Holiday Science Camp
A unique science program centered around problem solving and having fun!

Arludo is running a Holiday Science camp unlike any other!
Created by an Associate Professor and delivered by scientists, this program focuses on unleashing the creativity and critical thinking in your child. This 3-day program will give your child a completely different view on science and build their scientific thinking skills that can be applied to any career path they’re interested in.

We especially encourage children who feel that science is not for them because this program is totally unique and will provide them with a new perspective on how awesome science is!

The 3-day program involves children working on and solving problems together under the guidance of scientists. They will be using the latest digital technologies to collaboratively collect, visualise, and explore data and learn how creative thinking helps scientists answer problems and discover the world around them.

During the program, your child will:
• Use Augmented Reality apps and games to do science experiments and experience what it’s like to be a scientist.
• Take part in Escape Room challenges that encourage them to work collaboratively with others and think creatively and critically.
• Collect scientific data that they can explore and analyse with their peers and practicing scientists using the latest digital technologies.
• Design and conduct their own experiment to collect data and investigate how the human brain works.

By the end of the program, your child will gain:
• Knowledge about different concepts in biology, physics, and chemistry and gain an understanding of how to apply these concepts to solve problems.
• An understanding of the role that creativity plays in science and how creativity is used to design experiments.
• Improved analytical and critical thinking skills and an understanding of how data is used to make conclusions.
• Practice in public speaking and writing scientific concepts and how to use storytelling to hook your audience.
• Improved teamwork and group skills that can be used throughout life.

For more details visit:
https://arludo.corsizio.com/
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Day 1

Morning
• Children will be placed into groups using the Arludo app Eco Tag, an Augmented Reality game that teaches about ecosystems. Children will remain in these groups for the duration of the program.

• Children will learn about ecosystems and be asked to create a short (2 minute) presentation about their ecosystem, an endangered species within the ecosystem, and a means to be able to conserve the threatened species.

Learning Outcomes:
Learning about ecosystems, the risk the experience, and the importance of conservation initiatives. Improved teamwork and social skills, learning presentation and public speaking skills, opportunity to be creative in the type of presentation used.

Midday
• Children will work together to solve a problem based learning task similar to popular Escape Rooms. This escape room will be based around physics concepts such as friction, projectile motion, and light.

• Students will be working together under the guidance of scientists to use everyday objects such as popsicle sticks and ping pong balls to create catapults and trebuchets, calculate forces, and work with colours.

Learning Outcomes:
Understanding different physics concepts that can be used to understand everyday experiences. Improved teamwork and social skills, practicing problem solving and the importance of creativity and thinking outside the box.

Afternoon
• Students will learn about predator-prey interactions in an Augmented Reality game called Xenon Crowe. In this game, students take the role of predators and their job is to survive as long as they can by eating the prey around them.

• The game collects scientific data that are displayed at the front of the class, allowing the scientists in class to lead a discussion about what the students learned. Students are encouraged to explain what they think the data mean.

Learning Outcomes:
Learning about how predators learn which prey to hunt and how prey protect themselves from predators. Improved teamwork and social skills, learning presentation and public speaking skills.
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Day 2

Morning
• Children will play an Augmented Reality Arludo game called Blue Steal. Groups will take the role of a male bower bird that is trying to impress a female.
  • This game teaches about different mating strategies animals use and how female preference affects the strategies males use. Students will discuss the data they collect after playing the game.

Learning Outcomes:
Learning about evolution and how different strategies evolve. Improved teamwork and social skills, learning public speaking skills, analytical and critical thinking and the opportunity to be creative in the strategies used to win the game.

Midday
• Children will work together to solve a problem based learning task similar to popular Escape Rooms. This escape room will be based around chemistry concepts such as acids and bases (using common kitchen items), liquid density, and chromatography.
  • Students will be working together under the guidance of scientists to use everyday objects such as lemon juice, oil, syrup, and pens and paper towels.

Learning Outcomes:
Understanding different chemistry concepts that can be used to understand everyday experiences. Improved teamwork and social skills, practicing problem solving and the importance of creativity and thinking outside the box.

Afternoon
• Students will learn about the trade-offs that animals make when raising offspring in a game called Hungry Birds. In this game, students take the role of parents trying to rear as many offspring as they can. Students learn about parent-offspring conflict and foraging.
  • The game collects scientific data that are displayed at the front of the class, allowing the scientists in class to lead a discussion about what the students learned. Students are encouraged to explain what they think the data mean.

Learning Outcomes:
Learning about how complex ideas such as evolution and behaviour. Improved teamwork and social skills, learning presentation and public speaking skills.
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Day 3

Morning
• Children will play an Arludo game called Psych Tests. This game allows different classic experiments such as the Stroop Task, Visual Search, and the Implicit Attitudes test to be completed quickly in the classroom.
• Children will learn about how the brain works and makes snap decisions for us each day. They will also learn the different factors that affect how our brains make decisions.

Learning Outcomes:
Learning about how the human brain works. Improved presentation and public speaking skills, and analytical and critical thinking skills.

Midday
• Children will work together to design an experiment that helps them better understand the factors that affect how the human brain works. Groups will be encouraged by scientists to design experiments about what they are interested in.
• Students will develop an experimental design and protocol and then work together to collect the data for their study.
• At the end of this session, students will have written a short introduction (100-200 words) of why their research question is important, and the methods (100-200 words) that they will use to collect the data they need to understand their question.

Learning Outcomes:
Improved teamwork and social skills, practicing critical and creative thinking, and also using logical thinking to design an experiment.

Afternoon
• Groups will run their experiment and collect their data using the game Graze Invaders. This is a game that allows individuals to quickly gather data on reaction time and working memory.
• Students will analyse their data, draw figures, and write a short results and discussion (100-200 words) to describe the results of their experiment.
• Groups will briefly present their results in a 2 minute presentation.

Learning Outcomes:
Learning about experimental design and data collection. Improved confidence in their own abilities, teamwork and social skills, learning presentation, public speaking and creative writing skills.