



KAUST & TKS A UNIQUE STUDENT JOURNEY

2023 UPDATE



Office of the
Provost





Children attending school at KAUST not only have the resources of a world-class IB school, but by being part of the community of the King Abdullah University of Science & Technology, they have many opportunities to take advantage of the knowledge, skills, and facilities of a world-class research institute and its faculty.

The KAUST Enrichment for Youth team (which sits within the Office of the Provost) provides a range of enrichment opportunities to enhance and support our young students' school journey. Working closely with The KAUST School and across the university and community, the team offers programs, activities and connections that compliment and build on the core learning at school, and which make use of the world-class resources offered by KAUST.

Our mission is to build partnerships and collaborations to ensure our school students are exposed to all that KAUST has to offer, are able to develop unique skills and knowledge, and that our graduating students have a high-quality and unique portfolio as the basis for the next step in their educational and career journey.

Kindergarten Elementary Middle Secondary➤

The unique journey for our school students starts as soon as they enter Kindergarten. In these early years, they are introduced to the concepts of science, technology and research in an age-appropriate way.

As they journey onto Elementary, their interactions with science, technology and research become more purposeful and focused, and they have the opportunity to get involved in a number of collaborative projects, working on real world issues.

Arrival at the Middle school brings more embedded partnership learning, as they start to prepare for their time at Secondary.

From Grade 10 until they graduate, the students are offered many opportunities to work with and in the university: research projects, internships, lab training, and participation in the Winter Enrichment Program (WEP) and KAUST Research Open Week (KROW).



From Grade 2 onwards – in addition to the wide range of co-curricular and extra-curricular programming offered within the school, students are offered a menu of STEM, business and art activities, delivered in partnership with (and at) the university – examples include engineering design and design thinking workshops, Math LIVE, robotics, Python programming, and AI. The range of extra-curricular programs continues to grow.

All students (and parents) have regular opportunities to engage with science and technology through signature programs – Winter Enrichment Program (WEP), KAUST Research Open Week (KROW), Creativity & Innovation Week, Computer Science Education Week, and participation in WAICY (World AI Competition for Youth).

Kindergarten K1 – K3

Through Units of Inquiry, projects and events, Kindergarten students are introduced to math, science, engineering, arts and language. During these early years, the students interact with and explore their wider university community. Partnerships and collaborations with the university are many and varied as part of the delivery of the core curriculum. In addition, longer-term programs and activities are offered. In partnership with the Family & Child Support Center, a range of programs are offered to compliment the core school offerings.

Environmental Sciences

Edible School Garden – launched during the 2022/2023 school year. Initial curriculum content and activities designed in partnership with KAUST’s plant scientists in the BESE Division, the Center for Desert Agriculture, and the Water Desalination Research Center

Earth Day – a range of activities in collaboration with KAUST’s Center for Desert Agriculture

FishKAM – a partnership with KAUST’s Core Lab and Environmental team

Computer Science Education Week

Hour of Code – a collaboration with the RISC Lab, CEMSE division

RobotoKAUST

Designing underwater robots – a collaboration with the KAUST Research Conference on Robotics & Autonomy

Exploring the Red Sea

‘Little’ Red Sea Research Center

Sharing the planet – activities in collaboration with KAUST’s Red Sea Research Center

Kore Lab, Tinker Lab, Reuse Center and Art Studio

Partnerships with KAUST’s Core Labs and Research Centers to create physical labs and other spaces at the Kindergarten school for the young students to learn about research, recycling, sustainability, arts, etc.

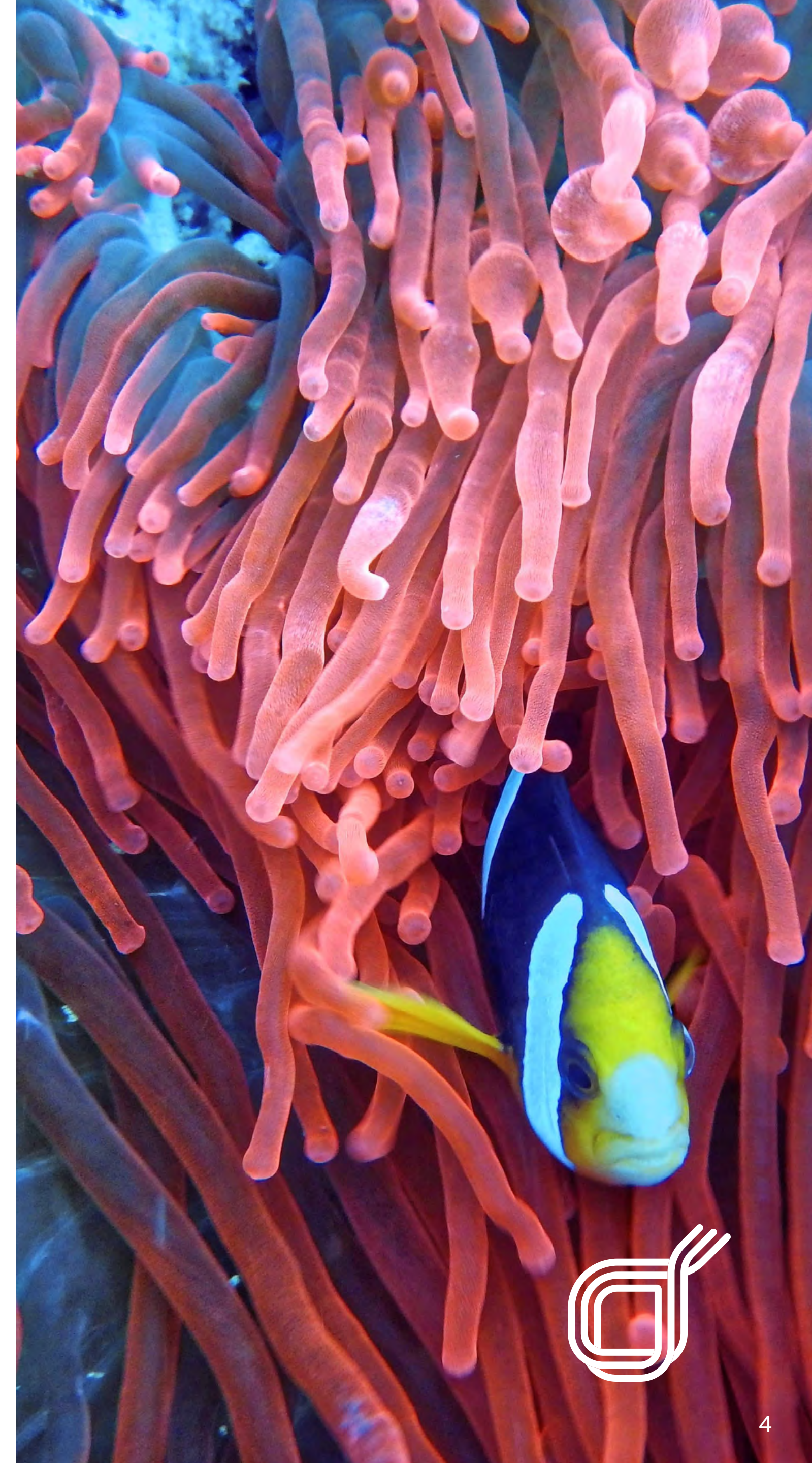
Creativity & Innovation Week

Challenges and projects for our young students to get creative and innovative to celebrate this international week in April each year. Projects are aligned with the UN SDGs and delivered in partnership with KAUST Smart, Office of Sustainability, Office of the Arts and FalconViz

Tutoring & Specialized Learning

In partnership with (and in addition to) TKS learning support, one-to-one and group tutoring can be offered to students across a wide range of subjects and needs

In partnership with the Family & Child Support Center, a range of programs are offered to compliment the core school offerings





Elementary Grade 1 – 5

Through Units of Inquiry, projects and other enrichment activities, Elementary students really start to explore and challenge the world around them. Partnerships and collaborations with the university become more focused and thought-provoking. These partnerships and collaborations are many and varied as part of the delivery of the core curriculum. In addition, longer-term programs and activities are offered.

Environmental Sciences

Edible School Garden – launched during the 2022/2023 school year. Initial curriculum content and activities designed in partnership with KAUST’s plant scientists in the BESE Division, the Center for Desert Agriculture, and the Water Desalination Research Center

Earth Day – a range of activities in collaboration with KAUST’s Center for Desert Agriculture

The natural world and sharing the planet – activities in collaboration with the PSE and BESE Divisions, KAUST’s Research Centers and Core Labs

Computer Science and AI

Computer Science Education Week – a week of activities co-created by TKS and the university – for Elementary students to learn about and interact with computer science and artificial intelligence

World AI Competition for Youth (WAICY) – annual event hosted by KAUST (KEY & The KAUST Academy) in partnership with ReadyAI, providing our students the opportunity to enter their AI projects in a global competition, and present to a panel of international, expert judges

STEM Program

Delivered across all grades in partnership with KAUST’s BESE, CEMSE & PSE Divisions, the Red Sea Research Center, the Al-Naimi Petroleum Engineering Research Center, the KAUST Solar Center, the Water Desalination Center, and the Center for Desert Agriculture

- Opportunities for our young researchers to learn more about and get involved with the Coral Probiotic Village and the KAUST Research Restoration Project
- Working with KAUST’s Research Centers, designing, developing and building racing cars for what will become an annual event – the KAUST Soap Box Derby!
- In partnership with Core Labs and supported by university students, students can design under-water robots and compete on the world stage as part of MATE ROV

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Elementary Grade 1 – 5

Sharing Science & Ideas

Challenges and projects for our young students delivered in partnership with KAUST's Entrepreneurship Center and KAUST Smart

Frontiers for Young Minds – opportunity for young students to become credited reviewers on scientific research papers authored for the young reader

STudents As Reseachers – a philosophy that is embedded in the PYP curriculum across all subjects

Winter Enrichment Program (WEP) and KAUST Research Open Week (KROW)

WEP – offering a varied program of guest speakers and workshops – specifically aimed at our younger students – to expose them to the latest discussions and themes in science, technology and research

KROW – Elementary students can visit KAUST's Research Centers, which open their doors during KROW

Elementary students have the opportunity to showcase their own science projects at the university as part of the WEP Science Fair, and share their research during KAUST Research Open Week

Additional After-School Programming

Opportunities for young students to engage in programs to enrich learning in math, sciences, design and robotics

Hikmah Labs – a series of engineering design workshops for an immersive 'SCHTEAM' (Science, Cultural Heritage, Technology, Engineering, Arts & Math) experience

Math LIVE – engaging immersive online sessions delivered in partnership with Math LIVE to stretch students beyond their knowledge of math, inspire them to apply what they know to solve problems, and train for International Math Competitions

Mate-ROV – students design and build underwater robots and participate in regional and global competitions to test the performance of their robots in the water

Frontiers for Young Minds – in addition to reviewing scientific research papers, students interview the authors and create videos and podcasts, and write about their experience in blogs
More programs and workshops are always being added

Tutoring, Music Activities & Specialized Learning

Individual & Group Tutoring – In partnership with (and in addition to) TKS learning support, one-to-one and group tutoring can be offered to students across a wide range of subjects and needs

Music Tutoring – In partnership with the TKS music team, one-to-one and small group music activities using a range of instruments are offered – during the school day, after-school and at weekends – by our resident musician

Complimentary Programs – In partnership with the Family & Child Support Center, a range of programs are offered to compliment the core school offerings





Middle Grade 6 – 8

Through Units of Inquiry, projects and other enrichment activities, Middle school students continue their exploration into the world around them. TKS and the university continue to work together to co-create content for the classroom and offer extra-curricular programming. Partnerships and collaborations with the university are many and varied as part of the delivery of the core curriculum. In addition, longer-term programs and activities are offered.

Environmental Sciences

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Science Curriculum – activities in collaboration with BESE, CEMSE and PSE, KAUST’s Research Centers and Core Labs

Earth Day – activities in collaboration with KAUST’s Center for Desert Agriculture

Computer Science and AI

Robotics – students work with Robotics as part of their Design curriculum and have the opportunity to extend their learning in after-school clubs

Computer Science Education Week – a week of activities co-created by TKS and the university – for Elementary students to learn about and interact with computer science and artificial intelligence

World AI Competition for Youth (WAICY) – annual event hosted by KAUST (KEY & The KAUST Academy) in partnership with ReadyAI, providing our students the opportunity to enter their AI projects in a global competition, and present to a panel of international, expert judges

Sustainability and the UN SDGs

A number of different curriculum-based projects to explore sustainability issues and the UN SDGs – delivered in collaboration with the Water Desalination Research Center, the Office of Sustainability, Shushah Island Coral Reef Project, and Women in Science & Engineering (WISE).

Creativity & Innovation Week

Challenges and projects for our young students to get creative and innovative to celebrate this international week in April each year. Projects are aligned with the UN SDGs and delivered in partnership with KAUST Smart, Office of Sustainability and Office of the Arts

Sharing Science & Ideas

Challenges and projects for our young students delivered in partnership with KAUST’s Entrepreneurship Center

Frontiers for Young Minds – opportunity for young students to become credited reviewers on scientific research papers authored for the young reader

STudents As Reseachers – a philosophy that is embedded in the PYP and MYP curriculum across all subjects

Middle Grade 6–8

Winter Enrichment Program (WEP) and KAUST Research Open Week (KROW)

WEP – offering a varied program of guest speakers and workshops – specifically aimed at our younger students – to expose them to the latest discussions and themes in science, technology and research

KROW – Middle school students can visit KAUST’s Research Centers, which open their doors during KROW. Students have the opportunity to showcase their own science projects at the university as part of the WEP Science Fair, and share their research during KAUST Research Open Week

Tutoring & Specialized Learning

Individual & Group Tutoring – In partnership with (and in addition to) TKS learning support, one-to-one and group tutoring can be offered to students across a wide range of subjects and needs

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Additional After–School Programming

Opportunities for young students to engage in programs to enrich learning in math, sciences, design and robotics

Hikmah Labs – a series of engineering design workshops for an immersive ‘SCHTEAM’ (Science, Cultural Heritage, Technology, Engineering, Arts & Math) experience

Math LIVE – engaging immersive online sessions delivered in partnership with Math LIVE to stretch students beyond their knowledge of math, inspire them to apply what they know to solve problems, and train for International Math Competitions

Mate-ROV – students design and build underwater robots and participate in regional and global competitions to test the performance of their robots in the water

Frontiers for Young Minds – in addition to reviewing scientific research papers, students interview the authors and create videos and podcasts, and write about their experience in blogs

More programs and workshops are always being added





Secondary Grade 9 – 12

Secondary students have a wide and varied program of co-created activities – both within the school and across the university campus. Partnerships and collaborations with the university are many and varied as part of the delivery of the core curriculum. In addition, longer-term programs and activities are offered.

Environmental Sciences

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Science Curriculum – activities in collaboration with BESE, CEMSE and PSE, KAUST’s Research Centers and Core Labs

Earth Day – activities in collaboration with KAUST’s Center for Desert Agriculture

KAUST-TKS STEM Credential

Students choosing to take math and two science subjects in school, can undertake other activities offered by the university. Successful completion of the required hours leads to a credential endorsed by KAUST University

Internships

WISER – Grade 10–12 students have the opportunity to intern in academic, research, and other areas of the university as part of the WISER program. The program offers work/research experience opportunities during term-time and in a four-week Summer program

- Students can work with faculty, researchers, and KAUST students and staff in developing their research projects and Extended Essay

Computer Science and AI

AI – courses to introduce students into the world of AI, and to develop their skills in Python (and other) coding

Robotics – students work with Robotics as part of their Design curriculum and have the opportunity to extend this learning in after-school clubs

Engineering Simulation and Modelling – in collaboration with the KAUST Supercomputing Lab

Computer Science Education Week – a week of activities co-created by TKS and the university – for Elementary students to learn about and interact with computer science and artificial intelligence

World AI Competition for Youth (WAICY) – annual event hosted by KAUST (KEY & The KAUST Academy) in partnership with ReadyAI, providing our students the opportunity to enter their AI projects in a global competition, and present to a panel of international, expert judges

KAUST-TKS Business & Entrepreneurship Credential

Students choosing to take business and economics subjects in school, can undertake other activities offered by the university. Successful completion of the required hours leads to a credential endorsed by KAUST University

Short Courses

A range of certificated short courses (in partnership with KAUST’s Core Labs) to introduce students to lab safety, lab equipment and working in a lab



Secondary Grade 9 – 12

Winter Enrichment Program (WEP) and KAUST Research Open Week (KROW)

The Secondary students have the opportunity to showcase their science projects at the university during the WEP Science Fair, showcase their research activities during KROW, and take part in activities offered during both programs

Sci-Cafés and Get WISER Cafés

Opportunities for students to engage with faculty and researchers around a specific topic, and to develop their life skills

Model United Nations and UN SDG Projects

A number of different curriculum-based and extra-curricular projects to explore world issues, sustainability issues and the UN SDGs – delivered in collaboration with the Office of Sustainability, the KAUST academic divisions (BESE, CEMSE & PSE), ANPERC, Water Desalination Research Center, KAUST Solar Center, the Center for Desert Agriculture, KAUST Smart Health Initiative, Edama and the Students for Sustainability

KAUST Smart & KAUST Innovation

Involvement in Hackathons and Design Challenges (along with university students) to help ideate solutions to the world's problems

Industry Engagement

Projects and internships with organizations outside of KAUST... AVI, NEOM,

Additional After-School Programming

Opportunities for young students to engage in programs to enrich learning in math, sciences, design and robotics

Hikmah Labs – a series of engineering design workshops for an immersive 'SCHTEAM' (Science, Cultural Heritage, Technology, Engineering, Arts & Math) experience

Math LIVE – engaging immersive online sessions delivered in partnership with Math LIVE to stretch students beyond their knowledge of math, inspire them to apply what they know to solve problems, and train for International Math Competitions

Beginner Python Coding – Python is the fastest growing programming language in the world – as the fields of machine learning, data modeling and AI grow, so does the demand for Python and related skills

More programs and workshops are always being added

Tutoring & Specialized Learning

Individual Tutoring – In partnership with (and in addition to) TKS learning support team, one-to-one and group tutoring is offered to students across a wide range of subjects and needs

Music Tutoring – In partnership with the TKS music team, one-to-one and small group music activities using a range of instruments are offered – during the school day, after-school and at weekends – by our resident musician

Complimentary Programs – In partnership with the Family & Child Support Center, a range of programs are offered to compliment the core school offerings





By working in partnership with The KAUST School and the KAUST university, we are continuously identifying opportunities and developing programs and activities for our young students to engage with the cutting edge research that is taking place at KAUST, and to be part of the exciting journey that KAUST itself is currently taking, as part of the Kingdom's Vision 2030.

TKS continues to develop its core curriculum to make best use of the resources and facilities available at a world-leading research university, and to meet the needs of school students (and parents) in our community.

KEY continues to partner across the university, to identify opportunities to stretch and enrich the core school curriculum, and offer students many and varied opportunities to learn, build their portfolio... and benefit from a truly unique student journey.





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