the fastest production cars in the world.



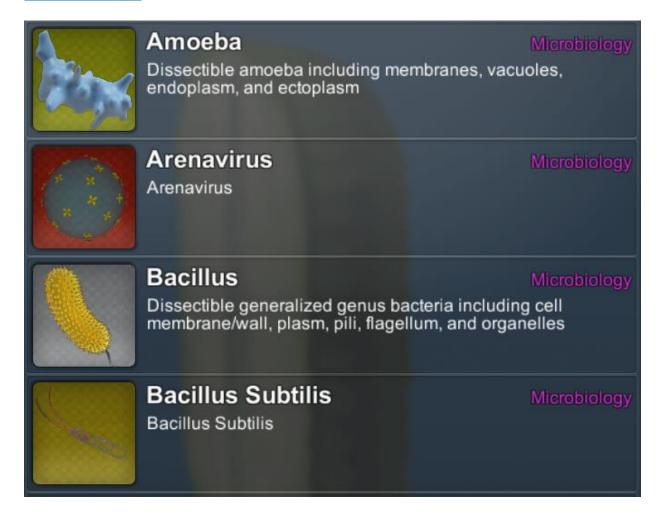
Water Pump

Mechanical

Animated centrifugal water pump, commonly used in water and sewage transportation, with controllable flow



Microbiology





Bird Flu Virus

Microbiology

Dissectible H5N1 virus with protein matrix, viral envelope, proteins, RNA, and hemagglutinin



Blue Tongue Virus

Microbiology

Blue Tongue Virus



Bordetella Pertussis

Microbiology

Dissectible whooping cough virus including membranes, surface proteins, and organelles



Borrelia Burgdorferi

Microbiology

Borrelia Burgdorferi



Cell Wall

Microbiology

Dissectible lipid bilayer with phospholipids and channel, alpha helix, receptor, surface, and transport proteins



Chlamydia Chlamydia

Microbiology



Chromosome

Microbiology

Dissectible basic chromosome with labeled q and p arms, chromatin, and centromere



Clostridium Botulinum

Microbiology

Dissectible bacteria that causes botulism that includes glycocalyx, organelles, and plasm



Coronavirus

Microbiology

Dissectible virus with membrane, protein capsid, glycoproteins, and RNA



Corynebacterium Diphtheriae

Microbiology

Dissectible bacteria that causes diphtheria that includes membranes organelles, and plasms



DNA

Microbiology

Dissectible double helix ball and stick diagram of deoxyribonucleic acid



Echovirus

Microbiology

Dissectible Enteric Cytopathic Human Orphan virus with receptors, polypeptides, and RNA



Enterobacteria Phage T4

Microbiology

Dissectible bacteriophage that infects E. coli bacteria with capsid head, RNA, collar and tips, sheath, base plate, and tail fibers and pins



Escherichia Coli

Microbiology

Dissectible e. coli bacteria that includes membranes, flagellums, and organelles



Fusobacterium Nucleatum

Microbiology

Dissectible oral bacteria found in dental plaque including DNA, membranes, and organelles



Giardia

Microbiology

Dissectible Giardia



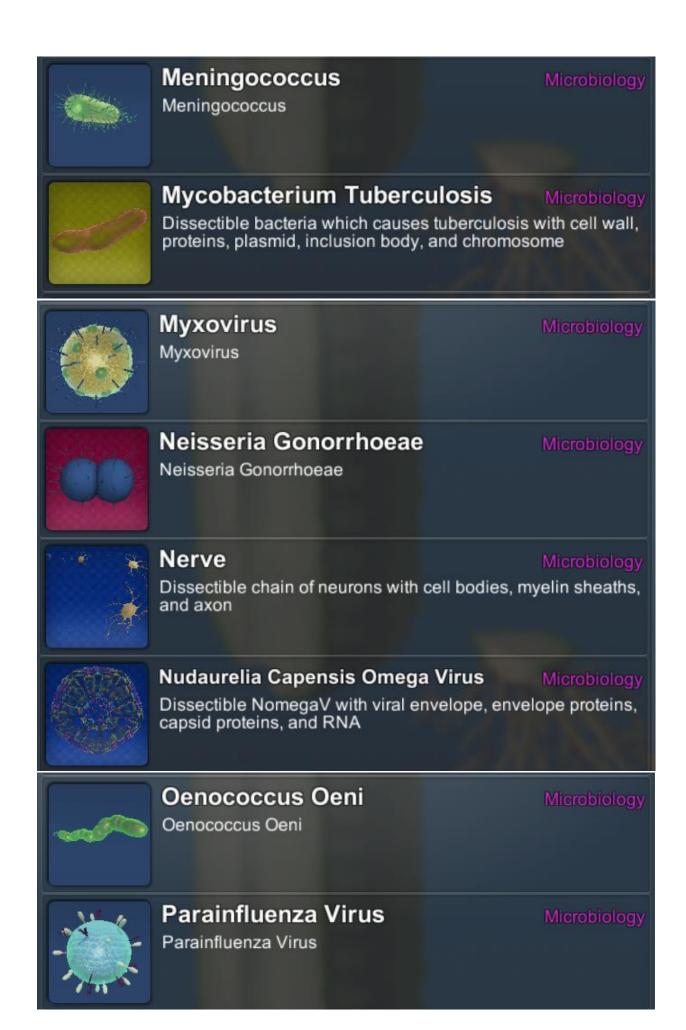




Measles Virus



Mengo Virus Mengo Virus





Paleontology



Allosaurus

Dissectible allosaurus with skeleton and skin

Paleontology



Diplodocus

Dissectible diplodocus with skeleton and skin

Paleontology



Human Evolution

Falledintology

Dissectible skeletons of australopithecus, homo erectus, and homo sapien



Pterosaur

Paleontology

Dissectible pterosaur with skeleton and skin



Skull Fossils

Paleontology

Skulls of Australopithecus, Homo erectus, and Homo sapiens, and two fossils of skull fragments.



Triceratops

Paleontology

Dissectible triceratops with skeleton and skin



Trilobite

Paleontology

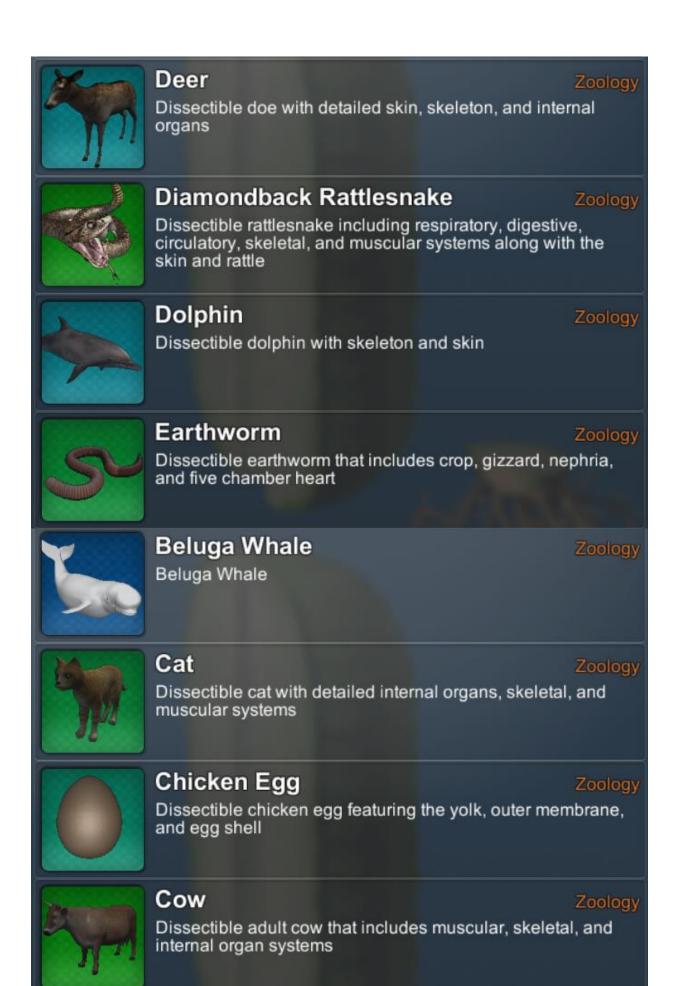
Dissectible detailed trilobite initial set as fossil that includes detailed exoskeleton



Tyrannosaurus Rex

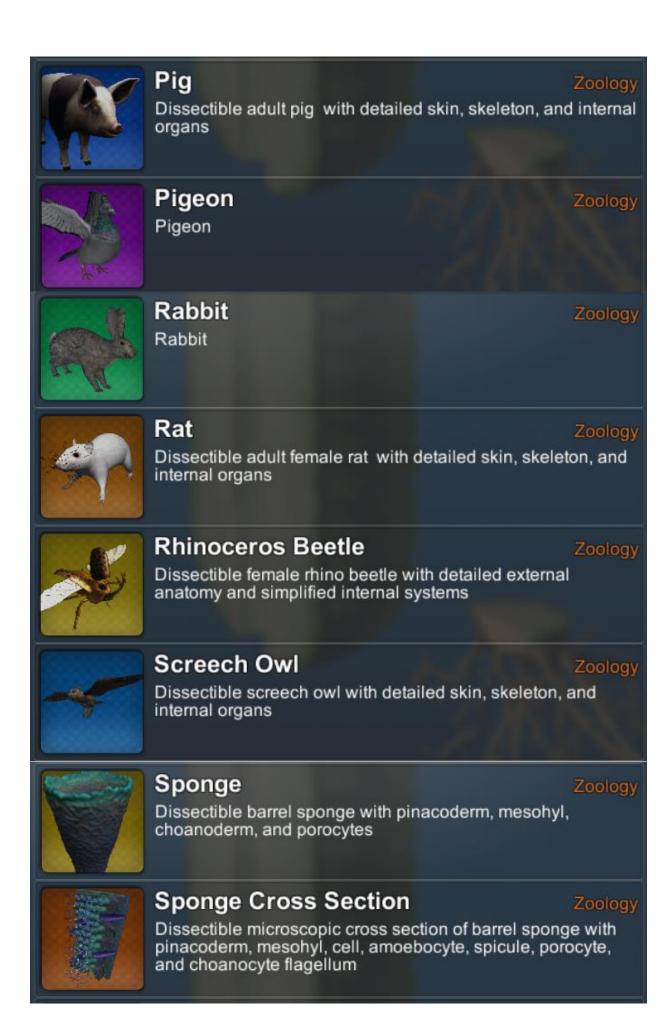
Paleontology

Dissectible t-rex with skeleton and skin and animated walk and roar











Starfish

Zoology

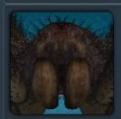
Dissectible starfish that includes pyloric ducts, gonad sets, radial canals, ampullae, Tiedemann's body, and digestive system



Strombus Gigas

Zoology

Dissectible conch snail that includes shell, columnar muscle, mantle, body, and internal organ systems



Tarantula

Zoology

Dissectible tarantula with detailed exterior, and simplified muscles and internal organs



Termite Life

Zoology

Non-dissectible termite life cycle with seven stages