



## ASTRONOMY CLUB ACTIVITES LEARNING OUTCOMES

(2024-2025)

S.no	Month	Session Name	Activity Description	Learning Outcomes	Skills Involved
1	April	Real time Night Sky Observation	Understanding the Planisphere- sky map and its usages. Real time night sky Observation.	The students will be able to: 1.Find latitude using Pole star and identify various constellations in the night sky using Planisphere.	<ul style="list-style-type: none"> <li>● Listening</li> <li>● Speaking</li> <li>● Staying positive</li> <li>● Aiming High Leadership</li> </ul>
2	July	Astronomy Club: Orientation to SPACE Comets and Asteroids: The Space Rocks	Understanding about space rocks and their role in the evolution of Solar System & life in it. Students make their own comet from various materials in this session.	The students will be able to: 1.Understand about space rocks and their role in the evolution of Solar System & life in it. 2.Make their own comet from various materials in this session.	<ul style="list-style-type: none"> <li>● Creativity</li> <li>● Listening</li> <li>● Speaking</li> <li>● Problem Solving</li> <li>● Teamwork</li> </ul>
3	August	Astronomer's Tools (Club Kit) A Grid in the Sky: Celestial Coordinate System Creating a Sky Map	Creating a celestial grid and a sky map	The student will be able to: 1.Understand the concept of coordinates in our celestial system. 2.Identify reference techniques to locate objects in space. 3.Create a celestial grid and a sky map.	<ul style="list-style-type: none"> <li>● Listening</li> <li>● Speaking</li> <li>● Creativity</li> <li>● Problem solving Teamwork</li> </ul>

4	August	Astrophotography Level 1: An Introduction to DSLR Camera Astrophotography Level 1: Working on a DSLR Camera	Students will handle DSLR camera to click photographs with different camera settings.	The students will be able to: 1.Understand the fundamentals of photography, variable light photography, practical use of aspects like focal length, shutter speed, ISO, exposure etc. using DSLR cameras 2.Students will handle DSLR camera to click photographs with different camera settings.	<ul style="list-style-type: none"> <li>● Listening</li> <li>● Speaking</li> <li>● Staying Positive</li> </ul>
5	October	Directions in Daytime: Finding Cardinal directions.  Project Paridhi: Measuring Earth's Circumference	Finding Cardinal directions. Conduct Eratosthenes experiment.	The students will be able to: 1.Differentiate between reference and cardinal directions, analyze importance of different methods to locate cardinal directions, using gnomon and its shadow casted by the Sun to mark cardinal directions 2.Understand.how scientific pursuits can be done by simple experimentation. 3.Recreate the Eratosthenes experiment and calculate the circumference of the Earth. Learn how to conduct project Paridhi for science popularization.	<ul style="list-style-type: none"> <li>● Listening</li> <li>● Speaking</li> <li>● Creativity</li> <li>● Problem Solving</li> <li>● Teamwork</li> </ul>
6	November	Sun: Our daytime star Solar Observation: Safe Viewing Techniques	Understanding the Sun and its features. Learning the methods	The students will be able to: 1.Understand the Sun and its features, space weather and	<ul style="list-style-type: none"> <li>● Listening</li> <li>● Speaking</li> <li>● Aiming High</li> </ul>

			to observe the Sun safely.	impact of Solar radiation on Earth. 2.Learn different methods to observe the Sun safely i.e through a Telescope using projection and solar filter, Solar View Goggles, Ball projector & Pin hole Projector.	Problem Solving
7	November	Rocket Science Level 1: Basics of Rocketry Construction of Hydro rockets Launching of Hydro rockets	Learning principles of rocketry and parts of rocket.	The students will be able to: 1.Understand science and principles of rocketry. 2.Know about different parts of a rocket. 3.Construct hydro rockets and launch it using special launchers.	<ul style="list-style-type: none"> <li>● Creativity</li> <li>● Listening</li> <li>● Speaking</li> <li>● Aiming High</li> <li>● Problem solving</li> </ul>
8	December	Stellarium: A Sky Simulation Software Understanding the Telescope Hands on Telescope Evening Sky Observation	Hands on telescope Real time Night Sky Observation.	The students will: 1. Understand the different parts of a telescope. 2.Learn to handle telescopes and point the telescope towards celestial bodies such as moon, planets, and stars.	<ul style="list-style-type: none"> <li>● Creativity</li> <li>● Listening</li> <li>● Speaking</li> <li>● Aiming High</li> </ul>
9	January	Wandering through the Solar System	Scaling down the model of Solar System	Students will be able to: Scale down the Solar System and will realize the relative sizes of planets and their distance from the Sun.	<ul style="list-style-type: none"> <li>● Listening</li> <li>● Speaking</li> <li>● Creativity</li> <li>● Problem Solving</li> <li>● Leadership</li> </ul>
10	February	Hydrobot	Pascal law and its application.	Students will be able to:	<ul style="list-style-type: none"> <li>● Listening</li> </ul>

				<p>1. Learn Pascal's law and its application.</p> <p>2. Use knowledge of hydraulic in space.</p>	<ul style="list-style-type: none"><li>● Creativity</li><li>● Speaking</li><li>● Problem Solving</li><li>● Teamwork</li></ul>
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