



STEM

in the home

Presented By:

Beyond the Beanstalk

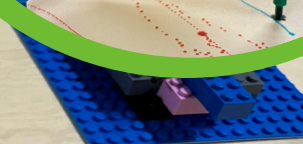
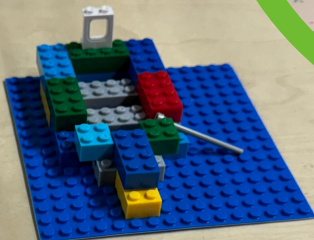


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Welcome

The Beyond the Beanstalk Team



Welcome! At Beyond the Beanstalk, we believe that every child deserves the opportunity to explore, learn, and grow through the power of STEM (Science, Technology, Engineering, and Mathematics). Whether you're here because you're curious about how to bring more learning into your home, or you're eager to see your child thrive in a world full of exciting discoveries, we're thrilled to have you with us.

This booklet is designed to introduce you to the importance of early education and how STEM can be a fun and engaging part of your child's development. You don't need a large budget or fancy equipment—just a little creativity and a lot of curiosity. Inside, you'll find simple, low-cost activities that you can do at home, as well as insights into why STEM matters and how it can help shape your child's future.

We're passionate about making STEM accessible to all, and we hope this booklet inspires you to explore new ways to learn and play together as a family. Thank you for joining us on this journey.

Company History

Since 2020

Beyond the Beanstalk was founded with a clear mission: to make STEM education both accessible and engaging for all children, particularly those who may not have easy access to high-quality educational resources. Recognising early on that there was a significant gap in early childhood education, we developed hands-on workshops designed to ignite curiosity and foster a lifelong love of learning. Starting in New South Wales, Australia, we quickly expanded our reach to the ACT and regional areas, offering innovative programmes that captivate children aged 2 to 15 years. Our workshops are unique in their blend of fun, interactivity, and education, covering diverse topics from sustainable gardening to cutting-edge technology.

At the heart of Beyond the Beanstalk is a team of passionate educators and STEM enthusiasts with strong educational backgrounds. One of our founders has been recognised with awards in STEM innovation and has authored a textbook, underscoring our commitment to excellence in education. We understand the challenges and opportunities in early childhood education and are dedicated to ensuring every child has the opportunity to explore, learn, and grow—regardless of their background. Our approach is rooted in the belief that learning should be both accessible and enjoyable. Over the years, we have built a reputation for our creative approach, seamlessly integrating storytelling with STEM to craft memorable educational experiences. Today, we continue to inspire and empower young minds, equipping them with the skills and knowledge they need to thrive in a rapidly evolving world. We are driven by the conviction that every child deserves the chance to dream big and achieve great things through the power of STEM education.



Our Programs

At Beyond the Beanstalk, we offer a diverse range of programmes designed to inspire and educate. Our Storytime STEM and Sustainable STEM workshops bring science and technology to life through engaging, hands-on activities that capture the imagination of children. We also offer flexible 6, 8, and 10-week programmes that delve deeper into STEM topics, including our Sustainable Programs, which focus on eco-friendly practices and alternative energy sources. For educators, we provide professional development workshops and online courses that equip them with ready-to-implement STEM activities and innovative teaching strategies. Additionally, we offer guest speaker talks, where our experienced educators share insights and inspire audiences to embrace STEM education in their classrooms and communities. At Beyond the Beanstalk, we're committed to making STEM accessible, exciting, and meaningful for all.





STEM In the home

The Importance of Early Education

Early education is the foundation for a child's lifelong learning journey. It's in these formative years that children develop critical thinking skills, social and emotional intelligence, and a love for discovery. When children are exposed to a rich learning environment early on, they are more likely to succeed academically, socially, and emotionally. This early exposure helps children build confidence, improve language skills, and understand the world around them in a structured yet fun way. It's not just about learning letters and numbers but about fostering curiosity and creativity that will serve them throughout their lives.

Why STEM Matters

STEM (Science, Technology, Engineering, and Mathematics) is more than just a collection of subjects; it's a way of thinking and approaching the world. By introducing children to STEM early, we help them develop problem-solving skills, creativity, and the ability to think critically. STEM education encourages children to ask questions, explore possibilities, and understand the logic behind how things work. It prepares them for a future where these skills will be crucial, no matter what career path they choose. Importantly, STEM can be fun and engaging, making learning an adventure rather than a chore.

Creating Impactful STEM Experiences on a Budget

You don't need a large budget or fancy equipment to create meaningful and impactful STEM experiences at home. With just a few household items, you can spark your child's interest in science and technology. The key is to use everyday situations as learning opportunities. For example, cooking can teach measurements and chemical reactions, while building with blocks can introduce basic engineering concepts. With creativity and curiosity, even the simplest activities can become powerful learning experiences that help children understand complex ideas in a hands-on, practical way.

STEM In the home ACTIVITIES



Static Electricity Experiment

- Materials: Balloon, wool or a sweater
- Rub the balloon on the wool or sweater to create static electricity. Then, use the balloon to pick up small pieces of paper or make your hair stand on end. This simple experiment teaches children about the invisible forces of electricity.

Balloon Hot Air Balloon

- Materials: Balloon, string, paper cup
- Create a mini hot air balloon by attaching a string to a balloon and tying the other end to a lightweight paper cup. Let the balloon float and watch as it lifts the cup, demonstrating basic principles of buoyancy and air pressure.

Homemade Lava Lamp

- Materials: Water bottle, vegetable oil, food colouring, Alka-Seltzer tablet
- Fill a bottle with water and vegetable oil, add a few drops of food colouring, and then drop in an Alka-Seltzer tablet. Watch as colourful bubbles rise and fall, creating a lava lamp effect and teaching children about density and chemical reactions.

Build a Marble Run

- **Materials:** Cardboard tubes, tape, marbles
- Use cardboard tubes and tape to create a marble run on a wall or a piece of cardboard. Experiment with different designs to see how the marble moves, teaching basic principles of physics and engineering.

Shadow Tracing

- **Materials:** Paper, pencil, a sunny day
- Place objects like toys or leaves on a piece of paper in the sunlight and trace their shadows. This activity introduces children to the concept of light and shadow, angles, and the movement of the sun.

Nature Scavenger Hunt

- **Materials:** None
- Go on a scavenger hunt in your backyard or a local park. Create a list of items to find, like leaves, rocks, or insects. This activity encourages observation, categorisation, and a deeper appreciation of the natural world.



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