

Dear Parents/Guardians,

We're excited to introduce you to a series of simple science experiments and STEM (Science, Technology, Engineering, and Mathematics) activities that you can enjoy with your child at home. These activities are not only fun and engaging but also align with the principles of the Early Years Foundation Stage (EYFS), fostering curiosity, exploration, and critical thinking skills.

Sink and Float Experiment:

- Gather various objects from around your home (e.g., plastic toys, wooden blocks, paper clips) and a large container of water.
- Encourage your child to predict whether each object will sink or float, then test their predictions by placing the objects in the water.
- Discuss the results and encourage your child to observe and describe why certain objects sink while others float.
- EYFS Link: Supports Understanding the World by promoting scientific inquiry and developing observation and prediction skills.

STEM Activities:

- **Building Structures:** Provide materials like wooden blocks, cardboard boxes, or LEGO bricks and encourage your child to build structures of their own design.
- **Simple Machines:** Explore simple machines such as levers, pulleys, or ramps using household items like spoons, string, or books.
- **Coding for Kids:** Introduce basic coding concepts using screen-free activities like sequencing cards or directional games.
- EYFS Link: Enhances Mathematical Development and Understanding the World by fostering problem-solving skills, creativity, and an understanding of technological concepts.

How Does a Leaf Breathe? Experiment:

- Collect a variety of leaves from different plants and place them in a clear container of water.
- Encourage your child to observe the leaves closely and discuss how they absorb water and release oxygen through tiny openings called stomata.

- EYFS Link: Supports Understanding the World and Communication and Language development by exploring the natural world and encouraging scientific vocabulary and observation skills.

Mixing Colors Activity:

- Provide primary-colored paint or food coloring along with cups of water and paintbrushes.
- Encourage your child to experiment with mixing the colors together to create secondary colors (e.g., red + yellow = orange).
- Discuss the results and encourage your child to describe their observations.
- EYFS Link: Enhances Expressive Arts and Design by fostering creativity and understanding of color theory, and supports Mathematical Development through understanding of basic concepts such as addition and subtraction.

Living and Non-Living Exploration:

- Take a nature walk or explore your backyard to find examples of living (e.g., plants, animals) and non-living (e.g., rocks, sticks) things.
- Encourage your child to sort and classify the objects into two categories and discuss the characteristics of living and non-living things.
- EYFS Link: Supports Understanding the World by exploring concepts of life and growth, and developing classification and observation skills.

These simple science experiments and STEM activities provide valuable opportunities for your child to explore, investigate, and learn about the world around them. By engaging in hands-on exploration, your child will develop critical thinking skills, creativity, and a love for learning that will benefit them throughout their educational journey.

Feel free to adapt these activities to suit your child's interests and abilities, and remember to have fun and enjoy the learning process together. If you have any questions or need further guidance, please don't hesitate to reach out.

Thank you for your partnership in nurturing your child's curiosity and passion for STEM education.