



**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 4/15/19)

Bionerds offers vast Biology topics from insects, animals, human, microorganisms, and more. Each topic is a one-hour class. Laboratory safety training is always included at the beginning of the class. We continue with a short lecture on the topic, and the rest of the time it will be fun and hands-on activities for the students. The students will have up-close personal experience with the organisms we learn, perform dissections on some topics, and/or do biology experiments and activities. We will provide a lab coat and gloves for each student. Goggles and masks are provided as well as needed. If you prefer to not having dissections in the classroom, it is totally fine! We'll do a different activity instead. Just let us know.

- After-School Programs – page 1-4
- Camp Programs – page 5-6
- Topics – page 7-8

<b>Bionerds After-School Programs</b> <b>(One-hour weekly class for 6-10-week session)</b>
<b>Animal Kingdom: Wilder Than you Think!</b>
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 and personal with the fresh/preserved organisms and perform dissections, cool biology experiments using lab equipment/tools.
<b>Aquatic Creatures: No Gills Required!</b>
Come and join this fun and hands-on biology workshop for kids! Learn about many freshwater and marine aquatic creatures, from sea urchin, stingray, lamprey, leech, and more. Your child will perform dissections and cool biology experiments/activities.
<b>Bioengineering: Designing Life</b>
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 artificial tissue, laboratory equipment, genetic modification, energy, and more! Your child will be exposed to engineering concept related to biology and perform cool biology experiments and activities.
<b>Camping Science: Connecting with Nature – NEW! Fall 2019</b>
Come and join us as we cover topics to help your child recognize and appreciate the living world just outside their window. We will discuss camping-related topics and local wildlife one might encounter to the importance of preserving our ecosystem. What plants are harmful or used for medicinal purposes? What animals we may see outdoor? Find out in our classes geared towards the outdoor explorer!



**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 After-School Programs (*continued*)**

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

#### **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 and personal with the live organisms on some topics and/or perform dissections, cool biology experiments on the other 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 experiments & activities and learn about biological processes.

#### **Food Science: Your Food is Alive! – NEW! Fall 2019**

Come and join us as we learn about the amazing world of food science! We will discuss how some living organisms are responsible for making some of the foods we love such as cheese, yogurt, bread, and more. Get up close with live organisms using a microscope and perform cool biology experiments/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, wildfire forensic, and more.

#### **Halloween Science with Boo-ionerds! – NEW! Fall 2019**

Trick or treat! Come and join us on a journey where we learn about some creepy and crawly topics of the Halloween season. From animals like bats and spiders to things like bones and pumpkins, there's a class for everyone to get into the Halloween spirit. Your child will be up close and personal with the live organisms and perform dissections, cool biology experiments using lab equipment/tools.

#### **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 perform dissections and cool biology experiments and activities.

#### **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 perform dissections and cool biology experiments and activities. No need to



**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 After-School Programs (*continued*)**

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

### **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. Get up close and personal with live bugs using a microscope and perform cool biology experiments.

### **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. Get up close and personal with live bugs using a microscope and perform cool biology experiments.

### **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 organisms on some topics and/or perform dissections, cool biology experiments on the other 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 starfish, fish, clam, shrimp, and more. Your child will perform dissections and cool biology experiments/activities.

### **Marine Animals: Amazing Waterworld! (Part II)**

Come and join this fun and hands-on biology workshop for kids! Learn about many marine animals, from sharks, octopus, sea anemone, crabs, and more. Your child will perform dissections and cool biology experiments and activities.

### **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 on some topics and perform cool biology experiments on the others.

### **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, fungus, and more. Get up close and personal with live organisms using a microscope on some topics and perform cool biology experiments on the others. No need to take the first Microscopic World class to join this one.



**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 After-School Programs (*continued*)**

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

### **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 very interesting to learn. Learn about food biology, digestion system, worms, beetles, and water creatures. Your child will get up close and personal with live organisms, perform dissections and cool biology experiments/activities.

### **Mix and Match Biology (Part II)**

Come and join this fun and hands-on biology workshop for kids! These mix and match topics are not related, but still interesting to learn. Learn about bacteria, turtles, genetic, mushrooms, snails and more. Your child will get up close and personal with live organisms, perform dissections and cool biology experiments/activities. No need to take the first Mix and Match Biology class to join this one.

### **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.



**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 Weekly Camps**

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

### **Camping Science: Connecting with Nature – NEW!**

Come and join us as we cover topics to help your child recognize and appreciate the living world just outside their window. We will discuss camping-related topics and local wildlife one might encounter to the importance of preserving our ecosystem. What plants are harmful or used for medicinal purposes? What animals we may see outdoor? Find out in our classes geared towards the outdoor explorer!

### **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 and personal with the live organisms on some topics and/or perform dissections, cool biology experiments on the other 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 experiments & activities and learn about biological processes.

### **Food Science: Your Food is Alive! – NEW! Fall 2019**

Come and join us as we learn about the amazing world of food science! We will discuss how some living organisms are responsible for making some of the foods we love such as cheese, yogurt, bread, and more. Get up close with live organisms using a microscope and perform cool biology experiments/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, wildfire forensic, and more.

### **Halloween Science with Boo-ionerds! – NEW! Fall 2019**

Trick or treat! Come and join us on a journey where we learn about some creepy and crawly topics of the Halloween season. From animals like bats and spiders to things like bones and pumpkins, there's a class for everyone to get into the Halloween spirit. Your child will be up close and personal with the live organisms and perform dissections, cool biology experiments using lab equipment/tools.



**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 Weekly Camps (*continued*)**

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

#### **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 and personal with fresh/preserved organs and/or perform dissections/cool biology experiments on the other 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 and personal with live bugs using a microscope on some topics and perform cool biology experiments on the others.

#### **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 many more. Your child will be up close and personal with the live organisms and perform dissections and 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 and personal with the live/preserved organisms and/or perform dissections and 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 and personal with the live/preserved/fresh organisms and/or perform dissections/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 and personal with live organisms using a microscope on some topics and perform cool biology experiments on the others.



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 Topics List

(\*Dissection included)

Animal Kingdom	Aquatic Creatures	Bioengineering	Decomposers
Birds*	Coral	Artificial Tissue	Bess Beetles
Frog*	Daphnia (Water Fleas)	Bioenergy	Decomposing Bacteria
Lizard*	Hydra	Environmental Engineering	Meal Beetles
Mouse*	Lamprey*	Genetic Engineering	Micro arthropods
Salamander*	Leech*	GMO Plants	Millipedes
Scorpions	Sea Urchin*	Laboratory Equipment	Mushrooms*
Snails*	Stingray*	Prosthetic	Snails*
Snake*			Worms*
<b>Camping Science - NEW!</b>			
Coming soon in Fall 2019!			
Dinosaurs	Food Biology	Forensic Science	Genetics
Are Birds Dinosaurs?	Sauerkraut	Animals	DNA
Ornithischians	Tempeh and Fungus	Art and Photography	Fruit Flies
Prehistoric Aquatic Animals	Yogurt	Botany	
Pterosaurs	Yeast	Dentistry	
Rise of the Dinosaurs	Cheese	DNA Forensic	
Sauropods		Fingerprinting	
Theropods		General Forensic	
		Toxicology	
		Trace Evidence	
		Wildfire Forensic	
<b>Halloween Science – NEW!</b>			
Coming soon in Fall 2019!			
Human Body			
Bones*	Eyes*	Lungs*	Stomach*
Blood	Heart*	Muscles*	Taste*
Brain*	Kidneys*	Skin*	Thumbs/Fingerprints
Ears	Liver*	Smell	



**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 Topics List *(continued)*

(\*Dissection included)

Bionerds Topics List <i>(continued)</i>			
(*Dissection included)			
Insects	Microscopic World	Plants	
Bess Beetles	Bacteria	Desert/Aquatic Plants*	
Butterflies	Bacteria/Antibiotics	Photosynthesis	
Crickets	Cyanobacteria	Plant Structures*	
Fruit Flies	Protist	Plant Cells	
Grasshopper*	Tempeh and Fungus	Seed Germination	
Ladybugs	Virus	Thirsty Plants	
Meal Beetles	Yeast		
Micro arthropods	Yogurt		
Marine Organisms			
Brine Shrimps	Hermit Crabs	Sea Anemone*	Squids*
Clams*	Jellyfish*	Sea Cucumber*	Starfish*
Crabs*	Octopus*	Sharks*	Turtles
Fish*	Plankton	Shrimps*	