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LAURA COE, CO-FOUNDER LISA COE, CO-FOUNDER PRESIDENT CEO

**Snapology** was created by two sisters, Lisa and Laura Coe, who observed the love their children had for creative play using building blocks and other materials that snap together. The idea of offering enrichment classes and camps to teach science, mathematics, technology and literacy concepts excited them given both of their backgrounds in mathematics and science.

Laura Coe holds a B.S. in Mathematics from Pennsylvania State University. She was employed as an Actuary in the healthcare industry for 22 years before engaging in Snapology on a full-time basis. Laura has a broad background in mathematics, statistics and finance. Laura is the mother of two wonderful sons.

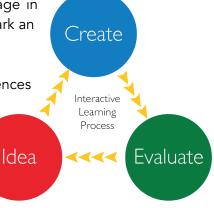
Lisa Coe holds a B.S. in Pharmacy from the University of Pittsburgh. She has been employed as Pharmacist and Consultant in the healthcare and pharmaceutical industry for the past 25 years. Lisa has extensive experience in sales, marketing and strategic business management. She is blessed to be the mother of a beautiful little boy.

Both Laura and Lisa currently live in Pittsburgh, PA.



Snapology's mission is to provide children an opportunity to engage in "playful learning" activities that will stimulate their creativity and spark an interest in learning.

Research has shown that many of children's best learning experiences come when they are engaged not simply in interacting with materials, but in designing, creating, and inventing with them<sup>1</sup>. Our classes are based upon several strategies that have been shown to maximize learning through the use of various activities and technologies in creative, playful, and "learningful" ways<sup>2</sup>.



- We personalize the learning through lesson plans based on themes such as sports, animals, space or other topics of interest to children.
- The class structure is flexible allowing children to progress and explore at their own pace.
- We use familiar objects in unfamiliar ways by incorporating the use of LEGO® bricks.
- Snapology's enrichment programs are developed to meet specific Common Core Standards and Next Generation Science Standards.

Snapology offers a variety of activities designed to reinforce the core competencies and curricula being taught at each grade level. Our activities offer students an environment where they are encouraged to create and interact with technology and explore the world around them through a hands-on approach that promotes playful learning.

#### **Inclusive Nature**

Snapology provides an inclusive environment for children to learn and play. Our programs are popular with both traditional and special needs children, including children on the autism spectrum and with sensory processing needs.

#### **Snapology Program Advisory Panel**

Snapology's Program Advisory Panel (SPAP) is comprised of a group of professionals with backgrounds and expertise in child development, robotics, engineering, educational administration and/or child psychology. This panel provides feedback and strategic guidance regarding Snapology programs.

1 Papert, S.(1980). Mindstorms: Children, Computers, and Powerful Ideas. New York: Basic Books. & Resnick, M. (2002). Rethinking Learning in the Digital Age. In G. Kirkman (Ed.), The Global Information Technology Report: Readiness for the Networked World(pp. 32-37).

2 Resnick, M (2006) Computer as Paintbrush: Technology, Play and the Creative Society, Play Equals Learning, Oxford Press



# **CORE S.T.E.A.M. PROGRAMS AT A GLANCE**

Title	Ages	Grade
Basic Engineers (Let's Get Moving)	5-8	K-3
Foundational Engineering: Machines & Contraptions	5-8	K-3
Intermediate Engineers	8-12	2-5
Advanced Engineers	9-14	4-8
Alternative Energy	7-14	2-8
Brick Art and Design Lab (Art History)	5-14	K-8
Developing Engineers: Mechanical Masterminds	8-13	2-8
Amusement Park Adventures Engineering	7-14	2-8
Superstructures (Architecture)	7-12	2-5
Snapology Scientists	7-12	2-5
Fidget Spinner Science	5-12	K-5
Science of Slime	5-12	K-5
Science of Super Powers	5-12	K-5
Sports Science	7-14	2-8
Escape Snapology	4-14	Pre K-8
Minecraft Gaming	9-13	4-8
Combat Robots	7-14	2-8
Robot Challenge	7-14	2-8
Archaeology	5-12	K-5



# CORE STEAM PROGRAMS

Snapology's S.T.E.A.M. enrichment programs focus on Common Core and Next Generation Science Standards that teach children about science, technology, engineering, art and math through the building and manipulation of various DUPLO®, LEGO® or K'Nex® models. Our activities challenge participants to cultivate problem solving skills through application of the scientific method and project planning.

#### **SOCIAL AND EMOTIONAL DEVELOPMENT SKILLS**

#### **Teamwork & Collaboration**

- Dynamic roles and coordination foster teamwork skills
- Group decision making encourages negotiation and compromise
- Team planning and decision making improve cooperation skills

#### **Presentation Skill Development**

- Explaining work encourages critical thinking
- Presenting their creations enhances both every day and classroom confidence

## **BASIC ENGINEERING (LET'S GET MOVING)**

Come build super-cool cars, catapults, and parade floats that use gears, axles and pulleys. Work in teams under guided instruction to build a different model using LEGO® bricks each week. This class is designed for children of all ages and building abilities to build together. Classes include free-building time to promote creativity.

#### ACADEMIC ENRICHMENT

- Explore the scientific method and engineering design process
- Develop appropriate strategies for logical problem solving
- Make measurements and observations to collect data for comparisons
- Evaluate different methods of measurement and observation
- Learn about mechanical movement and energy
- Potential and kinetic energy, gears, pulleys, motors

AGES GRADES 5-8 K-3

# FOUNDATIONAL ENGINEERING: MACHINES & CONTRAPTIONS

Does your child love to tinker and create new things, or are they the kind of learner who likes to break things apart to see what's inside? If so, they're going to love Snapology's Foundational Engineering: Machines and Contraptions program! This program gives your student the tools they need to understand mechanical movement and the importance of simple machines. They will see these moving parts up-close as they follow instructions to build various machines and contraptions, then use the models to develop new design ideas, test out physics concepts, and even play games with their partners and classmates! Whether they are the creative-constructive type or prefer the inquisitive-deductive way of learning, this program is sure to spark their engineering interests!

#### ACADEMIC ENRICHMENT

- Explore the scientific method and engineering design process
- Develop appropriate strategies for logical problem solving
- Learn about mechanical movement and energy
- Potential and kinetic energy, gears, pulleys, motors

AGES GRADES 5-8 K-3

#### INTERMEDIATE ENGINEERS

In Snapology's Intermediate Engineers program children will build super-cool models that use gears, axles and levers. Students will work in teams under guided instruction to build cars, merry-go-rounds, go-cart and catapults. Don't miss out on this awesome program!

#### ACADEMIC ENRICHMENT

- Explore the scientific method and engineering design process
- Develop appropriate strategies for logical problem solving
- Make measurements and observations to collect data for comparisons
- Evaluate different methods of measurement and observation
- Learn about mechanical movement and energy

**GRADES** 

2-5

 Potential and kinetic energy, gears, pulleys, motors

AGES 8-12

#### ADVANCED ENGINEERS

In this program, students will build complex LEGO® models that use simple machines and technical bricks. Children will use engineering and physics concepts as they work in teams under guided instruction to build a different model each class. Students will learn about diverse engineering, physics, geometry, and trigonometry concepts in this program.

#### ACADEMIC ENRICHMENT

- Explore the scientific method and engineering design process
- Develop appropriate strategies for logical problem solving
- Make measurements and observations to collect data for comparisons
- Evaluate different methods of measurement and observation
- Learn about mechanical movement and energy
- Potential and kinetic energy, gears, pulleys, motors

AGES GRADES 9-14 4-8

#### **ALTERNATIVE ENERGY**

Ever wonder how energy is developed from the sun, wind, and water? Come build a solar-powered car, a windmill and a watermill using LEGO® bricks. Save the planet and build with LEGO® bricks all at the same time!

#### ACADEMIC ENRICHMENT

- Explore the scientific method and engineering design process
- Develop appropriate strategies for logical problem solving, perform experiments
- Learn about mechanical movement and renewable energy
- Potential and kinetic energy, gears, pulleys, motors
- Solar, wind and water energy supplies, transfer, accumulation, conversion, and consumption

AGES GRADES 7-14 2-8

## **BRICK ART AND DESIGN LAB (ART HISTORY)**

Edgar Degas, a famous artist, once said, 'Art is not what you see, but what you make others see'. As your child learns about different types of art and the periods they were created, students will be interpreting what they see and creating their own works of art using LEGO® bricks. Through Snapology's interactive Art History class, children will learn about Da Vinci's Mona Lisa, Van Gogh's Starry Night, Wright's Falling Water, and many more!

#### ACADEMIC ENRICHMENT

- Explore various art forms and periods
- Sculpture, painting, architecture, ballet, impressionism, cubism
- Utilize emulation and creativity to create original works using LEGO® bricks

AGES GRADES 5-14 K-8

#### **DEVELOPING ENGINEERS: MECHANICAL MASTERMINDS**

Is your student inquisitive, a problem-solver, a big-thinker, a tinkerer, a puzzler, a LEGO® lover, or a budding engineer? If so, they're the perfect fit for Snapology's Developing Engineers: Mechanical Masterminds program! This program gives your student the tools they need to understand mechanical movement through the foundations of simple machines, physics, and engineering design. They will see moving parts up-close as they follow instructions to build various machines, then use the models to develop new design ideas, test out physics concepts, and even play games with their partners and classmates. Whether they are the creative-constructive type or prefer the inquisitive-deductive way of learning, this program is sure to spark their interests!

#### ACADEMIC ENRICHMENT

- Explore the scientific method and engineering design process
- Develop appropriate strategies for logical problem solving
- Learn about mechanical movement and energy
- Potential and kinetic energy, gears, pulleys, motors

AGES GRADES 8-13 2-8

#### AMUSEMENT PARK ADVENTURES ENGINEERING

Design your own amusement park in this super fun program! Learn how to use LEGO® bricks and other building materials to make coasters and other awesome rides. Can you design the next Disney World?

#### ACADEMIC ENRICHMENT

- Explore the scientific method and engineering design process
- Develop appropriate strategies for logical problem solving
- Learn about mechanical movement and energy
- Potential and kinetic energy, gears, pulleys, motors

# **SUPERSTRUCTURES (ARCHITECTURE)**

Does your builder enjoy designing beautiful buildings or functional spaces for their minifigures? If so, this program is the perfect space for your young architect to sharpen their design and building skills! All buildings, from the Empire State Building to the house next door, started as an idea in an architect's head. Students will learn how to take an idea from their head and turn it into a building in the real world. They will be guided through the building process, from creating a floor plan to disaster-proofing the structure, so that they will be able to create the next best thing in LEGO® architecture!

#### ACADEMIC ENRICHMENT

- Explore the scientific method and engineering design process
- Develop appropriate strategies for logical problem solving
- Learn about architecture and sound building methods
- Blueprinting, base isolation, X and K bracing

AGES GRADES 7-12 2-5

#### **SNAPOLOGY SCIENTISTS**

Allow your child to cultivate their love of science and experience different domains of science & nature. Students will engage in concepts from astronomy, earth science, biology, chemistry and physics using LEGO® bricks and other interactive learning tools. We make science fun at Snapology!

#### ACADEMIC ENRICHMENT

- Investigate different areas of science
- Earth & space science, biology, chemistry, physics
- Explore the scientific method and engineering design process
- Develop appropriate strategies for logical problem solving, perform experiments

#### FIDGET SPINNER SCIENCE

Fidget Spinners are both fun and mesmerizing, which explains why they've become a must-have item for kids! Snapology's Fidget Spinner Workshop will teach your child how to make his or her own version of this popular toy and how to best use it in their day-to-day lives.

#### ACADEMIC ENRICHMENT

- Explore concepts in physics such as energy, friction, and forces
- Learn about building techniques that allow movement, such as the use of bearings
- Utilize the engineering design process to refine models

AGES GRADES 5-12 K-5

#### SCIENCE OF SLIME

Allow your child to cultivate their love of science through hands-on experimentation with non-toxic chemistry! In this workshop, students will learn the basic science behind their favorite slimy polymer and how the magic is all in the ingredients. This is not your average slime workshop; your child will walk away from the Snapology Science Lab with clear knowledge about the chemistry behind slime and clean hands!

#### ACADEMIC ENRICHMENT

- Learn chemistry fundamentals, including the elements, bonding, and chemical reactions
- Explore the scientific method through experimentation
- Learn the importance of careful observation in science

AGES GRADES 5-12 K-5

#### **SCIENCE OF SUPER POWERS**

In Snapology's Science of Superpowers program, children will learn about the science behind their favorite heroes' powers. Students will learn about gravity, aerodynamics, forces, motion, and much more as they learn about flight, super villain fights, and superhero vehicles.

#### ACADEMIC ENRICHMENT

- Learn about concepts in physics, including flight forces, collisions, and momentum
- Explore the importance of physics in their everyday life
- Utilize problem solving techniques to create new designs

AGES GRADES 5-12 K-5

#### **SPORTS SCIENCE**

In this class, children will learn the science behind their favorite sports. Students will learn about momentum, energy, measurement, air pressure, and much more as they perform simple experiments related to sports. Perfect for both sports and science lovers, this fun interactive program exercises both the body and the mind.

#### ACADEMIC ENRICHMENT

- Learn about important concepts in physiology including heart rate and muscle tone/ strength
- Explore sports related physics including momentum, energy, force, and pressure
- Utilize important scientific skills including experimentation and measurement

#### **ESCAPE SNAPOLOGY**

Hurry, your team has 60 minutes to discover clues, solve puzzles, answer riddles, and manipulate contraptions in order to complete an assigned tasks to ultimately unlock the door to escape Snapology! The team that escapes the fastest is given ultimate bragging rights...until their record is beaten by a new team! In Escape Snapology, students will play various escape games using their budding S.T.E.A.M. skills; in our longer programs, students will actually have the chance to design and implement their own escape games!

#### ACADEMIC ENRICHMENT

- Practice math skills through the completion of riddles and puzzles
- Exercise strategic thinking and planning skills
- Utilize inductive and deductive reasoning skills
- Participate in requisite teamwork for success

AGES GRADES 4-14 Pre K-8

#### VIRTUAL ESCAPE SNAPOLOGY

In this program, your student and their teammates will have 45 minutes to examine clues, solve puzzles, answer riddles, and decode secret messages in order to complete the task of unlocking the secrets of Snapology's Digital Escape Challenge! The team that finishes fastest is given ultimate bragging rights... until their record is beaten by a new team! In this thrilling program, your learner will play various games that will take them into the most exciting fantasy places while requiring them to utilize their budding STEAM skills to finish each game.

#### ACADEMIC ENRICHMENT

- Develop strategies for solving unique puzzles and word problems
- Practice math skills through the completion of riddles and puzzles
- Exercise strategic thinking and planning skills
- Utilize inductive and deductive reasoning skills

AGES GRADES 4-14 Pre K-8

#### MINECRAFT GAMING

Work together as a team in Minecraft to develop creativity and problem-solving skills through active planning, troubleshooting, and spatial building scenarios. Children should have experience playing Minecraft before they attend this program to optimize the experience and learning. If using a computer, you can run both programs at once; otherwise, two devices are required.

#### ACADEMIC ENRICHMENT

- Explore concepts involving navigation, maps, architecture, physics, electrical circuits, coding, and more
- Practice critical thinking skills through challenges
- Practice with Architectural Design
- Creative thinking and design encourages independent thinking and problem-solving skills

AGES	GRADES
9-13	4-8

### **COMBAT ROBOTS**

Do you think you can build the strongest and most agile robot? Can your robot win a head-to-head combat mission? Come learn engineering strategies for building sturdy structures using LEGO® bricks and then apply that knowledge to build a robot for friendly competition. You'll have a blast as you play robot football and complete the hoop challenge in this fun robotics program.

#### ACADEMIC ENRICHMENT

- Practice critical thinking skills through building challenges
- Practice with the Engineering Design Process
- Creative thinking and design encourages independent thinking and problem-solving skills

AGES	GRADES
9-13	4-8

#### **ROBOT CHALLENGE**

Learn engineering strategies and building techniques to use robots constructed from LEGO® bricks to complete missions using remote controls. Apply your knowledge and skill in friendly competition. Complete as many missions as you can in a specific time frame to win the ultimate challenge match. Take your building to the next level.

#### ACADEMIC ENRICHMENT

- Gain awareness of the field of archeology
- Explore significant archaeological discoveries
- Exercise strategic thinking and planning skills
- Practice with basic engineering, design, and motor skills
- Develop informal presentations involving relevant facts and descriptive details

AGES GRADES 7-14 2-8

#### **AMAZING RACE**

Are you ready for an adventure? Send your learner on a trip with Snapology around the world to discover unique aspects of different cultures, including national flags, traditional cuisines, influential artists, and notable historical landmarks! While they explore, they will be challenged to work with a partner to solve different tasks in various "countries" that will put them ahead or behind in the race to the finish line! Not only will your student be learning about world cultures and developing an appreciation for cultural differences, but they will be competing in fun challenges to test their building and problem-solving skills.

#### **ACADEMIC ENRICHMENT**

- Develop strategies for problem solving
- World studies (geography and social studies)
- Practice critical thinking skills through building challenges

#### STEAM SURVIVOR

Does your learner have what it takes to be a STEAM Survivor? If your child enjoys taking on engineering and design challenges, working with a team to complete timed tasks, and using partnerships to brainstorm and explore new possibilities to solve unique problems, this program is the perfect place for them to push their STEM and building skills to the next level! Throughout the program, students will be challenged to design and build complicated objects, work cooperatively with others to secure their place on a team, and compete to be the fastest and most precise competitors in the class. Although the tasks will be challenging, they will be structured and guided by a trained Snapologist who will make sure your child gets the support they need to be successful and get the most out of this unique, challenging program!

#### ACADEMIC ENRICHMENT

- Practice critical thinking skills through building challenges
- Practice with the Engineering Design Process
- Creative thinking and design encourages independent thinking and problem-solving skills

AGES GRADES 9-13 4-8



## **ROBOTICS & CODING PROGRAMS AT A GLANCE**

Title	Ages	Grade
Amazing Animals Robotics	6-12	1-5
Awesome Adventures Robotics	6-12	1-5
Inventor's Club Robotics	7-13	2-6
Space Wars Robotics	7-14	2-8
Incredible Inventions Robotics	7-14	2-8
Creature Creator Robotics	7-14	2-8
KinderBots	4-6	Pre K-1
RoboPets	4-7	Pre K-2
Real World Robotics	7-14	2-8
GameBots Robotics	7-14	2-8
GameBots Beginner Coding	7-14	2-8
Mega Machines Robotics	7-14	2-8
AttackBots Robotics (Battle Robotics)	7-14	2-8
AttackBots Beginner Coding	7-14	2-8
Robotics Rescue Mission	9-14	4-8
Robot Olympics	9-14	4-8



# ROBOTICS & CODING PROGRAMS

Snapology's Robotics programs teach children the basics of computer programming and engineering through interactive robotic model builds and challenges. Our Robotic enrichment series offers children ages 6-14 hands on experience developing computer skills, coding, problem solving skills and teamwork capabilities.

# SOCIAL AND EMOTIONAL DEVELOPMENT SKILLS

#### **Teamwork & Collaboration**

- Explaining work encourages critical thinking
- Presenting their creations enhances both every day and classroom confidence

#### **Presentation Skill Development**

 Explaining work encourages critical thinking and classroom confidence

#### **AMAZING ANIMALS ROBOTICS**

Build a robotic zoo featuring models with working motors and sensors! Work in teams under guided instructions to build and program LEGO® models. Build a different model each class! Learning is enhanced through use of laptops.

#### ACADEMIC ENRICHMENT

- Explore robotics and basic computer programming
- Pseudo-coding, sensor input, mechanics
- Practice critical thinking skills through challenges

AGES GRADES 6-12 1-5

#### **AWESOME ADVENTURES ROBOTICS**

Take off on a robotics adventure featuring LEGO® models with working motors and sensors! Work in teams under guided instructions to build and program your models, such as giants, soccer players, and boats, for a fun adventure. Build a different model each class! Learning is enhanced through use of laptops.

#### ACADEMIC ENRICHMENT

- Explore robotics and basic computer programming
- Pseudo-coding, sensor input, mechanics
- Practice critical thinking skills through challenges

AGES GRADES 6-12 1-5

#### **INVENTOR'S CLUB ROBOTICS**

Whoever said you couldn't solve the world's problems with LEGO® bricks? Learn about the process real inventors go through while you help design, build and program robotic models to solve problems. Are you the next Thomas Edison? Learning is enhanced through use of laptops.

#### ACADEMIC ENRICHMENT

- Explore robotics and basic computer programming
- Pseudo-coding, sensor input, mechanics
- Practice critical thinking skills through challenges
- Problem solving and inventiveness are encouraged through play

AGES GRADES 7-13 2-6

#### **JEDI ROBOTICS**

In this Level I Robotics program, our structured robotic models are inspired by the Star Wars® films and space travel! Send your student on a space adventure full of building, programming, and imagination using LEGO® bricks and unique building instructions that you won't find anywhere else. While they build, they'll learn about space, space travel, and - of course - Star Wars®!

#### ACADEMIC ENRICHMENT

- Investigate topics in earth and space science
- Celestial bodies, orbits
- Explore robotics and basic computer programming
- Pseudo-coding, sensor input, mechanics

#### **INCREDIBLE INVENTIONS ROBOTICS**

Do you enjoy inventing new things? Learn about the process real inventors go through while you help design, build and program robotic models to solve problems using LEGO® bricks and robotics. Are you the next Thomas Edison? Learning is enhanced through use of laptops.

#### ACADEMIC ENRICHMENT

- Explore robotics and basic computer programming
- Pseudo-coding, sensor input, mechanics
- Practice critical thinking skills through challenges
- Problem solving and inventiveness are encouraged through play

AGES GRADES 7-14 2-8

#### **CREATURE CREATOR ROBOTICS**

In Snapology's Creature Creator Robotics class, your animal lover will create their own animal inspired robotic models. Students will learn about gear ratio, sensors, simple machines, and programming as they build insects, dolphins, gorillas, and much more. Your child is sure to have a wild time as they build, learn, and play.

#### ACADEMIC ENRICHMENT

- Investigate topics in zoology including animal structure and habitats
- Learn about pseudo coding, sensor inputs, and robotics
- Learn about mechanics through pulleys, gears, and cranks
- Use engineering skills to solve challenges

#### **KINDERBOTS**

Children will begin to explore the world of robotics as they build simple models that teach the fundamentals of robotic design. Whether learning about sensors while building drills and magic wands, or discovering ways that gears and pulleys create movement while building helicopters and robotic dogs, your child is sure to have a great time.

#### ACADEMIC ENRICHMENT

- Explore robotics and become introduced to computer programming
- Pseudo-coding, sensor input, mechanics
- Practice critical thinking skills through challenges
- Problem solving and inventiveness are encouraged through play

AGES GRADES
4-6 Pre K-1

#### **ROBOPETS**

Children will begin to explore the world of robotics as they build moving animals that teach the fundamentals of robotic design. Whether learning about animal habitats, or discovering ways that gears and pulleys create movement while building dancing birds and robotic dogs, your child is sure to have a great time.

#### ACADEMIC ENRICHMENT

- Explore robotics and become introduced to computer programming
- Pseudo-coding, sensor input, mechanics
- Practice critical thinking skills through challenges
- Problem solving and inventiveness are encouraged through play

AGES GRADES
4-7 Pre K-2

#### **REAL WORLD ROBOTICS**

In Snapology's Real World Robotics class, students interested in technology will create robotic models inspired by real life robotic technologies. Students will learn about gear ratio, sensors, simple machines, and programming as they build alarm devices, earthquake detectors, robotic arms, and much more. Your child will have a blast exploring the world of robotic technologies as they build, learn, and play.

#### ACADEMIC ENRICHMENT

- Investigate topics in robotic technology such as rovers and prosthetic limbs
- Learn about pseudo coding, sensor inputs, and robotics
- Learn about mechanics through pulleys, gears, and cranks
- Use engineering skills to solve challenges

AGES GRADES 7-14 2-8

#### **GAMEBOTS ROBOTICS**

Calling all gamers! Have a blast creating robotic games each week while learning about robotics. Students will learn about gear ratio, sensors, programming, and pulleys as they create fun to play games. Whether creating pinball machine, duck hunt or a ring toss game, your child is sure to have fun building, learning, and playing.

#### ACADEMIC ENRICHMENT

- Students will learn basic coding skills through pseudo coding.
- Students will learn the basics of robotics through design and play.
- Students will explore basic engineering concepts.
- Students will use engineering and programming skills to develop solutions to challenges.
- Students will work and play collaboratively with partners and classmates to create functional robotic games.

#### **GAMEBOTS BEGINNER CODING**

Calling all gamers! Have a blast learning how to code while building robotic games to test your code. Students will learn about sequencing commands, value and sensor inputs, and loops. Whether creating a robotic hockey player, pinball machine, or a ring toss, your child is sure to have fun building, learning, and playing.

#### ACADEMIC ENRICHMENT

- Learn fundamental coding skills such as sequencing and using inputs
- Develop abstract thinking skills
- Learn about mechanics through pulleys, gears, and cranks
- Use engineering skills to solve challenges

AGES GRADES 7-14 2-8

#### **MEGA MACHINES ROBOTICS**

In Snapology's Mega Machines class, your child will create some of their favorite motorized vehicles. Students will learn about gear ratio, sensors, pulleys, cranks, and programming as they build trucks, space rovers, helicopters, and much more. Your child is sure to have fun as they build, learn, and play.

#### ACADEMIC ENRICHMENT

- Learn about pseudo coding, sensor inputs, and robotics
- Learn about mechanics through pulleys, gears, and cranks
- Use engineering skills to solve challenges

## **ATTACKBOTS ROBOTICS (BATTLE ROBOTICS)**

In this exciting class, students will build a variety of military inspired robotic models. Children will learn about sensors, gears, pulleys, and programming as they create robotic catapults, crossbows, tanks, bomber planes and much more!

#### ACADEMIC ENRICHMENT

- Explore robotics and basic computer programming
- Pseudo-coding, sensor input, mechanics
- Practice critical thinking skills through challenges
- Problem solving and inventiveness are encouraged through play

AGES GRADES 7-14 2-8

#### ATTACKBOTS BEGINNER CODING

In this exciting class, students will learn important foundational coding skills while building military inspired robots. Children will learn about sequencing commands, value and sensor inputs, and loops as they create robotic catapults, crossbows, battleships and much more!

#### ACADEMIC ENRICHMENT

- Learn fundamental coding skills such as sequencing and using inputs
- Develop abstract thinking skills
- Learn about mechanics through pulleys, gears, and cranks
- Use engineering skills to solve challenges



#### **ROBOTICS RESCUE MISSION**

There has been a devastating earthquake in the fictional town of Dalto, CA. Can you save the town? Students in this class will learn how to build and program an autonomous robot using LEGO® Mindstorms® EV3 technology. Their new skills will be used to solve real-world problems and help the town after a natural disaster. Students will program and modify their robot to complete challenges set up on a large game board modeled after the town of Dalto, CA. [Prior robotics experience is not necessary. Beginners are welcome.]

#### ACADEMIC ENRICHMENT

- Explore robotics and intermediate computer programming
- Pseudo-coding, sensor input, feedback loops, mechanics
- Practice critical thinking skills through challenges
- Problem solving and inventiveness are encouraged

AGES GRADES 9-14 4-8

#### **ROBOTICS OLYMPICS**

In Snapology's Robot Olympics, students will build and program robots to compete in sports themed challenges. Your child will learn both mechanical and computer programming concepts as they create robots that run races, play hockey, and much more. Students will work in groups, using LEGO® Mindstorms® EV3 technology, to complete challenges. Your child is sure to have fun as they build, learn, and play.

#### **ACADEMIC ENRICHMENT**

- Utilize strategic building methods to maximize efficiency of robots
- Practice engineering design process and problem solving strategies
- Learn programming concepts through icon based programming platform

AGES GRADES 9-14 4-8

#### **SUMOBOTS**

The ancient art of SUMO wrestling may be fun to watch, but certainly not so easy to compete in. Not anymore! In this program, your child will design their own SUMO wrestling robot that will compete against their classmates' bots for the title of toughest SUMO Bot. There are no limitations put onto their robot designs and they will have the opportunity to refine their robots as they compete during the program. This design process will make them better engineers, better programmers, and better collaborators. Don't worry, they will be guided by a trained Snapologist to help them accomplish their goals as they design and battle!

#### ACADEMIC ENRICHMENT

- Practice with following detailed, step-by-step instructions
- Use new information to influence building or programming choices
- Practice critical thinking skills through challenges
- Explore robotics and develop computer programming skills

AGES GRADES 9-14 4-8

#### **LEVEL 1 CODING**

In Snapology's Level I Coding programs, students use age-appropriate, block-based pseudo-code to create simple program strings that bring fun robotic animals, machines, and games to life! Our Level I Coding classes utilize a coding platform that presents coding blocks as picture icons that can be dragged and dropped into place. This approach to beginner coding creates a gateway for students of all ages, levels, and languages to explore coding simply and successfully with minimal instruction. Our goal in Level I Coding classes is to introduce students to logical thinking and develop their ability to create coding sequences that are tested through the use of motors, sensors, lights, and sounds. All Snapology programs are designed to have students working in teams to develop their skills in collaboration, leadership, problem solving, and critical thinking. Snapology's Level I Coding programs are always centered around fun themes and topics to keep students engaged and motivated to get to the next level. Shh, don't tell them it's educational!

#### LEVEL 1 PROGRAMS

- Incredible Inventions Robotics
- Creature Creator Robotics
- Mega Machines Robotics
- Real World Robotics
- Jedi Robotics
- Battle Robotics
- Battle Robotics: Beginner Coding
- KinderBots
- RoboPets Camp
- GameBots: Robotics
- GameBots: Beginner Coding
- Amazing Animals
- Awesome Adventures
- Inventor's Club

AGES GRADES 4-12 K-6

#### **LEVEL 2 CODING**

In Snapology's Level II Coding programs, students use age-appropriate, customizable, block-based code to design and program video games and competition robots. Students must define all of the parameters of their programming elements in order to create a functional code. The development of functional code is evaluated by the students' ability to compete in fun, collaborative games and challenges. A program code that has even the slightest error in the sequence or program blocks will not compete successfully and requires student intervention and investigation. Our Level II Coding programs allow students to create and control all aspects of their designs with minimal intervention from the teacher. All Snapology programs are designed to have students working in teams to develop their skills in collaboration, leadership, problem solving, and critical thinking. Snapology's Level II Coding programs are centered around fun topics and include friendly competition to keep students engaged and to promote good sportsmanship. These programs also work to build confidence and prepare students to pursue further education in computer science, robotics, engineering and other related areas.

#### **LEVEL 2 PROGRAMS**

- Robotics Rescue Mission
- Robot Olympics
- SumoBots
- First® LEGO® League Challenge
- Video Game Design

AGES GRADES 9-14 3-8



# **TECHNOLOGY PROGRAMS AT A GLANCE**

Title	Ages	Grade
Animation Studio	7-14	2-8
Video Game Design	9-14	4-8
Movie-Making - Mining & Building	7-14	2-8
Movie-Making - Jedi Masters	7-14	2-8
Drone Commander	9-14	4-8



# **TECHNOLOGY PROGRAMS**

Snapology's technology programs teach children computer skills, techniques and programming through fun interactive activities. Our technology enrichment series offers children ages 7-14 hands on experience developing computer skills, problem solving skills and teamwork capabilities.

# SOCIAL AND EMOTIONAL DEVELOPMENT SKILLS

#### Teamwork & Collaboration

- Dynamic roles and coordination foster teamwork skills
- Group decision making encourages negotiation and compromise
- Team planning and decision making improve cooperation skills

#### **Presentation Skill Development**

 Explaining work encourages critical thinking and classroom confidence

#### **ANIMATION STUDIO**

Create amazing movies with stop motion animation using LEGO® bricks. Children will work in teams to produce their very own movie complete with dialogue and sound effects. Movies are uploaded to a secure site for family and friends to see how cool they are!

#### ACADEMIC ENRICHMENT

- Story and character development
- Students will construct and elaborate on stories and characters, learning how to structure their stories to be clear and cohesive
- Computer and technology skills
- Students will use stop motion animation software, as well as web cameras

AGES GRADES 9-14 4-8

#### **VIDEO GAME DESIGN**

Create your own video game in this awesome Snapology program. We'll teach you how to design your very own online game that can be shared and played at home with family & friends. Don't miss out.

#### ACADEMIC ENRICHMENT

- Develop computer skills
- Program navigation, spatial planning, game mechanics
- Develop story narrative and game progression
- Character choice, conflict development, solution planning

AGES GRADES 9-14 4-8

#### **MOVIE-MAKING: MINING AND BUILDING**

Create an amazing Minecraft® movie with stop motion animation using LEGO® bricks. Children will work in teams to build a Minecraft® world and produce their very own movie complete with dialogue and sound effects. Movies are uploaded to a secure site for family and friends to see how cool they are!

#### **ACADEMIC ENRICHMENT**

- Story and character development
- Students will construct and elaborate on stories and characters, learning how to structure their stories to be clear and cohesive
- Computer and technology skills
- Students will use stop motion animation software, as well as web cameras

AGES GRADES 7-14 2-8

#### **MOVIE-MAKING: JEDI MASTERS**

Create an amazing Star Wars™-inspired movie using stop motion animation, LEGO® bricks, and Star Wars characters! Your student will work with a partner to create a story in outer space, complete with a unique set, characters, and plot line. They will learn how to produce all aspects of their own movie, including dialogue, sound effects, and special effects. At the end of the program, your student will debut their movie and upload it to Snapology's YouTube account to share with your family and friends for years to come! Are you ready, set, action!

#### ACADEMIC ENRICHMENT

- Story and character development
- Students will construct and elaborate on stories and characters, learning how to structure their stories to be clear and cohesive
- Computer and technology skills
- Students will use stop motion animation software, as well as web cameras

AGES GRADES 7-14 2-8

#### **MOVIE-MAKING: NINJAS**

Create an amazing Ninja-inspired movie using stop motion animation, LEGO® bricks, and Ninjago characters! Your student will work with a partner to create a ninja story, complete with a unique set, characters, and plot line. They will learn how to produce all aspects of their own movie, including dialogue, sound effects, and special effects. At the end of the program, your student will debut their movie and upload it to Snapology's YouTube account to share with your family and friends for years to come! Are you ready, set, action!

#### ACADEMIC ENRICHMENT

- Story and character development
- Students will construct and elaborate on stories and characters, learning how to structure their stories to be clear and cohesive
- Computer and technology skills
- Students will use stop motion animation software, as well as web cameras

AGES GRADES 7-14 2-8

#### **MOVIE-MAKING: SUPERHEROES**

Create an amazing superhero filled movie using stop motion animation, LEGO® bricks, and your favorite superheroes and villains! Your student will work with a partner to create a superhero tale, complete with a unique set, characters, and plot line. They will learn how to produce all aspects of their own movie, including dialogue, sound effects, and special effects. At the end of the program, your student will debut their movie and upload it to Snapology's YouTube account to share with your family and friends for years to come! Are you ready, set, action!

#### ACADEMIC ENRICHMENT

- Story and character development
- Students will construct and elaborate on stories and characters, learning how to structure their stories to be clear and cohesive
- Computer and technology skills
- Students will use stop motion animation software, as well as web cameras

AGES GRADES 7-14 2-8

#### **DRONE COMMANDER**

In Snapology's Drone Commander program, students will be introduced to the world of Unmanned Aerial Vehicles (UAVs) and develop a deep understanding how to control and manage this exciting technology. In this workshop, children will learn about the types of UAVs, the parts needed for controlled flight, the forces of flight, basic drone safety, and a variety of flying maneuvers. This exciting program will give your child the chance to safely test out some of the newest advances in robotics and really take their knowledge of engineering to new heights!

#### ACADEMIC ENRICHMENT

- Learn about the physics of flight including drag, lift, and thrust
- Practice safe unmanned flight techniques
- Utilize experimentation and the engineering design process to perfect flight techniques

AGES GRADES 9-14 4-8

# PRE-SCHOOL S.T.E.A.M. PROGRAMS AT A GLANCE

Title	Ages	Grade
ABCs & 123s	2-3 (Parent/Child) or 3-5	Pre K-K
Junior Creator's Club	4-6	Pre K-1
Junior Engineers	4-6	Pre K-1
Junior Scientists: All About Animals	4-6	Pre K-1
KinderBots	4-6	Pre K-1
Discovering Dinosaurs	3-5	Pre K-K
Animal Explorers	3-5	Pre K-K
Shapes, Colors, and Counting	3-5	Pre K-K
Planes, Trains, & Automobiles Junior	3-5	Pre K-K



# PRE-SCHOOL S.T.E.A.M. PROGRAMS

Children ages 2-6 engage in fun, educational play in Snapology's pre-school programs. These programs incorporate DUPLO® blocks and are designed to inspire creativity and enhance fine motor skills while teaching lessons such as letter recognition, phonics, writing skills and basic engineering.

# SOCIAL AND EMOTIONAL DEVELOPMENT SKILLS

#### Classroom Skills

 Students will begin developing their fundamental classroom skills by following instructions and rules, listening carefully, raising their hands and being a cooperative classmate

#### **Teamwork & Collaboration**

- Students will practice critical planning skills as they see how their individual contributions impact group projects
- Students will practice positive teamwork and sharing skills

#### **ABCS & 123S**

Learning was never this much fun when I was a child. Children will learn their colors, shapes, letters and numbers using DUPLO® bricks and other interactive learning toys during this fun program. This program is designed to reinforce the current curriculum being taught to preschoolers. To strengthen their knowledge in a playful manner, children are engaged in both structured and imaginative play during each session.

#### ACADEMIC ENRICHMENT

- Develop basic language and verbal skills
- Practice letter and word creation, learn phonics
- Practice early math skills
- Counting, reinforce learning about shapes

AGES 2-3 (Parent/Child) or 3-5

GRADES Pre K-K

#### **JUNIOR CREATOR'S CLUB**

Come watch your child and be amazed with what they create in this class. Preschoolers and Kindergarteners can participate in various creative play activities designed to promote the creative, social and expressive skills of children. You'll be amazed at the improvement you'll see in your child's fine motor skills after just a few visits to Snapology.

#### ACADEMIC ENRICHMENT

- Develop basic language and verbal skills
- Practice letter and word creation, learn phonics
- Practice early literary skills
- Identify characters, conflicts, plot
- Elaborate on probable character actions and feelings

AGES 2-3 (Parent/Child) or 3-5

GRADES Pre K-K

#### **JUNIOR ENGINEERS**

Young students build fun and simple models using DUPLO® blocks. By playing with and manipulating the models, they experience pulleys, levers, gears, wheels and axles while exploring energy, buoyancy, and balance. Classes include free-building time to promote creativity.

#### ACADEMIC ENRICHMENT

- Develop basic engineering and mechanical ideas
- Gears, pulleys, momentum, gravity, friction, balance, and energy
- Practice early science skills
- Practice skills such as measurement and experimentation

AGES GRADES
4-6 Pre K-1

#### JUNIOR SCIENTISTS: ALL ABOUT ANIMALS

Do you know what mammal is the largest on Earth? Or how a caterpillar becomes a butterfly? In this program, we invite your little zoologist to analyze the differences between vertebrate and invertebrate, construct their way through the butterfly and frog life cycle, build reptiles, and examine the differences and similarities between insects and arachnids using Kid K'NEX® pieces. Your child will too busy exploring the animal world to realize that they are gaining critical social, motor, and developmental skills.

#### ACADEMIC ENRICHMENT

- Explore the animal kingdom and discover differences in animal anatomies and structure
- Insects, arachnids, vertebrates, invertebrates, mammals, birds, reptiles, fish
- Develop higher level biology concepts
- Biodiversity, habitats, ecosystems

AGES GRADES
4-6 Pre K-1

#### **KINDERBOTS**

Children will begin to explore the world of robotics as they build simple models that teach the fundamentals of robotic design. Whether learning about sensors while building drills and magic wands, or discovering ways that gears and pulleys create movement while building helicopters and robotic dogs, your child is sure to have a great time.

#### ACADEMIC ENRICHMENT

- Explore robotics and become introduced to computer programming
- Pseudo-coding, sensor input, mechanics
- Practice critical thinking skills through challenges
- Problem solving and inventiveness are encouraged through play

AGES GRADES 4-6 Pre K-1

#### **DISCOVERING DINOSAURS**

Students will travel far back in time and explore the world of the stegosaurus, tyrannosaurus, and raptors. They will identify basic body parts, habitats, and diets of some of their favorite dinosaurs, all while practicing counting and colors, and having fun!

#### ACADEMIC ENRICHMENT

- Students will learn basic paleontology by exploring the diets of dinosaurs, how their diets determined their physical features, and when they lived
- Students will practice making observations of physical characteristics
- Students will learn how an animal's habitat must provide them with food, water, and shelter in order to survive
- Students will develop basic engineering and motor skills

#### **ANIMAL EXPLORERS**

The animals living in our backyards or in our towns are very different from the animals in other parts of the world. While some animals have adapted to live in freezing temperatures, others have adapted to live in extremely hot and dry environments. In Snapology's Animal Explorers class, students will learn where animals live and why an animal's habitat is important for survival. Through stories, games, and building animals with DUPLO® blocks, your little learner will be busy exploring biomes of the world while gaining critical social and developmental skills without even realizing it!

#### ACADEMIC ENRICHMENT

- Students will learn basic ecology through exploring how an animal's habitat must provide water, food, and shelter in order for the animal to survive
- Students will explore biology by learning about unique animal adaptations that help them survive in different habitats
- Students will practice making observations of physical characteristics
- Students will develop basic engineering and motor skills

AGES GRADES
3-5 Pre K-K

### SHAPES, COLORS, AND COUNTING

Concept and reasoning development begins very early for children and is a key component for preschool and kindergarten readiness. In Snapology Junior's Shapes, Colors, Counting program, your little one will begin to identify basic shapes, where those shapes appear in their environment, and recognize colors and numbers in a variety of ways.

#### ACADEMIC ENRICHMENT

- Students will begin to recognize and label various colors, shapes, and number
- Students will develop preschool-level math skills
- Students will practice following two- & three-step instructions

# **PLANES, TRAINS & AUTOMOBILES JUNIOR**

Transportation is all around! Cars, buses, trains, and airplanes are all important for communities and the world to stay connected. In Snapology's Planes, Trains, and Automobiles program, your little learners will explore the importance of transportation and build models of cars, trains, boats, and more using Kid K'NEX®. Most importantly, they will experience important social interactions while working with a partner and learning with the group. Get ready for your child to come home with a whole new set of transportation facts!

#### ACADEMIC ENRICHMENT

- Students will develop their knowledge of transportation history
- Students will explore the importance of transportation in large cities and communities
- Students will develop basic engineering and motor skills
- Students will learn to follow step-by-step, visual building instructions more carefully and precisely
- Students will practice with comparing physical details by analyzing the features present in their builds

# **SNAPOLOGY JUNIOR CAMP**

Send your little learner to explore all about animals, dinosaurs, shapes, and colors with us! In this program, students will travel back in time to explore an Earth filled with stegosauruses, tyrannosauruses, and raptors. Students will also learn about animal habitats and why an animal's home is important for survival. Along the way we will reinforce primary and secondary colors, shapes, and how to count the things we are playing with. Through stories, games, and building with LEGO® DUPLO® blocks, your little learner will be busy exploring the history of biomes on Earth while gaining critical social, emotional, and developmental skills without even realizing it!

#### ACADEMIC ENRICHMENT

- Students will practice making observations of physical characteristics.
- Students will investigate animal habitats and basic needs.
- Students will explore basic concepts of paleontology, biology. and ecology.
- Students will be challenged to label various colors and shapes.
- Students will practice counting and using numbers from 1-10.
- Students will develop their basic engineering and motor skills through play and building.
- Students will practice following two- & three-step instructions.

# THEMED S.T.E.A.M. PROGRAMS AT A GLANCE

Title	Ages	Grade
Mining & Building: Basic	5-12	K-6
Mining & Building: Epic	7-14	2-8
Mining & Building: Advanced	7-14	2-8
Snapology Ninjas	5-14	K-8
Jedi Masters	5-14	K-8
Superheroes	5-14	K-8
Monster Mania	5-14	K-8
Military Patriots	5-14	K-8
Mini-Figure Mania	6-14	K-8
Exploring Arendelle	5-14	K-8
Castles, Kingdoms, & Wizards	5-14	K-8
Snapology's Friends	5-14	K-8
Superheroes of the Bible	5-14	K-8
Building Faith	5-14	K-8
Poke-Heroes	5-14	K-8
Grumpy Birds	5-14	K-8
Planes, Trains, & Automobiles	5-12	K5
Story Builders	5-12	K-5
Imagine Your Story	5-14	
Building a Better World	5-14	
Movie Favorites	4-14	



# THEMED S.T.E.A.M. PROGRAMS

Snapology's themed programs are designed to promote creative play, teamwork and social skills. Through the use of popular themes, students are engaged a variety of theme-focused activities while learning engineering principles and putting purpose to their building through blueprinting.

# SOCIAL AND EMOTIONAL DEVELOPMENT SKILLS

- Practice with Teamwork & Collaboration
- Social Awareness
- Development of Presentation Skills
- Development of Self-Management and Goal-Directed Behaviors
- Exercising Decision-Making Skills
- Development of Self-confidence and Positive Thinking

#### **MINING & BUILDING: BASIC**

Travel to the Nether with Snapology, but watch out for those creepers! Come join us as we bring Minecraft® to life using LEGO® bricks. Create your own world, including animals, creepers, and your very own Minecraft® character.

#### ACADEMIC ENRICHMENT

- Develop presentations involving relevant facts and descriptive details
- Engage in topic centered group conversation
- Develop appropriate, on task questions, elaborate on stated facts

AGES GRADES 5-12 K-6

#### **MINING & BUILDING: EPIC**

Do you think you know everything there is to know about Minecraft® and more? In Snapology's EPIC Mining & Building, you are going to be put to the test. Your knowledge is going to be challenged in games of crafting and creating. What ideas can you create in EPIC Mining & Building - perhaps something that you nether thought of before. Come see if your skills are worthy at Snapology's EPIC Mining & Building!

#### ACADEMIC ENRICHMENT

- Develop presentations involving relevant facts and descriptive details
- Engage in topic centered group conversation
- Develop appropriate, on task questions, elaborate on stated facts
- Utilize critical thinking skills
- Solve riddles, challenges, and puzzles related to the Minecraft® world

AGES GRADES 7-14 2-8

#### MINING & BUILDING: ADVANCED

Minecraft® lovers unite! Snapology's Advanced Mining & Building is a technical class involving advanced Minecraft® building using LEGO® bricks and game-play experience. Students will learn the art of crafting and stirring up their own potions using LEGO® bricks. You came, you saw, you mined at Snapology's Advanced Mining & Building!

#### ACADEMIC ENRICHMENT

- Develop presentations involving relevant facts and descriptive details
- Engage in topic centered group conversation
- Develop appropriate, on task questions, elaborate on stated facts
- Utilize critical thinking skills
- Solve riddles, challenges, and puzzles related to the Minecraft® world

AGES GRADES 7-14 2-8

#### **NINJA ADVENTURES**

Sensei Wu needs you! Design a new dojo for Snapology made from LEGO® bricks and train your men to battle with the best. Go through ninja training and earn your black belt, Snapology-style. Get ready to have fun and become a Master Ninja.

#### ACADEMIC ENRICHMENT

- Develop presentations involving relevant facts and descriptive details
- Engage in topic centered group conversation
- Develop appropriate, on task questions, elaborate on stated facts

#### **JEDI MASTERS**

In this Star Wars®-inspired program, your youngling will explore the galaxy with their master building skills and our intergalactically-focused curriculum. Motivated to become Jedi like the heroes in the movies, students will learn to concentrate on mastering the Force, appreciating the use of teamwork to build battle drones and AT-Walkers, and if they're skills are up to par, make their very own lightsaber and use it in battle! May the force be with your young Padawan as they rise through the Jedi ranks!

#### ACADEMIC ENRICHMENT

- Develop presentations involving relevant facts and descriptive details
- Engage in topic centered group conversation
- Develop appropriate, on task questions, elaborate on stated facts

AGES GRADES 5-14 K-8

#### **SUPERHEROES**

To the Batcave, Snapology fans! Design your own superhero using LEGO® bricks, create your own adventure and comic strip. Have a blast as you create your own fantasy world of superheroes. What kind of super powers do you have?

#### ACADEMIC ENRICHMENT

- Develop presentations involving relevant facts and descriptive details
- Engage in topic centered group conversation
- Develop appropriate, on task questions, elaborate on stated facts

#### **MONSTER MANIA**

Get your scare on with Snapology's Monster Mania! Use LEGO® bricks to create your own monster fighter, build a haunted town and have a scary good time during this fun program. Last class ends with a spook-tacular party! Come and join us, if you dare!

#### ACADEMIC ENRICHMENT

- Develop presentations involving relevant facts and descriptive details
- Engage in topic centered group conversation
- Develop appropriate, on task questions, elaborate on stated facts

AGES GRADES 5-14 K-8

#### **MILITARY PATRIOTS**

Army, Navy, Air Force, Marines, Coast Guard. Become a Snapology Patriot as you build your training camp, Navy flags, Air Force jets and Coast Guard boats - all using LEGO® bricks. Who said kids can't join the military? Be all you can be with Snapology!

#### ACADEMIC ENRICHMENT

- Learn about military history, traditions, and procedures
- Develop presentations involving relevant facts and descriptive details
- Engage in topic centered group conversation
- Develop appropriate, on task questions, elaborate on stated facts

#### **MINI-FIGURE MANIA**

During this class we will let you play with our secret stash of mini-figures...from movie characters, to sea creatures, to SpongeBob! Join us as we shrink ourselves to mini-figure size and create our own mini-figure worlds. Welcome to mini-figure mania!

#### ACADEMIC ENRICHMENT

- Develop presentations involving relevant facts and descriptive details
- Engage in topic centered group conversation
- Develop appropriate, on task questions, elaborate on stated facts
- Practice story and character development
- Write and present original stories inspired by the mini-figures presented in class

AGES GRADES 6-14 K-8

#### **EXPLORING ARENDELLE**

Do you want to build a snowman with Elsa and Anna?! Design your own Ice Castle, create your own snowman, like Olaf, and love is an open door is only a snowflake away. Have a blast as you create your own kingdom of Arendelle using LEGO® bricks. For the first time in forever you will be building with LEGO® bricks and Frozen all in one world!

#### ACADEMIC ENRICHMENT

- Develop presentations involving relevant facts and descriptive details
- Engage in topic centered group conversation
- Develop appropriate, on task questions, elaborate on stated facts

#### **CASTLES & KINGDOMS**

Who wouldn't want to escape and play in the world of magic, fairytales, and royalty? In Snapology's Castles & Kingdoms program, students will have the opportunity to use LEGO® bricks to design their medieval fantasies while also bringing the real history to life! Yes, your student will do more than just build with LEGO® bricks, they will build their historical understanding of the unique elements that make the medieval time period such a fascinating point in human history.

#### ACADEMIC ENRICHMENT

- Develop presentations involving relevant facts and descriptive details
- Engage in topic centered group conversation
- Develop appropriate, on task questions, elaborate on stated facts
- Practice story and character development
- Write and present original stories inspired by topics in the program

AGES GRADES 5-14 K-8

#### **BEST FRIENDS CLUB**

Would you like to share a moment of friendship and play with LEGO® bricks?! In this fun-filled Snapology class, students will get to create their own jungle adventure, go to the beach, help with the ranch, and mix up fruits at the juice bar! Join us at Snapology and meet the five best friends at LEGO® Friends!

#### ACADEMIC ENRICHMENT

- Explore topics in biology including ecosystems and animal science
- Develop presentations involving relevant facts and descriptive details
- Engage in topic centered group conversation
- Develop appropriate, on task questions, elaborate on stated facts

#### SUPERHEROES OF THE BIBLE

Solomon, Moses, David, Ester, Noah, Paul and Jonah are just a few of the Superheroes we learn about in the Old Testament. Your child will learn about these heroes as we complete different building activities using LEGO® bricks and discuss different Bible verses each class. Experience religion in a fun, unique, expressive way with Snapology!

#### ACADEMIC ENRICHMENT

- Learn about the major stories of the Old Testament
- Develop presentations involving relevant facts and descriptive details
- Engage in topic centered group conversation
- Develop appropriate, on task questions, elaborate on stated facts

AGES GRADES 5-14 K-8

#### **BUILDING FAITH**

God is good all the time and all the time God is good. Let Snapology help your child's journey in faith by using LEGO® bricks to express their faith. Build a shield of faith and learn about God's creations as we discuss a new Bible verse and complete a different building activity each class. This class is Christian based.

#### ACADEMIC ENRICHMENT

- Explore and analyze Bible verses in depth
- Develop presentations involving relevant facts and descriptive details
- Engage in topic centered group conversation
- Develop appropriate, on task questions, elaborate on stated facts

#### **POKEMANIA**

Come join Snapology for Poke-Heroes. Students will build and explore the world of Pokemon as they create their own gyms, battles, and even their very own generation of Pokemon. Children will also learn about real world science as they learn about the habitats of the Pokemon. Your child will have a blast becoming the best Pokemon trainer ever.

#### ACADEMIC ENRICHMENT

- Develop presentations involving relevant facts and descriptive details
- Engage in topic centered group conversation
- Develop appropriate, on task questions, elaborate on stated facts
- Learn about and discuss environmental habitats

AGES GRADES 5-14 K-8

#### **GRUMPY BIRDS**

Inspired by Angry Birds®, come on an epic adventure with Red, Chuck, Stella, Terence and their little Piggie friends in this super-fun program. Build, explore and create your favorite Bird Adventures while you learn about the physics behind the catapults, levers and slingshots used to make these birds fly.

#### ACADEMIC ENRICHMENT

- Develop presentations involving relevant facts and descriptive details
- Engage in topic centered group conversation
- Develop appropriate, on task questions, elaborate on stated facts
- Learn about mechanical movement and energy

## **PLANES, TRAINS & AUTOMOBILES**

In Snapology's Planes, Trains, and Automobiles program, children will explore the world of transportation. Students will build models of their favorite forms of transportation as they learn about energy, wheels and axles, air resistance, and more.

#### ACADEMIC ENRICHMENT

- Learn about various power and energy sources utilized in transportation
- Experiment with concepts in physics including magnetic fields, momentum, and friction
- Understand the importance of design in optimizing energy efficiency
- Compare and contrast historical and modern forms of transportation

AGES GRADES 5-12 K-5

#### **STORY BUILDERS**

Once upon a time... your child became the author of their favorite stories! In this program, students will explore the primary elements of storytelling as they design their own unique stories focused on the characters and plot lines of stories they've heard before. Maybe they will dazzle us with tales of faraway lands, with amazing adventures of superheroes, or even science experiments gone very, very wrong. The possibilities for creation are endless!

#### ACADEMIC ENRICHMENT

- Learn and practice the fundamentals of storytelling characters, setting, plot, conflict, and resolution
- Focus on developing literacy skills
- Creative thinking and design encourages independent thinking and problem-solving skills

#### A UNIVERSE OF STORIES

Humans have accomplished amazing things in our pursuit to understand the universe, and this program aims to make your learner a part of the story! Snapology's A Universe of Stories Space Robotics program allows children to explore different aspects of space science and deep space exploration through building robotic models that mimic the concepts that they are investigating. They will discuss the movement of astronomical objects, the developments in space exploration, and the past, present, and future of space travel.

#### ACADEMIC ENRICHMENT

- Basic awareness of Astronomy
- Exercise strategic thinking and planning skills
- Practice with basic engineering, design, and motor skills
- Develop informal presentations involving relevant facts and descriptive details

AGES GRADES 5-12 K-8

#### **BRICK CITY**

Does your builder enjoy designing beautiful buildings and cities for their mini-figures? If so, this program is the perfect space for your young architect or city planner to sharpen their design and building skills! In this workshop, students will learn all about the importance of collaboration, careful planning, and skillful execution of their building plans.

#### ACADEMIC ENRICHMENT

- Explore the importance of urban planning
- Exercise strategic thinking and planning skills
- Practice with basic engineering, design, and motor skills
- Practice story and character development
- Develop informal presentations involving relevant facts and descriptive details



#### **IMAGINE YOUR STORY**

In Snapology's STEAM Fantasy Workshop, students will be guided, inspired, and challenged to create fairytales of their own! We will help them create their own mythical creatures, develop a storyline for a unique fairytale, bring their story to life with LEGO® brick architecture, and even create a special fantasy map! Your student will utilize traditional fantasy themes and elements of storytelling to guide their play and creation in this magical workshop!

#### **ACADEMIC ENRICHMENT**

- Use literacy skills to practice storytelling
- Examine the literary genres of fantasy and folklore
- Exercise strategic thinking and planning skills
- Practice with basic engineering, design, and motor skills
- Develop informal presentations involving relevant facts and descriptive details

AGES GRADES

5-14

#### **BUILDING A BETTER WORLD**

In Snapology's Building a Better World program, children are challenged to think critically about the world around them. As students identify problems, they will think creatively about how they can use technology to inspire change. Your child is sure to have a blast as they build, learn, and play!

#### ACADEMIC ENRICHMENT

- Gain awareness of the field of architecture
- Develop a basic understanding of robotics
- Exercise strategic thinking and planning skills
- Practice with basic engineering, design, and motor skills
- Develop informal presentations involving relevant facts and descriptive details

AGES GRADES

5-14

#### **MOVIE FAVORITES**

Bring your favorite animated movies to life using LEGO® bricks in the super-fun camp. Movies such as the Toy Story, How to Train Your Dragon, Lion King, OnWard, Frozen and Trolls will be recreated using imagination and LEGO® bricks. Don't miss out.

#### ACADEMIC ENRICHMENT

- Exercise storytelling and story analysis skills
- Develop informal presentations involving relevant facts and descriptive details
- Exercise strategic thinking and planning skills
- Practice with basic engineering, design, and motor skills

AGES GRADES

5-14

# **COMPETITION TEAMS PROGRAMS AT A GLANCE**

Title	Ages	Grade
Junior First® LEGO® League	5-9	1-4
First® LEGO® League	9-14	5-9
Amazing Race	7-12	2-6
STEM Survivor	7-12	4-8
SumoBots	9-14	4-8



## **COMPETITION TEAMS**

Snapology's Competition Teams are a fantastic way to take building and teamwork to a new level. Focused on building an interest in science and engineering, these are hands-on programs designed to capture children's inherent curiosity and direct it toward discovering the possibilities of problem solving and improving the world around them.

The programs feature a real-world challenge, to be solved by research, critical thinking and imagination. Guided by adult coaches, students work in teams with LEGO® elements and moving parts to build ideas and concepts to present them for review at the local, state and national levels.

# SOCIAL AND EMOTIONAL DEVELOPMENT SKILLS

#### **Teamwork & Collaboration**

- Individual contribution to a group projects practices critical planning skills
- Task delegation and group planning enhance teamwork skills
- Team planning and decision making improve cooperation skills

#### Presentation Skill Development

- Explaining work encourages critical thinking
- Presenting a topic of interest promotes classroom confidence

#### FIRST® LEGO® LEAGUE CHALLENGE

FIRST® Lego® League (FLL) is an international robotics competition program. Children will compete in local competitions, moving on to regional and national competitions depending on success. FLL is designed to get children excited about science and technology, and teach them valuable employment and life skills. Teams build, test, and program an autonomous robot using LEGO® Mindstorms EV3 robots to solve a set of missions on an obstacle course.

#### ACADEMIC ENRICHMENT

- Explore engineering concepts
- Motors, gears, pulleys, energy, mechanics, sensors, and basic programming
- Engage in research about the yearly challenge topic
- Determine relevant information, organize, and present findings
- Utilize critical thinking skills
- Solve real world challenges using research and creativity

AGES GRADES 5-9 1-4

#### FIRST® LEGO® LEAGUE EXPLORE

Guided by adult coaches, students work with LEGO® elements and moving parts to build ideas and concepts. Working in teams of 2-6 children, teams work to complete the Building Challenge and 'show off' their project on the final day of the program. All the teams are celebrated and leave with an award.

#### ACADEMIC ENRICHMENT

- Explore engineering concepts
- Motors, gears, pulleys, energy, mechanics, sensors, and basic programming
- Engage in research about the yearly challenge topic
- Determine relevant information, organize, and present findings
- Utilize critical thinking skills
- Solve real world challenges using research and creativity

AGES GRADES 9-14 5-9

#### **AMAZING RACE**

Are you ready for an adventure? Send your learner on a trip with Snapology around the world to discover unique aspects of different cultures, including national flags, traditional cuisines, influential artists, and notable historical landmarks! While they explore, they will be challenged to work with a partner to solve different tasks in various "countries" that will put them ahead or behind in the race to the finish line! Not only will your student be learning about world cultures and developing an appreciation for cultural differences, but they will be competing in fun challenges to test their building and problem-solving skills.

#### ACADEMIC ENRICHMENT

- Develop strategies for problem solving
- World studies (geography and social studies)
- Practice critical thinking skills through building challenges

AGES GRADES 7-12 2-6

#### **STEAM SURVIVOR**

Does your learner have what it takes to be a STEAM Survivor? If your child enjoys taking on engineering and design challenges, working with a team to complete timed tasks, and using partnerships to brainstorm and explore new possibilities to solve unique problems, this program is the perfect place for them to push their STEAM and building skills to the next level! Throughout the program, students will be challenged to design and build complicated objects, work cooperatively with others to secure their place on a team, and compete to be the fastest and most precise competitors in the class. Although the tasks will be challenging, they will be structured and guided by a trained Snapologist who will make sure your child gets the support they need to be successful and get the most out of this unique, challenging program!

#### ACADEMIC ENRICHMENT

- Practice critical thinking skills through building challenges
- Practice with the Engineering Design Process
- Creative thinking and design encourages independent thinking and problem-solving skills

AGES GRADES 9-13 4-8

#### **SUMOBOTS**

The ancient art of SUMO wrestling may be fun to watch, but certainly not so easy to compete in. Not anymore! In this program, your child will design their own SUMO wrestling robot that will compete against their classmates' bots for the title of toughest SUMO Bot. There are no limitations put onto their robot designs and they will have the opportunity to refine their robots as they compete during the program. This design process will make them better engineers, better programmers, and better collaborators. Don't worry, they will be guided by a trained Snapologist to help them accomplish their goals as they design and battle!

#### ACADEMIC ENRICHMENT

- Practice with following detailed, step-by-step instructions
- Use new information to influence building or programming choices
- Practice critical thinking skills through challenges
- Explore robotics and develop computer programming skills

AGES GRADES 9-14 4-8

# **SOCIAL SKILLS PROGRAMS AT A GLANCE**

Title	Ages	Grade
Connections	3-5 and 6-14	Pre K-8
Adaptive Play	All	All



## **SOCIAL SKILLS PROGRAMS**

Snapology social skills programs creatively use LEGO® bricks as the mechanism for children to interact and communicate with one another. Our programs are open to children of all ages and abilities. Snapology is dedicated to helping children develop the skills necessary to foster good relationships, caring attitudes and listening skills.

# SOCIAL AND EMOTIONAL DEVELOPMENT SKILLS

- Children can get along with others (not by avoidance)
- Essentially develop good relationships (for the function of the individual) not all people work well together or get along due to personality.
   But there is an appropriate way at handling that
- Helping others
- Caring attitudes (we are all different, embrace our strengths)
- Playing and working cooperatively
- Following classrooms rules
- Listening skills
- Following direction given by an adult
- Thinking about others as you and they speak and act

#### **CONNECTIONS**

This program creatively uses LEGO® bricks as the mechanism for children to interact with one another. The program is open to any child needing a boost in social skill development (including typical children and children with special needs). TSS or Aides welcome.

AGES GRADES 3-5 and 6-14 Pre K-8

#### **ADAPTIVE PLAY**

Snapology invites parents to bring their children with special needs to play in a private, non-judgmental, sympathetic environment. During these times, Snapology will be closed to the general public, allowing children to play freely in a supportive and fun atmosphere. Parents can feel free to conduct therapy, work on specific goals for their children or just simply let them play and make new friends.

AGES GRADES
All All

# **SPECIALIZED PROGRAMS AT A GLANCE**

Title	Ages	Grade
Building Commitment to End Building		4-8
Building Leadership		1-8
Building a Better World (1-3 hour workshop)	5-14	K-8
Snapology for Seniors		
Team Building & Meeting Facilitation (Adults)		
Team Building		
Meeting Facilitation		



#### BUILDING COMMITMENT TO END BULLYING

Snapology creatively uses hands-on activities and celebrity videos to help children understand the three different perspectives of a bully situation; the bully, the victim and the bystander. As we discuss the perspectives, we focus on empowering the bystander and empathizing with the victim and bully. Through fun activities, the children begin understand bullying at a deeper level and are given real actions they can take to curtail a bullying situation. Each student is empowered to commit to something they can do differently the next time they are involved as a bystander, bully or victim.

GRADES 4-8

#### **BUILDING LEADERSHIP**

Snapology creatively uses hands-on activities to help children understand the importance of leadership in their lives. As we discuss leadership, we focus on empowering the students to stand up for what is right. Through fun activities, the children begin understand the impact they can have on their friends and their community and are given real actions they can take to step up (in bully situation and in every day life). Each student is empowered to commit to something they can do differently the next time they have a chance to exhibit leadership qualities. This is a unique program that your students will love.

**GRADES** 

## **BUILDING A BETTER WORLD (1-3 HOUR WORKSHOP)**

In Snapology's Building a Better World program, children are challenged to think critically about the world around them. As students identify problems, they will think creatively about how they can use technology to inspire change. Your child is sure to have a blast as they build, learn, and play!

#### Better Robotics (1-2 hours)

During this activity, students will work with a partner to build a robotic model that helps make the world a better place. Students will learn to program and customize their model to solve a variety of problems such as cleaning up pollution, helping people with disabilities or solving transportation issues.

#### Building Character (1 hour)

In this activity, children will engage literary skills as well as critical thinking and spatial planning. Children will select a character from literature that has made the world a better place. They will then build a 3D model of the character and present their build to their classmates, focusing on explaining why the character was effective at making the world a better place. This program is currently has three hours of programming suitable for a workshop.

#### **ACADEMIC ENRICHMENT**

- Gain awareness of the field of archeology
- Explore significant archaeological discoveries
- Exercise strategic thinking and planning skills
- Practice with basic engineering, design, and motor skills
- Develop informal presentations involving relevant facts and descriptive details

AGES GRADES 5-14 K-8

# **SNAPOLOGY FOR SENIORS (ADULTS)**

Bricks aren't just for kids! In Snapology for Seniors, adults are included in all the fun we provide for children. In this sampler style class, participants will create mosaics portraits, working robotic models, amusement park rides, and much more! Creativity is encouraged in this fun, social environment. This program can be offered as way for Seniors to socialize and keep sharp or as a way for them to partner with their kids / grandkids in a family-style class or workshop.

## **TEAM BUILDING & MEETING FACILITATION (ADULTS)**

Are you tired of ineffective meetings where only a few members participate? Do you have a large project that you need all team members to contribute to? You've Come To The Right Place! Imagine the new ideas and productivity increase you'll experience when all employees are actively contributing to the conversation. If you want a different result, you need to do something different.

#### **TEAM BUILDING**

In our team building programs, every employee participates equally, feels comfortable contributing and is fully engaged. We'll ensure your team members improve communication, understanding the underlying issues and take action to make long-term improvements. We'll create a safe environment for team members to share and participate. Best of all, it's fun! Your employees will thank you for a refreshing new approach to team building.

#### **MEETING FACILITATION**

We provide a hands-on, minds-on learning experience used to produce a deeper, more meaningful understanding of the world and its possibilities. Do you have a big project that you need to plan out? Do you need to get the whole team on-board with the plan? Do you need everyone's input on the best way to proceed and/or barriers to success of the project? Give us a call to see how we can help facilitate your meetings to get your project off to the right start.



