Builders of Tomorrow: Who They Are

Builders of Tomorrow is a program designed to champion the importance of creative play for the future, showcasing LEGO play, LEGO fans, LEGO teachers and LEGO parents, as prime examples of the best ways to nurture the Builders of Tomorrow.

NASA’s Classroom of the Future

"The workforce observed that people coming in are lacking in certain skills. Those skills are things that the kids should be learning in their classes... like being able to work effectively in a team, being able to solve complex problems independently, and understanding the complexity of systems."

--Meri Cummings, curriculum designer with the NASA-sponsored Classroom of the Future

To research what inspires children to learn, NASA launched the Classroom of the Future, located within the Erma Ora Byrd Center for Educational Technologies at Wheeling Jesuit University in West Virginia. NASA charged the Classroom of the Future with creating a model of inspiration—that is, what inspires learners—and then using that model to find ways to help students achieve more in science, technology, engineering, and mathematics, what NASA calls the “STEM” careers.

So far, Classroom of the Future researchers have identified five keys to inspiring kids to learn: creativity, imagination, identity, mental models, and self-efficacy (a person’s perception that they can succeed at a task). These dimensions work together to improve children’s skill levels and abilities to take on challenges. LEGO bricks and robotics models provide a good tool to test the research. Using LEGO bricks, including a special programmable brick, students construct robots and create software programs to perform a series of tasks with their robots.
MIT Lifelong Kindergarten

Mitch Resnick, Associate Professor at the MIT Media Laboratory, serves as director of the Lifelong Kindergarten Group at the MIT Media Laboratory, where his goal is to help children learn new things in new ways. Resnick believes that through play, children develop and refine their imagination, curiosity and creativity. His work is based on the idea that as children playfully explore and experiment, they develop new ideas and new ways of thinking about the world around them. In addition, as a director at the MIT Media Laboratory, Resnick has led the development of several projects created to help children and adults learn new things in new ways, by using programmable LEGO bricks to design their own scientific investigations.

"As our societies and economies grow ever-more reliant on creativity and innovation, we need more playful learning in our lives, not less."

-- Mitch Resnick

FIRST LEGO League

FIRST (For Inspiration and Recognition of Science and Technology) is a multinational non-profit organization, that aspires to transform culture, making science, math, engineering, and technology as cool for kids as sports are today. The FIRST LEGO League (FLL) is the result of a partnership between FIRST and the LEGO Group. Young participants, ages...
9-14, work together to build a robot and compete in a friendly robotics event, giving kids another outlet for competition and group involvement outside of organized sports. Using LEGO bricks and other elements such as sensors, motors, and gears, teams gain hands-on experience in engineering and computer programming principles as they construct and program their unique robot inventions. More than 600 teams of youth participate nationwide and internationally. There are currently 17 regional events and a national championship event every year.