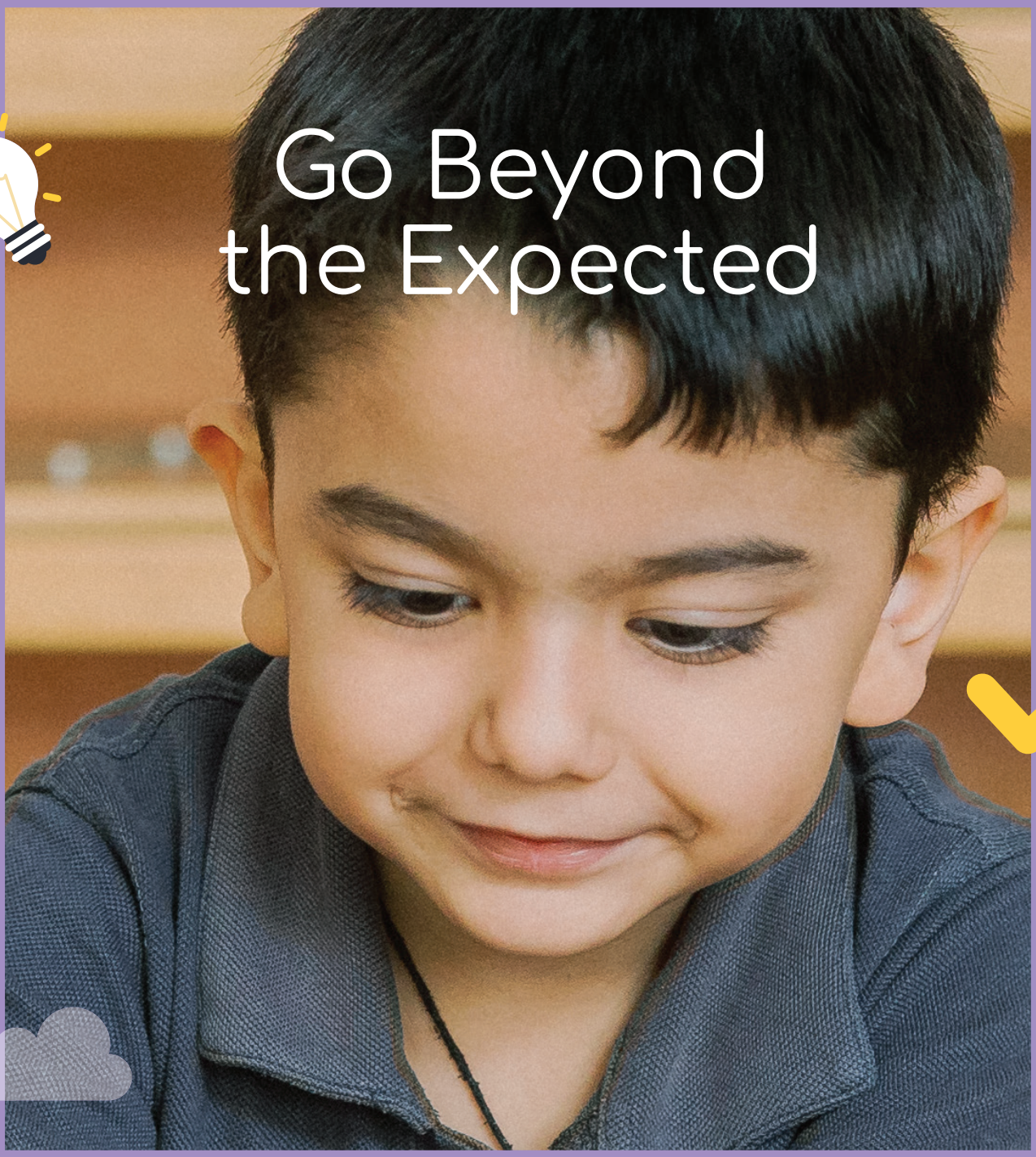
EKYA nava go beyond



INFORMATION TECHNOLOGY AND SOCIETY PATHWAY

Ekya Nava nurtures, encourages, and empowers conscientious learners with a cross-disciplinary approach. The unique pathways we offer foster conscientious, cross-disciplinary learners, empowering them to go beyond conventional learning and establish crucial real-world connections.

The **Information Technology and Society (IT & S) Pathway** delves into the intersection of information and society, providing students with a holistic grasp of computing systems, data, analysis, networks, algorithms, programming, and how digital literacy influences our information-driven world through a multidisciplinary perspective.

The **purpose** of the Information Technology & Society

To equip learners with knowledge and skills to use computing systems, data analysis, networks, algorithms, and programming, fostering digital literacy from a multidisciplinary perspective.

To prepare learners to navigate and contribute responsibly in an information-rich society.

To foster critical thinking and problem-solving skills essential for responsible engagement with digital information and ensuring a positive role in the evolving digital society of the future.

The Curriculum includes **key strands and practices** such as computational thinking, programming, data and analysis, algorithms and programming languages, computer systems and networks, collaboration and communication.

Key Strands

Computing Systems

Data, Analysis and Networks

Algorithms and Programming

Digital Literacy and Society

Practices

Learn – Inquire

Think – Critical thinking, Connect, Reflect

Do – Care, Communicate, Collaborate, Create

Key Strands

Computing Systems: Delving into the Digital World's Building Blocks
Students embark on a journey to uncover the fundamental principles of computing systems, gaining a deep understanding of the hardware, software, and data that power our digital world. Explore the intricate interplay between these elements, from the silicon chips that form the foundation of our devices to the complex networks that connect them.
Students will gain proficiency in understanding the architecture of computing systems, including the roles of processors, memory, storage, and input/output devices. They will also delve into the intricacies of operating systems and software applications, comprehending how they interact with hardware to execute tasks.

Data Analysis & Networks: Unlocking Insights from Data
In this strand, students will explore the art of data analysis, learning how to collect, store, and analyze vast amounts of data using powerful tools and techniques. They will master the skills to interpret data, extract meaningful insights, and translate raw data into actionable information.

Students will venture into the realm of networks, gaining a comprehensive understanding of network structures, protocols, and architectures. They will learn how to design and implement networks, ensuring seamless communication and data exchange across systems.

Algorithms and Programming: Empowering Digital Problem Solvers
This strand empowers students to become adept problem solvers in the digital realm. They will learn how to design and implement algorithms, and the step-by-step instructions that computers follow to solve problems. Students will also develop programming skills using various languages, enabling them to create software solutions and automate tasks.

Students will embark on a programming odyssey, starting with Scratch, a beginner-friendly visual programming language. They will progress to Python, a powerful and versatile language used for a wide range of applications.

At the senior school level, students will delve into more advanced programming languages, including Arduino, Java, and Python.
They will gain proficiency in object-oriented programming techniques and develop human-centric software solutions.

Digital Literacy & Society: Navigating the Digital Landscape Responsiblybility
Students will develop the skills and knowledge to navigate the digital landscape safely, ethically, and effectively. They will learn about the importance of digital citizenship and how to protect their online identity and privacy. To harness technology for positive impact, students will explore how technology can be used to address global challenges and make a positive impact on society. They will engage in projects and activities that promote responsible digital innovation and social change.

With a comprehensive understanding of computing systems, data analysis, programming, and digital literacy, students will be well-equipped to shape the future of technology. They will be able to create innovative solutions, address societal challenges, and contribute to a more informed and inclusive digital world.

Practices

This pathway ensures a strategic, purposeful, and influential approach to problem-solving in the realm of technology and its impact on society. It emphasizes a holistic perspective, encouraging learners to consider the broader implications and ethical dimensions of their technological solutions in the world of work.

LEARN

Inquire: Students learn to ask critical questions, evaluate diverse information sources, master data analysis, and navigate ambiguity. This cultivates curiosity and insight, enabling them to challenge assumptions and make informed decisions in complex situations.

THINK

Critical Thinking, Connect and Reflect: Encouraging diverse perspectives, critical analysis, reflection on personal growth, and openness to new ideas fosters critical thinking and innovation. Students develop a sharp eye for bias and a mindset geared towards continuous improvement.

DO

Care, Communicate, Collaborate, Create: Applying their learning and thinking, students strive to create positive change. They emphasize collaboration, leveraging diverse perspectives, and devising innovative solutions. The goal is to address societal challenges, fostering inclusive, equitable, and culturally sensitive outcomes for meaningful societal impact.

By engaging in the key practices of the Information Technology and Society Pathway **Learn, Think, and Do,** learners will embark on a transformative journey to becoming skilled and impactful change makers.