AeroBay Curriculum <> GRADE 1		
Session Number	**Session Topic (Grade 1)**	**Objective**
Session 1	**IGNITE STEAM: Unleashing Innovation** Come, let's dive into the exciting world of STEAM! In this session, you will explore STEM, STEAM, and STREAM education, understanding how Science, Technology, Engineering, Arts, and Mathematics come together to shape the future. **Lab tools included: Tools demonstration**	Students will develop a clear understanding of STEM, STEAM, and STREAM education, recognizing the interdisciplinary nature of learning. This session will spark curiosity, critical thinking, and a passion for hands-on learning, preparing them to tackle future challenges with a STEAM mindset.
Session 2	**Bio Mech: Exploring the Human Body** let's uncover the wonders of the human body! Explore the structure and functions of various body parts, understand their positions and roles. **Kit included: Human Body Kit (Take away)**	Students will develop a strong understanding of human body parts, their functions, and their positions. They will explore how different systems in the body work together, gaining insights into biology.
Session 3	**Wind Wonders: The Power of Motion** let's harness the power of the wind! Learn about energy conversion, paper flexibility, folding techniques, and different types of paper. **Kit included: Wind Mill (Take away)**	Students will understand the concept of wind energy and its applications. They will explore the properties of different types of paper, practice folding techniques, and learn how paper flexibility impacts design.
Session 4	**Sun-Powered Cooker** Let's harness the power of the sun to cook food! Build your own solar oven and explore how sunlight can be used for heating. **Kit included: Solar Oven MDF kit (Take away)**	Students will understand the principles of solar energy and heat transfer. They will explore the properties of transparent, translucent, and opaque materials, learn about heat absorption and reflection, and apply their knowledge to design a functional solar oven.
Session 5	**Cosmic Quest: Exploring the Solar System** let's take a journey through space! Learn how Earth fits into the cosmos, understand rotation and revolution, and discover the difference between planets with and without rings. Get ready to blend science and art as you bring the universe to life. **Kit included: Solar System kit (Take away)**	Students will understand the structure of the Solar System, the role of Earth in space, and the concepts of rotation and revolution. They will explore the differences between planets, identify those with and without rings, and develop spatial awareness using a globe.

Session 6	**The Art Lab: Colors, Brushes & Beyond** let's explore the world of art! Get ready to bring your imagination to life. **Kit included: Art Kit(Take away)**	Students will understand primary and secondary colors, learn how to mix colors to create new shades, and explore the difference between drawing and sketching. They will gain hands-on experience with various art tools, develop fine motor skills, and improve precision in handling pencils and brushes.
Session 7	**Decode the Secret Message** Get ready to think critically, analyze clues, and sharpen your problem-solving skills as you break the code! **Kit included: Code Quest (Take away)**	Students will enhance their critical thinking and problem-solving abilities while exploring the importance of encryption and decryption in communication.
Session 8	**Bot Verse: Exploring the World of Robots** let's dive into the fascinating world of robots! In this session, you will explore how robots look, where they work, and how they help us in daily life. **Lab tool included: Robotics Arm (Demonstration)**	Students will gain a fundamental understanding of robotics, learning about different types of robots, their functions, and real-world applications.
Session 9	**Electronic Quiz Board** let's light up our knowledge with circuits! Get ready to explore the magic of electricity and test your knowledge in a fun way! **Kit included: E -Quiz (Take away)**	Students will understand the basics of electrical circuits, including connections, conductivity, and LED functionality. They will develop problem-solving skills by creating a functional quiz board using circuits.
Session 10	**Shape Stack: The Tetris Challenge** let's dive into the world of shapes and strategy! Learn how to manage space, place shapes efficiently, and think ahead to solve puzzles creatively! **Kit included: Terra Tiles (Take away)**	Students will understand the properties of different shapes and develop spatial awareness by strategically placing them to complete patterns. They will also enhance their problem-solving, critical thinking, and decision-making skills while learning the importance of organization and planning in real-world applications.
Session 11	**Logic** let's put our logic and number skills to the test with an exciting 9-square Sudoku challenge! Get ready to sharpen your mind and crack the code! **Kit included: Digit Hunt - 6 square (Take away)**	Students will develop a deeper understanding of numbers, sequences, and patterns through the 6-square Sudoku puzzle. They will enhance their logical thinking, problem-solving, and analytical reasoning by identifying number relationships and filling in missing digits.
Session 12	**STEAM Mastery Challenge: Intra-Class Competition** Get ready for an exciting STEAM Mastery Challenge, put your learning to the test through an engaging intra-class competition! This session will bring together all the concepts explored in previous activities, allowing students to compete in hands-on challenges that assess their problem-solving skills, creativity, and conceptual	Students will be able to apply their knowledge to solve real-world challenges, demonstrate their understanding through hands-on tasks, and enhance their critical thinking and teamwork skills in a competitive environment. They will also evaluate their own proficiency, identify areas for improvement, and build confidence in practical problem-solving and innovation.
Session 13	**Parachute Drift: The Balloon Descent** let's explore the magic of air! Watch how your parachute floats, slows down, and lands safely! **Kit included: Balloon Parachute (Take away)**	Students will understand the principles of air as a matter, wind dynamics, and elasticity through hands-on experimentation. They will also explore drag force, gravity, and the role of surface area in slowing down objects.
Session 14	**Hover Glide: The Floating Disc** let's make objects glide on air! Watch as your hovercraft hovers and moves with ease, just like real hovercrafts used in transportation! **kit included: Disc Hovercraft (Take away)**	Students will understand the concepts of air pressure and friction through hands-on experimentation. They will explore how reducing friction allows objects to glide smoothly and how air pressure creates lift.

Session 15	**Rotor Dynamics: The Power of Helicopter Blades** let's explore how helicopters take flight! Learn about aerodynamics, blade rotation, and air resistance as you design and test your own spinning blades! **Kit included: Helicopter Blades (Take away)**	Students will understand the working principles of helicopter blades, including lift, thrust, and air resistance. They will explore how blade shape and movement affect flight and apply engineering concepts to build a functional helicopter model.
Session 16-19	**Wing Wave** let's explore the science of flight by building a flapping paper plane! Understand the forces of lift, thrust, and drag while designing a plane that flaps its wings like a bird. **Kit included: Paper Flapping Plane (Take away)**	Students will understand the fundamentals of flight and how bird flight compares to airplane mechanics through the construction of a flapping paper plane. They will explore how forces like lift, thrust, and drag work together to keep objects in the air. Through hands-on experimentation, students will enhance their scientific thinking, problem-solving, and engineering skills, gaining insights into biomimicry and
	Sail Away – The Paper Boat Journey let's set sail on an exciting journey! Get ready to fold, float, and have fun! **Kit included: Paper Boat (Take away)**	Students will understand the concept of water transportation and the principle of floating and sinking. They will develop fine motor skills through paper folding and explore how the shape of objects determines their buoyancy.
	Magnetic Drive – The Repulsive Car Get ready to explore the magic of magnets! Watch as your car glides across the surface using invisible forces! **Kit included: Magno Car (Take away)**	Students will understand the concept of magnetic repulsion and its application in motion. They will explore how magnets work, differentiate between attraction and repulsion, and apply these principles to build a functional repulsive car.
	Blast Off! The Straw Rocket Challenge Get ready to launch your own mini rocket! Learn about thrust, air resistance, and the forces that make a rocket soar through the air. Test different designs and see how far your rocket can travel! **Kit included: Straw Rocket (Take away)**	Students will understand the basic principles of rocketry, including thrust, air pressure, and aerodynamics. They will explore how design affects flight performance and apply engineering skills to build and launch their own straw rockets.
Session 20	**Glide Masters – The Foam Glider Challenge** Soar into the world of aerodynamics with your very own foam glider! Learn about the different parts of a glider and how forces like lift, drag, thrust, and gravity affect its motion in the air. **Kit included: Fomo glider (Take away)**	Students will understand the fundamentals of aerodynamics and how different shapes and materials impact flight. They will identify the key parts of a glider and experiment with design modifications to improve stability and flight distance.

Session 21	**Soaring Wings – Foam Glider Flight** Get ready to take flight! Experience the forces of flight in action as you observe how lift, drag, thrust, and gravity influence your glider's movement. **Ground activity: Glider flying by students**	Students will apply their understanding of aerodynamic forces by launching and modifying their foam gliders. They will analyze flight patterns, adjust for better stability, and gain practical insights into how forces interact to keep an object airborne.
Session 22	**Heartbeat Detectives** Create your very own stethoscope and explore the science of sound, vibrations, and the human heartbeat. **Kit included: Stethoscope (Take away)**	Students will understand the principles of sound transmission, vibrations, and how a stethoscope functions. They will explore the relationship between sound and the human body while developing hands-on skills in assembling and using a simple stethoscope.
Session 23	**Our Happy Earth: Caring for Nature** Join us on an exciting journey to explore the wonderful world around us! Learn about trees, air, water, and animals—everything that makes our planet a happy and healthy place to live. Through fun activities and stories, we will discover why keeping our environment clean is important, how trees help us breathe, and why saving water is essential.	By the end of this session, students will understand the importance of nature conservation and how their everyday actions impact the environment. They will learn how trees give us oxygen, the role of clean air and water in keeping us healthy, and simple steps they can take to protect nature, such as planting trees and saving water. Through interactive activities, they will develop eco-awareness and responsibility toward caring for their surroundings.
Session 24	**Spotlight: Exhibit with confidence** Learn how to engage your audience, structure your ideas, and deliver a powerful presentation with clarity and impact! **Lab materials included: Prop usage during presentation**	Students will choose any topic from the above sessions covered and prepare a complete presentation of the same. Students will develop public speaking, presentation, and communication skills by delivering a structured presentation on topics covered so far. They will learn how to organize their thoughts, express ideas clearly, and engage an audience with confidence.