

MANARAT STEM FEST

2027

GEN. SCIENCE OLYMPIAD SYLLABUS

CLASS 3-4

1. Living Systems & Habitats

- Plants as Living Things: Understanding the characteristics and life processes of plants.
- Living Things: General study of organisms and their shared traits.
- Staying Alive: Exploring the requirements for survival in various organisms.
- Earth and Its Habitat: Examining how different environments support diverse life forms.

2. Physical Sciences

- Energy: Introduction to different forms of energy and their uses.
- Light and Shadows: Understanding how light travels and how shadows are formed.
- Electricity: Basic principles of electrical circuits and components.
- Forces and Magnets: Studying the effects of physical forces and the properties of magnetism.

3. Matter & Materials

- Materials: Exploring the properties, uses, and classification of different substances.
- Mixing Materials: Understanding what happens when different substances are combined.
- The Earth and the Moon: Introduction to basic astronomy and the relationship between these celestial bodies.

CLASS 5-6

1. Life Science and Biology

- Cells: Introduction to cell structure and function.
- Cells, Tissues, Organs, and Systems: Understanding the levels of biological organization.
- Plant Reproduction: How plants produce offspring.
- Animal Adaptation: How animals change to survive in their environments.
- Classification of Plants and Animals: Grouping organisms based on shared characteristics.
- Nervous System: Understanding how the body sends and receives signals.
- Human Health: Studying food, health, hygiene, and the effects of smoking.
- Bones and Muscles: The structural support and movement systems of the body.

2. Chemistry and Matter

- Elements (The Simplest Matter): Introduction to the building blocks of matter.
- Compounds and Mixtures: Understanding how different substances combine.
- Solutions and Suspensions: Studying how substances dissolve or mix in liquids.
- Separation Techniques: Methods for filtering or separating different materials.
- Mass and Density: Measuring the amount of matter in objects and how tightly it is packed.

3. Physics and Earth Science.

- Time, Speed, and Rate: Basic calculations of movement over time.
- Force and Pressure: Understanding pushes, pulls, and the distribution of force.
- Transfer of Heat: How thermal energy moves between objects.
- Simple Machines: Introduction to basic mechanical tools like levers and pulleys.
- Measurement: Precise methods for determining size, speed, and density.
- Environmental Science: Studying the environment, natural disasters, and nature links.
- Air and Water: The properties and importance of these essential resources.
- Safety and First Aid: Basic emergency response and safety protocols.