



Biology. Kids. Hands-on. Fun.

Bionerds, Inc
PO BOX 81004
Rancho Santa Margarita, CA 92688

(949) 288-1486
hello@bionerdsllc.com
www.bionerdsllc.com

Bionerds Curriculum

(Updated 05/14/2020)

Did you know hands-on activity is one of the best ways to learn, especially in the young minds? Bionerds is here to offers Biology workshops for kids from Kindergarten to 8th graders. Our topics are vast and exciting to include insects, animals, human, microorganisms, genetics, plants, and more.

Class Format

Each theme has several topics included. Each topic is about 45 minutes to one hour. We do a short lecture on the topic, and the rest of the time will be exciting and hands-on activities for the students. The students will have up close personal experience with the organisms we learn, perform dissections (demo dissections for online program) on some topics, and engage in biology experiments and activities.

Safety is Priority

We educate Laboratory Safety training in the beginning of the class to students. Learning is more fun when everybody is safe. We provide Protective Personal Equipment (PPE) as needed below:

- Laboratory coats
- Gloves
- Goggles
- Mask

We adhere to guidelines recommended by the local government related to Coronavirus (COVID-19) pandemic for in-person programs. Please ask us for details at admin@bionerdsllc.com.

Our Teachers

Our teachers are so passionate in sharing their expertise. They have college degrees either in Biology or other related sciences/extensive field experiences. Some even have graduate degrees.

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Bionerds After-School Programs

(One-hour weekly class for 6-10-week session)

Animal Kingdom: Wilder Than you Think!

Come and join this fun and hands-on biology workshop for kids! Learn about the amazing animal kingdom, from frog, lizard, birds, and more. Your child will be up close with fresh/preserved organisms, perform many dissections, and engage in cool biology activities using lab equipment/tools.

Aquatic Creatures: No Gills Required!

Come and join this fun and hands-on biology workshop for kids! Learn about many freshwater and marine aquatic creatures, from sea urchin, stingray, jellyfish, and more. Your child will be up close with fresh/preserved organisms, perform many dissections, and engage in cool biology activities using lab equipment/tools.

Bioengineering: Designing Life

Come and join this fun and hands-on biology workshop for kids! Learn how to design and create something to improve life itself, such as prosthetics, medical equipment, genetic modification, bioenergy, and more! Your child will be exposed to engineering concept related to biology and perform cool biology activities.

Camping Science: Connecting with Nature

Come and join our exciting hands-on workshop to help your child recognize and appreciate the living world just outside their window. We will discuss camping-related topics, such as wildlife, survival, sun power, rocks and more. Your child will be up close with live/preserved organisms and engage in cool camping-related activities.

Decomposers: Earth's Best Friends!

Come and join this fun and hands-on biology workshop for kids! Learn why and how these organisms, from worms, beetles, crustaceans, and more, are called Earth's best friends. Your child will be up close with live/preserved organisms, perform some dissections, and engage in cool biology activities using lab equipment/tools.

Dinosaurs: Fantastic Pre-historic World!

Dinosaurs ruled the earth for 180 million years. Your child will learn the role each of the major types of dinosaurs played in their ecosystems, and the traits that made them such successful organisms for so long. Your child will do cool paleontological activities and learn about biological processes.

Food Science: Your Food is Alive!

Come and join us as we learn about the amazing world of food science! We will discuss how some living organisms related to foods such as cheese, honey, bread, and more. Learn the science of sugar, food coloring, nutrition, and more. Your child will be up close with live/fresh organisms/food and engage in cool biology activities. Some of these foods are to take home! No nuts in class but please indicate allergies if any.

Forensic Science: Bionerds' Way!

Come and join the fun to become a Forensic Scientist – Bionerds way! Your child will learn forensic and biology techniques, experiment and activities to further deductive reasoning to uncover the truth following in the footsteps of Sherlock Holmes and Scotland Yard. Topics will include fingerprinting, DNA, trace evidence, dental forensic, and more.



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Bionerds After-School Programs

(One-hour weekly class for 6-10-week session)

Human Body: We are Super!

Come and join this fun and hands-on biology workshop for kids! Learn about our amazing human body from your thumb, heart, eyes, lungs, to your sense of smell and more. Your child will be up close with fresh/preserved specimens, perform many dissections, and engage in cool biology activities using lab equipment/tools.

Human Body: We are Super! (Part II)

Come and join this fun and hands-on biology workshop for kids! Learn about our amazing human body from your brain, muscles, skin, bones, and more. Your child will be up close with fresh/preserved animal organs, perform many dissections, and engage in cool biology activities using lab equipment/tools. No need to take Human Body Part I to take this class.

Insects: Bug Me if You Dare!

Come and join this fun and hands-on biology workshop for kids! Learn about the amazing bugs around us such as beetles, butterflies, crickets, micro-arthropods, ladybugs and more. Your child will be up close with live/preserved bugs and perform cool biology activities.

Insects: Bug Me if You Dare! (Part II)

Come and join this fun and hands-on biology workshop for kids! Learn about the amazing bugs around us such as grasshopper, mealworm beetles, and more. Your child will be up close with live/preserved bugs and perform cool biology activities. No need to take Insects Part I to take this class.

It's All About Life!

Come and join this fun and hands-on biology workshop for kids! Learn about the amazing life around you, from decomposers, insects, plants, human, microorganisms, genetics, and more. Your child will be up close with the live/fresh/preserved organisms and specimens, perform some dissections, and engage in cool biology experiments using lab equipment/tools.

Junior Doctors! NEW! Starting FALL 2020/SPRING 2021

Come and join this fun and hands-on biology workshop for kids! Learn about the incredible world of medicine and medical research! Your child will learn about cardiology, veterinary medicine, neurology and more! Each class will highlight a career in the medical field. Your child will be up close with the fresh/preserved specimens, perform some dissections, and engage in cool biology experiments using lab equipment/tools.

Marine Animals: Amazing Waterworld!

Come and join this fun and hands-on biology workshop for kids! Learn about many marine animals, from sea star, fish, clam, shrimp, and more. Your child will be up close with fresh/preserved organisms, perform many dissections and engage in cool biology experiments/activities.



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Bionerds After-School Programs (One-hour weekly class for 6-10-week session)
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Come and join this fun and hands-on biology workshop for kids! Learn about many marine animals, from sharks, octopus, sea anemone, and more. Your child be up close with fresh/preserved organisms, perform many dissections and engage in cool biology experiments/activities. No need to take Marine Animals Part I to take this class.
Microscopic World: What You Can't See May Surprise You!
Come and join this fun and hands-on biology workshop for kids! Learn about the living organisms that are very small and some we can't even see with our own eyes: bacteria in the environment and food, protozoa, sea monkeys, yeast and more. Get up close and personal with live organisms using a microscope and perform cool biology experiments/activities.
Microscopic World: What You Can't See May Surprise You! (Part II)
Come and join this fun and hands-on biology workshop for kids! Learn about the living organisms that are very small and some we can't even see with our own eyes: bacteria with antibiotic, cyanobacteria, virus, fungi, and more. Get up close and personal with live organisms using a microscope and perform cool biology experiments/activities. No need to take the Microscopic World Part I to take this class.
Mix and Match Biology
Come and join this fun and hands-on biology workshop for kids! Learn about food biology, digestion system, worms, beetles, and water creatures. Your child will get up close with live/fresh/preserved specimens, perform some dissections, and engage in cool biology experiments/activities.
Mix and Match Biology (Part II)
Come and join this fun and hands-on biology workshop for kids! Learn about bacteria, turtles, genetic, mushrooms, snails and more. Your child will get up close and personal with live/fresh/preserved specimens, perform some dissections, and engage in cool biology experiments/activities. No need to take the Mix and Match Biology Part I to take this class.
Plants: Know Your Greens!
Come and join this fun and hands-on biology workshop for kids! Learn about amazing plants and trees on their photosynthesis ability, seed germination, anatomy and cell/DNA structures, and more. Your child will perform cool biology experiments and activities.
Spooky Science with Boo-ionerds!
Come and join us on a journey where we learn about some creepy and crawly topics from animals like bats and spiders to things like skeletons. Your child will be up close and personal with live/preserved organisms, perform some dissections, and engage in cool biology experiments using lab equipment/tools.



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Bionerds Weekly Camps (Monday-Friday, Half-Day and Full-Day camps)
Bioengineering: Designing Life
Come and join this fun and hands-on biology workshop for kids! Learn how to design and create something to improve life itself, such as prosthetics, medical equipment, genetic modification, bioenergy, and more! Your child will be exposed to engineering concept related to biology and perform cool biology activities.
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Dinosaurs ruled the earth for 180 million years. Your child will learn the role each of the major types of dinosaurs played in their ecosystems, and the traits that made them such successful organisms for so long. Your child will do cool paleontological experiments & activities and learn about biological processes.
Food Science: Your Food is Alive!
Come and join us as we learn about the amazing world of food science! We will discuss how some living organisms related to foods such as cheese, honey, bread, and more. Learn the science of sugar, food coloring, nutrition, and more. Your child will be up close with live/fresh organisms/food and engage in cool biology activities. Some of these foods are to take home! No nuts in class but please indicate allergies if any.
Forensic Science: Bionerds' Way!
Come and join the fun to become a Forensic Scientist – Bionerds way! Your child will learn forensic and biology techniques, experiment and activities to further deductive reasoning to uncover the truth following in the footsteps of Sherlock Holmes and Scotland Yard. Topics will include fingerprinting, DNA, trace evidence, dental forensic, and more.
Human Body: From Head to Toes!
Come and join this fun and hands-on biology workshop for kids! Learn about how amazing your body is and how its systems work, from your brain to your skin. Your child will be up close with fresh/preserved organs, perform many dissections, and engage in cool biology experiments using lab equipment/tools.
Insects: Bug Me if You Dare!
Come and join this fun and hands-on biology workshop for kids! Learn about the amazing bugs around us such as beetles, butterflies, fruit flies, micro-arthropods, ladybugs, grasshoppers, and more. Get up close with live/preserved bugs and perform cool biology experiments.



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Bionerds Weekly Camps (*continued*)

(Monday-Friday, Half-Day and Full-Day camps)

It's All About Life!

Come and join this fun and hands-on biology workshop for kids! Learn about the amazing life around you, from decomposers, insects, plants, human, microorganisms, genetics, and more. Your child will be up close and personal with the live/fresh/preserved organisms or specimens, perform some dissections, and engage in cool biology experiments using lab equipment/tools.

Land and Water Creatures

Come and join this fun and hands-on biology workshop for kids! Learn about the land and water creatures from lizard, frog, sea urchin, stingray, and more. Your child will be up close with fresh/preserved organisms, perform many dissections, and engage in cool biology experiments using lab equipment/tools.

Let's Dive into the Ocean!

Come and join this fun and hands-on biology workshop for kids! Learn about the amazing marine animals from the tiny planktons, starfish, to the great white sharks, and many more. Your child will be up close with the live/preserved/fresh organisms, perform many dissections, and engage in cool biology experiments using lab equipment/tools.

Microscopic World: What You Can't See May Surprise You!

Come and join this fun and hands-on biology workshop for kids! Learn about the living organisms that are very small and some we can't even see with our own eyes: bacteria in the environment and food, protozoa, sea monkeys, yeast and more. Get up close with live organisms using a microscope and perform cool biology experiments using lab equipment/tools.

Mix and Match Biology

Come and join this fun and hands-on biology workshop for kids! These mix and match topics are not related, but interesting to learn. Learn about food biology, digestion system, decomposers, water creatures, and more. Your child will perform some dissections and engage in cool biology experiments/activities.

Plants: Know Your Greens!

Come and join this fun and hands-on biology workshop for kids! Learn about amazing plants and trees on their photosynthesis ability, seed germination, anatomy and cell/DNA structures, and more. Your child will perform cool biology experiments and activities.

Spooky Science with Boo-ionerds!

Come and join us on a journey where we learn about some creepy and crawly topics from animals like bats and spiders to things like skeletons. Your child will be up close and personal with live/preserved organisms, perform some dissections, and engage in cool biology experiments using lab equipment/tools.



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Bionerds Online Sessions

(Multiple of 45-minute to 2-hour classes or camps)

Bioengineering ONLINE Session

Come and join our LIVE and fun INTERACTIVE online biology workshop for kids! Learn how to design and create something to improve life itself, such as prosthetics, biomimicry, genetic engineering, and more! Your child will be exposed to engineering concept related to biology and perform cool biology activities. A simple supply list to gather will be provided before class, but not required to have to join the class.

Bugs ONLINE Session

Come and join our LIVE and fun INTERACTIVE online biology workshop for kids! Learn about amazing bugs around you, such as beetles, grasshoppers, millipedes, and more. Live/preserved bugs will be presented online. A simple supply list to gather will be provided before class, but not required to have to join the class.

Camping Science ONLINE Session

Come and join our LIVE and fun INTERACTIVE online biology workshop for kids! Learn about wildlife, survival, all-things-night camping, and more. Your child will do cool and interactive camping-related activities LIVE online with our teacher. A simple supply list to gather will be provided before class, but not required to have to join the class.

Dinosaurs ONLINE Session

Come and join our LIVE and fun INTERACTIVE online biology workshop for kids! Your child will learn the role each of the major types of dinosaurs played in their ecosystems, and the traits that made them such successful organisms for so long. Your child will do cool and interactive paleontological activities LIVE online with our teacher. A simple supply list to gather will be provided before class, but not required to have to join the class.

Food Science ONLINE Session

Come and join our LIVE and fun INTERACTIVE online biology workshop for kids! Your child will learn how food is science. Plant your own vegetables and make your own food such as yogurt and ice cream LIVE online with our teacher. A simple supply list to gather will be provided before class, but not required to have to join the class.

Forensic Science ONLINE Session

Come and join our LIVE and fun INTERACTIVE online biology workshop for kids! Your child will learn about forensic and biology techniques, experiment and activities to further deductive reasoning to uncover the truth. Topics will include fingerprinting, dentistry, wildlife, art and photography, and more. A simple supply list to gather will be provided before class, but not required to have to join the class.

Human Body ONLINE Session

Come and join our LIVE and fun INTERACTIVE online biology workshop for kids! Learn about how the human body works. Your child will follow our teacher perform demo dissection LIVE online on preserved/fresh specimens, such as heart, eyes, brain, and more. A simple supply list to gather will be provided before class, but not required to have to join the class.



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Bionerds Online Mini-Sessions (*continued*)

(Monday-Friday, Daily 45-minute classes)

Land Water ONLINE Session

Come and join our LIVE and fun INTERACTIVE online biology workshop for kids! Learn about frogs, coral, scorpions, lizard, and more. Your child will follow our teacher perform demo dissection LIVE online on preserved/fresh specimens. A simple supply list to gather will be provided before class, but not required to have to join the class.

Marine Animals ONLINE Session

Come and join our LIVE and fun INTERACTIVE online biology workshop for kids! Learn about sharks, octopus, stingray, and more. Your child will follow our teacher perform demo dissection LIVE online on preserved/fresh specimens. A simple supply list to gather will be provided before class, but not required to have to join the class.

Plants ONLINE Session

Come and join our LIVE and fun INTERACTIVE online biology workshop for kids! Learn about plant structures and cells, photosynthesis, seed germination and more. We will guide your child to dissect and grow plants and do cool biology activities. A simple supply list to gather will be provided before class, but not required to have to join the class.



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Bionerds Topics List

(*Dissection included | # Demo dissection/Internal anatomy observation included | + Live organism may be included)

Animal Kingdom	Aquatic Creatures	Bioengineering	Camping Science
Birds#	Coral	Artificial Tissue	Animals
Frog*	Daphnia (Water Fleas) +	Bioenergy	Camping Plants
Lizard*	Hydra +	Biomimicry	Camping Insects +
Mouse*	Lamprey#	Environmental Engineering	Human Effects of Camping
Salamander*	Leech*	Genetic Engineering	Water Bodies
Scorpions	Sea Urchin*	GMO Plants	Survival/First Aids
Snails*+	Stingray#	Laboratory Equipment	Experiencing the Night
Snake#		Medical Equipment	Sun Power
		Prosthetic	Local Environment/Habitat
		Renewable Energy	Rocks
Decomposers	Dinosaurs	Food Biology	Forensic Science
Bess Beetles +	Are Birds Dinosaurs?	Bees and Honeys	Animals
Decomposing Bacteria +	Extinction Event	Cheese +	Art and Photography
Extreme Decomposers +	Life after Dinosaurs	Food Coloring	Botany
Meal Beetles +	Living Fossils	Food Nutrition	Dentistry
Micro arthropods +	Ornithischians	Grocery Vegetables +	DNA Forensic
Millipedes +	Prehistoric Aquatic Animals +	Ice cream	Fingerprinting
Mushrooms* +	Pterosaurs	Sugar	General Forensic
Snails* +	Rise of the Dinosaurs	Taste*	Toxicology
Worms* +	Sauropods	Yogurt +	Trace Evidence
Soil Science	Theropods	Yeast +	Wildfire Forensic
Genetics	Spooky Science	Insects	Microscopic World
DNA	Bats	Ants +	Bacteria +
Fruit Flies +	Blood	Bess Beetles +	Bacteria and Antibiotics +
	Bones/Skeleton*	Butterflies +	Brine Shrimps +
	Crows	Crickets +	Cyanobacteria +
	Eyeballs*	Fruit Flies +	Protist +
	Owls*	Grasshopper*	Sauerkraut +
	Potion and Slimes	Ladybugs +	Tempeh and Fungus +
	Pumpkin*	Meal Beetles +	Virus
	Science of Autumn	Micro arthropods +	Yeast +
	Spiders +	Moth +	Yogurt +



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Bionerds Topics List (continued)			
(*Dissection included)			
Human Body			
Bones*	Eyes*	Lungs*	Stomach*
Blood	Heart*	Muscles*	Taste*
Brain*	Kidneys*	Skin*	Thumbs/Fingerprints
Ears	Liver*	Smell	
Marine Organisms			
Brine Shrimps +	Hermit Crabs +	Sea Anemone*	Squids*
Clams*	Jellyfish*	Sea Cucumber*	Starfish#
Crabs*	Octopus*	Sharks*#	Turtles#
Fish*	Plankton +	Shrimps*	
Plants			
Desert/Aquatic Plants*			
Photosynthesis			
Plant Structures*+			
Plant Cells			
Seed Germination +			
Thirsty Plants			