



# The Power of Play.

## Engaging the *whole* student.



We live in a world where technological innovations occur almost daily – and our approach to teaching must evolve to keep pace and ensure today’s students will thrive in the years ahead. Learning through play offers a holistic experience that allows students to engage both sides of their brain, build a diverse skill set, and develop a love for learning and growth mindset that is critical for their future. [The LEGO Foundation](#) has been exploring the impact of hands-on, playful learning for nearly 40 years. Recently, they analysed 369 studies from more than 40 countries to uncover evidence connecting learning through play and cognitive and creative skills development. Here is a snapshot of the key findings.

### Building cognitive skills.

Whether it’s processing new information or tackling complex tasks, the amount of cognitive development that occurs during childhood is enormous. In 237 instances the study found a positive link between learning through play and a cognitive sub-skill.

### Building creative skills.

Whether it’s exploring bold ideas or dreaming up solutions to real-world challenges, creativity helps develop students with well-balanced minds and complementary skill sets. In 54 studies, there was a positive link between learning through play and creativity.

#### Literacy

**LEGO® Education SPIKE™ Essential** features a cast of minifigures with full backstories that build a student’s storytelling and communication skills.

Literacy skills are vital to success in all areas of life. Through purposeful play, children can practice communicating, listening, and expressing themselves while strengthening vocabulary, grammar, and semantics understanding.

**The evidence**  
Studies show that programmes incorporating purposeful play improve language and literacy – even at the earliest learning stages.

#### Divergent Thinking

It’s rare that any problem has a singular answer. Through purposeful play, children can explore potential ideas, experiment with existing solutions, and consider a range of possibilities that open the door to bold new breakthroughs.

**LEGO® Education lessons** scaffold up to open-ended challenges that inspire students to think outside the box and explore a range of solutions.

**The evidence**  
Studies show that imaginative play is a potential pathway to creative development – especially divergent thinking.



#### Mathematics

**LEGO® Education BricQ Motion Essential “Weightlifter” lesson** aligns playful learning and maths standards in a way that’s engaging and fun.



Through purposeful play, teachers can immerse students and engage them in a way that makes actually *doing* maths exciting and fun.

**The evidence**  
Studies show that building-based play supports children’s early mathematical development – including numeracy, patterning, spatial skills, and understanding of mathematical language.

#### Exploration

It’s hard to beat trial and error. Through purposeful play, children can take a hands-on approach to exploring new and challenging situations, uncovering new scientific insights, and discovering what makes each of us unique.

The iterative nature of **LEGO® Education products** drives students to explore the ideal options for addressing real-world challenges.

**The evidence**  
Studies show that guided play can help maximise a child’s agency – inspiring their innovation and imagination.

#### Executive Functioning

**LEGO® Education products** encourage students to team with peers and work together to achieve a shared goal.

Being able to plan, prioritise, and self-regulate are key to growth and learning ability. Through purposeful play, children can learn to maintain concentration and stay “on task.”

**The evidence**  
Studies show that playing with peers, particularly those with shared learning goals, can help children improve executive function abilities.

#### Motor Creativity

Movement can be creative – from choreographing a dance routine to working out how to reach a cookie jar on top of a refrigerator. Purposeful play can serve as a context for children to experiment with their bodies and movement.

**SPIKE Prime “Break Dance” lesson** challenges students to get creative with their engineering, design, and coding skills as they develop a robot that can lead a dance party.

**The evidence**  
Studies show that for some children, even something as simple as doing exercise games before completing a test had a positive effect on their creative thinking.



#### Spatial Skills

One of the most critical skills students need to learn early is how to interact with the world around them. Through purposeful play, children can begin to understand spatial relations and determine how to navigate new and old spaces, give directions, and manipulate mental images.

**LEGO® Education SPIKE™ PRIME and SPIKE Essential lessons** feature models that navigate specific spaces or overcome obstacles.



**The evidence**  
Studies show that brick-based play allows children to practice STEM skills and block play can help support their spatial skills.

#### Curiosity

Children love to ask “why” questions as they attempt to make sense of the things that surround them. Through purposeful play, children may take their first steps to deepening their understanding of our world and finding explanations for the wonders they encounter every day.

**The evidence**  
Studies show that children are naturally inquisitive, and research is just beginning to uncover the many ways purposeful play supports curiosity development.

**SPIKE Essential lessons** offer students a fun and hands-on learning experience while exploring Physical Science, Life Science, Earth and Space Science and Engineering Design.

### The findings are impressive.

**64%**

of the studies showed a positive link between learning through play and a **cognitive sub-skill**.

**Two cognitive sub-skills** where studies showed the **strongest connection**

- 1 Literacy
- 2 Mathematics

**54**

studies showed a positive link between learning through play and **creativity**.

**Two creative sub-skills** where studies showed the **strongest connection**

- 1 Divergent thinking
- 2 Exploration

Learning through play has been connected with a child’s **positive affect** and **enjoyment**.

Learning through play has been connected to **creative thinking** – especially between **imaginative play** (such as brick-based play) and **divergent thinking**.

As further research is conducted, we look forward to discovering even more about how learning through play can help children develop the skills needed to build a better world.

Discover how **LEGO® Education** solutions bring learning through play to life in the classroom and beyond – visit [LEGOeducation.com](#) today.

