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AMBASSADOR SCHOOL
INSPIRE INQUIRE INNOVATE

STREAMING
FORWARD
June 2025

VERY GOOD
DSIB RATING

LIGHT UP BUDDY

To design and build a simple robot model from blocks, proving that innovation doesn't have to come from brand-new parts.

Students connected and operated an LED light, switch, and buzzer using a controller, clearly demonstrating how energy flows from a battery (controller - rechargeable battery) to power different components (LED light and buzzer). This helped students explore basic circuitry in a fun and engaging way.

This project shows the importance of the 3 R's: Reduce, Reuse, and Recycle. By giving new life to everyday items, they discovered how creative solutions can also help protect our planet.

Their ability to apply scientific concepts (like energy flow), use technology tools (such as circuits and controllers), and engage in engineering design was observed. Creative art robot design, communication, and team collaboration were assessed.

SPELLING BEE

Our young kindergarten learners had an exciting time applying their phonics knowledge in a hands-on, augmented reality–powered PLUGO Spelling device. As images appeared on the screen, students identified the missing letters and used their phonics skills to spell out the correct words—placing the missing alphabet pieces on the window pane of the PLUGO device.

This engaging activity combines computer vision technology with physical interaction, allowing students to bridge digital and physical learning. It was a fun, interactive way to reinforce spelling through play-based exploration—making learning both educational and entertaining!

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PINWHEEL DESIGN PROJECT

The objective of the lesson was the use of an Electric pin wheel with adjustable motors and its real-life applications. Students used a switch on the controller and experimented to make a pinwheel spin efficiently.

Students followed the engineering design process — planning, building, testing, and improving their creations. Some pinwheels wobbled, others spun too slowly, and a few didn't move at all at first. Using thinking and reflection skills, students made smart changes to improve their designs.

Students explained their work and their learning. This is a mix of engineering design process, critical thinking, and innovation. We're proud of how our young engineers brought their ideas to life!

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STREAM PARK - THE RAMP

"How and why things roll?".

Using toy cars and ramps of different heights, students observed how gravity affects movement. They measured the distance travelled by a car using units as LEGO blocks. The relationship between ramp height and distance covered by the car was discussed.

Comparing the observations, students concluded that higher ramps helped the cars travel farther. To extend their learning, they created a simple block diagram to visually represent their findings. This engaging activity reinforced early math skills like measurement, comparison, and data representation.

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CODER MTINY - TREASURE HUNT

Exciting coding adventure with mTiny, for students. They programmed the robot to follow instructions and complete the task. The activity began with building a path from the base (home) to the final destination—the treasure. Along the way, students programmed Tiny to move forward, turn left or right, avoid obstacles, and collect hidden jewels before reaching the goal.

Working in teams, each student took turns rolling a dice to determine their move, then coded MTiny accordingly.

Through this hands-on challenge, students practiced key computational thinking skills such as pattern recognition and algorithm design.

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PLAYGROUND - DESIGN FOR ALL

Students built playgrounds using LEGO Playground DUPLO blocks. They designed fun and safe playgrounds for their school.

Students created digital advertisements to showcase their playground's special features, including fun play areas and safety features. They also practiced their math skills by designing steps and arranging numbers in ascending order, adding an extra challenge to their creative work. Throughout the activity, students were assessed on collaboration, creativity, and communication skills.

It was a wonderful blend of building, designing, and learning—all through play!

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HOME A SWEET HABITAT!

Exploring all about animal habitats and adaptations!

Students identified and explored basic animal habitats, both on land and in water, through research. They compared the unique characteristics of environments like the desert, polar regions, forests, and aquatic habitats. Applying the research information, teams had to build a model of an animal's habitat, using essential features that help that animal survive.

Community starters were used to build and explain the concept of adaptation, showing how animals use their body parts or behaviors to thrive in their environments, like a polar bear's thick fur or a fish's gills. Posters illustrating their animal in its habitat and adaptation were showcased. These projects combined science, creativity, and communication skills, and gave students a deeper appreciation for the diversity of life on our planet!

EGGSTREAM MAKEOVER

Topic: Design and build a functioning egg decorating machine using gear mechanisms.

Teams applied their problem-solving skills to construct the machines. Applying the gear mechanism, the machine's movement was designed. Students explained mechanical concepts with confidence. The excitement peaked when the machines were put to the test—successfully creating intricate designs on the eggs. This activity beautifully combined creativity, engineering, and teamwork, making learning both meaningful and fun.

THE LUCKY SEED!

Our young scientists explored the magic of animation while learning about the wonders of plant growth. Blending science with art and technology, students used the Stop Motion Animation App to create animated movies that brought the stages of plant growth to life.

As part of this engaging, hands-on experience, they designed and built models representing each stage of germination. Through their animations and models, students deepened their understanding of the plant life cycle and the important role plants play in keeping our environment healthy. They also picked up useful tips and tricks for creating creative animations using the app.

This project beautifully combined digital storytelling with scientific exploration, sparking creativity, collaboration and communication during the activity.

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INTRODUCTION TO MICRO: BITS

Block-based coding using the Micro: bit Simulator. This interactive platform allowed students to explore programming in a hands-on activity, engaging every student to focus on the task.

First session, students learned to navigate the Micro: bit interface and explored its key features and tools. They created and debugged simple projects, from displaying text and icons to animating images and triggering responses through button presses and the "on shake" feature. Students also practiced explaining their coding steps, strengthening both technical and communication skills.

Second week- students built a calculator using the Micro: bit Simulator. Subtraction operations—designing, coding, and testing their virtual calculators to solve math problems- were the skills strengthened.

This integrated learning experience combined coding with mathematics, showing students how technology can solve real-world problems in fun and meaningful ways. The sessions sparked curiosity, encouraged critical thinking, and brought out the creative coder in every student!

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WE CARE - SAVE ENDANGERED ANIMALS

Each team had to research animals for their habitat and adaptation. Using LEGO kits, they then designed and modified habitats of endangered species. Teams also incorporated essential elements such as shelter, water sources, food, and safety features to help these animals survive and thrive.

Students used the Story Visualizer app to create vibrant digital posters and presented them to the class. These posters not only reflected their creativity but also communicated the need to protect endangered species. The aesthetic importance of the posters was also seen in a few of the presentations.

This activity integrated science, creativity, and digital literacy, making it a truly enriching experience for our young learners

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MATH AT THE LEGO FURNITURE STORE

Bringing numbers to life through LEGO bricks and imagination, students became budding furniture store owners in this exciting activity. Using the LEGO Community Starter Kit, each team built four creative furniture items, assigned 4-digit prices, and calculated totals in expanded form. They subtracted a fixed discount and ensured their prices stayed within an 8,000 AED budget. To promote their products, they snapped photos and used Microsoft Designer on tablets to create vibrant flyers. This engaging activity blended real-world budgeting, addition, subtraction, and visual design while boosting teamwork, creativity, and practical math skills in a fun and meaningful way.

3D DESIGN WITH TINKERCAD

Transforming imagination into 3D reality, students began their journey into digital design by exploring the creative possibilities of Tinkercad. They worked in pairs and explored the platform through guided tutorials and quickly moved on to creating their digital models, such as keychains, mini tools, and more. This activity blended design, creativity, and collaboration, helping students grasp how digital tools can turn imagination into buildable ideas.

Using only a tablet and their problem-solving minds, they applied alignment, grouping, and spatial thinking skills to shape real-world objects. This activity demonstrated how technology can empower young creators to think, build, and express in new dimensions.

SOIL FORMATION STORY

From rocks to soil, young creators traced nature's quiet transformation through hands-on storytelling. Working in teams, students explored the process of soil formation—learning about weathering, decomposition of organic matter, and the role played by the sun, water, and wind. They brainstormed their ideas using the Notes application to plan a clear visual sequence. Then they used LEGO Community Starter Kits, and built landscapes on baseplates and animated the stages using the Stop Motion Studio application on tablets.

Along the way, students were assessed for scientific concepts, ability to work effectively in teams, digital creativity, and their application of technology through storyboarding, set design, and stop motion animation to illustrate the natural process.

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SPIKE UNDERWATER QUEST!

Students in teams researched and discussed the basics of how and why Submarines are built. Using the LEGO SPIKE Essential Set and tablets, students explored the underwater quest. Guided by curiosity and teamwork, they built their mini submarines, brought them to life with simple loop-based programs. They used color sensors to detect obstacles along the way. Collaboration, problem-solving, and storytelling skills were assessed while the submarine navigated the underwater world.

Through hands-on building and playful problem-solving, they discovered how repeating actions can solve real challenges, while having a lot of fun too!

STOP MOTION STORY TELLING

Our creative students stepped into the world of stop motion animation! Using simple materials and lots of imagination, they designed and brought their own stories to life, frame by frame. Each group created a short animation that not only told a story but also delivered a meaningful moral—like kindness, honesty, or teamwork. Through this fun and engaging activity, students developed storytelling, sequencing, collaboration, and fine motor skills, while also learning the patience and precision needed for animation. It was heartwarming to see their excitement as their characters moved and their stories unfolded—proof that even young learners can become powerful storytellers!

MY SCHOOL CREATION

Students were inspired by the question: "If you could invent one thing to make our classroom better, what would it be?" Students, through discussion, identified everyday challenges and designed innovative solutions using the LEGO Education SPIKE Essential kit.

Ideas of solutions were sorting scattered pencils by creating a pencil-sorting robot. Maintaining classroom cleanliness by engineering an autonomous cleaning robot that cleans tables and floors.A whiteboard assistant—an automated device that erases the whiteboard, reducing the need for manual effort.

Throughout these projects, students engaged in the design thinking process: identifying problems, brainstorming solutions, building prototypes, and testing their creations. These hands-on experiences not only fostered creativity and critical thinking but also highlighted the role of technology and robotics in improving everyday environments.

DELIGHTEX FOOD CHAIN!

Students recently participated in an engaging STREAM activity where they explored the concept of the food chain using the Delightex AR/VR platform. After exploring the Delightex platform and researching different ecosystems, each group selected a specific food chain and used their ICT skills to creatively design an interactive 3D model.

Through this activity, students learned how producers, consumers, and decomposers interact in nature. They brought their chosen food chains to life using virtual tools, showcasing both creativity and a clear understanding of the topic.

The session ended with enthusiastic student presentations, where they confidently explained their models. It was a wonderful blend of science, technology, and creativity, and a great example of how immersive learning can make complex topics both fun and meaningful.

LEAVES UNDER SMARTIVITY

Using the Smartivity Microscope Kit, students built their working microscopes—a wonderful opportunity to develop engineering and problem-solving skills.

Once assembled, the young biologists explored the structures of various leaves, observing veins, edges, and tiny patterns invisible to the naked eye. They learned how to compare leaf structures, identify differences, and understand how each plant part plays a vital role in its life.

This lesson beautifully combined scientific observation, critical thinking, and fine motor skills, while also sparking creativity and teamwork. It was a joy to see students connect with nature through the lens of technology.

SMART BUS

Our brilliant students took a leap into the world of smart transportation through a hands-on STREAM activity! Using the LEGO SPIKE Essential kit, they built and programmed their own Smart Bus – equipped with a color sensor that detects stop zones and slow-down areas, just like real-world smart transit systems.

But the learning didn't stop at building! Students applied their math skills in a real-world context — solving word problems involving multiplication and addition, to simulate the total time.

What made this even more special was their team collaboration — planning, testing, and presenting their model with confidence and creativity. From understanding automation and transport tech to coding and logical thinking, this activity brought together all elements of STREAM in a fun and meaningful way.

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HURRICANE TOWER

Our students explored the exciting world of engineering and weather science through a hands-on STREAM activity. Using simple materials such as paper, cardboard, tape etc. , students designed and built towers strong enough to withstand simulated hurricane winds using fan. They learned how hurricanes affect buildings, calculated safe distances from storm zones, and discovered how shapes like triangle, cylindrical can make structures stronger. Blending science with creativity, many added artistic touches to their towers, showcasing both function and design. The activity also encouraged teamwork, problem-solving, and resilience—especially when their first attempts didn't succeed. It was a powerful reminder that learning often happens through trying, failing, and trying again. Our young innovators showed great enthusiasm and skill, proving they're well on their way to becoming future engineers and designers!

AR AND VR CO SPACES!

Our young innovators explored the exciting world of Augmented and Virtual Reality using the free version of CoSpaces Edu called Delightex. The session began with a simple challenge: "Create a virtual space that tells a meaningful story about our classroom, environment, or community." Students logged in using their class code and began building their scenes using the 3D objects available in the platform's library. With a mix of creativity and curiosity, they added trees, people, furniture, and even dialogue bubbles. They used block-based coding to add simple animations, like a waving student or a talking robot. Each creation was unique and heartfelt—one team built a peaceful school garden, while another envisioned a futuristic classroom where robots help with learning. During their presentations, students shared the idea behind their scene, what they animated, and one feature they wished they could add with more time or access to premium tools. It was truly inspiring to see their imaginations come to life, proving once again how technology and storytelling can go hand in hand to build future-ready learners.

LEGO FOOTBALL MATCH

Our students had an exciting hands-on experience as they built and programmed LEGO Spike Prime robots to play a thrilling game of robot soccer! Working in teams, they brought their robots to life through coding and creative design, showing great teamwork and problem-solving skills.

Through this fun activity, students explored important STEM concepts such as forces, motion, and energy transfer in a real-world context. They learned how pushing and pulling, speed, direction, and balance all affect how their robots moved—and scored!

The joy of seeing their robots in action, combined with the science behind it, made this a memorable and meaningful learning experience.

ARTIFICIAL POLLINATION WITH AIRBLOCK DRONE

In a hands-on STREAM session, Grade 6 students explored the interesting connection between biology and technology through artificial pollination in agriculture. They started by learning how natural pollination works and why it is essential for food production.

Next, students jumped into agricultural innovation, discovering how drones are changing farming practices around the world. Using AirBlock drones, they practiced basic flight commands like takeoff, hovering, movement, and landing, which helped them build confidence in coding and controlling drones in real life.

The highlight of the session was when students programmed their drones to simulate artificial pollination. This demonstrated how technology can help when natural pollinators are in short supply. Through this experience, students not only gained STREAM skills but also developed a better understanding of how innovation supports sustainability and food security.

FLL: SUBMREGED MISSIONS

In an exciting STREAM adventure, our Grade 6 students designed, built, and programmed robots to complete their very first submerged missions on the robotics mat. With creativity and teamwork, they developed underwater-inspired robots that could move, interact, and respond to challenges placed below the surface.

Students learned to code movements, solve missions, and think like underwater engineers. They simulated marine exploration and understood real-world ocean robotics. This hands-on challenge sparked their problem-solving skills and fueled their imagination about how technology can protect and explore our oceans.

TACKLE FLL MASTERPIECE MISSIONS IN STREAM CHALLENGE

Our Grade 7 students recently showcased their creativity and problem-solving skills in a dynamic STREAM session focused on the FLL Masterpiece Challenge Mat. Tasked with completing one or two missions, students worked in teams to design, program, and test LEGO Spike Prime robots.

This hands-on activity combined engineering, coding, and critical thinking skills. Students navigated their bots through timed tasks while thinking about real-world uses of automation and robotics. Each mission completed marked a small victory, boosting teamwork, resilience, and confidence.

From precise turns to coded actions, these young innovators showed that learning is not just about theory; it's about bringing ideas to life on the mat!

KEEP IT SAFE

Students took on the role of designing a safe in a unique STREAM challenge using LEGO Spike Prime. Their mission was to understand the importance of safely storing and protecting important documents or items. Through designing and programming robots, students explored real-world methods to prevent damage, theft, and environmental harm to valuable artifacts.

By simulating safe storage solutions, they improved their coding and engineering skills. This hands-on learning experience brought safety and technology together, brick by brick.
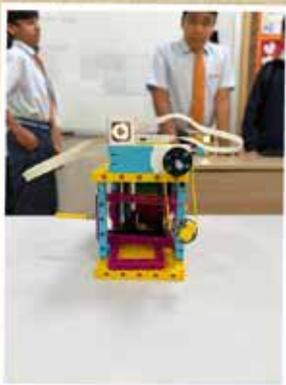
FABLE RESTAURANT ROBOT

Our students stepped into the future of hospitality with a cutting-edge STREAM activity — designing and building a Restaurant Robot using Fable Robotics! From welcoming guests to serving food, these young innovators explored how automation and robotics are transforming the service industry.

Working in collaborative teams, students ideated, built prototypes, and wrote code to bring their robot to life. Through hands-on problem-solving, they learned how to automate tasks with precision and creativity — applying their coding, engineering, design, and presentation skills throughout the process.

This activity not only strengthened their understanding of real-world robotics applications, but also nurtured essential 21st-century skills like teamwork, innovation, critical thinking, and communication.

DELIGHTEX INTRODUCTION!

Our students had an exciting introduction to the Delightex platform, where imagination met innovation! After exploring its features, students used their creativity and critical thinking to design their own unique digital projects. Some crafted engaging stories, others developed interactive games, and a few even built impressive simulations using characters and animated objects. They learned how to code movements and actions, bringing their ideas to life in a virtual environment. This hands-on experience gave students a glimpse into the world of virtual and augmented reality, sparking curiosity and excitement. More than just a tech lesson, the activity nurtured problem-solving, storytelling, design thinking, and basic programming skills—and most importantly, it was a lot of fun!

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