



APPROACHES

Project STEAM at St Hilda's

Junior students at St Hilda's are driving their own STEAM experiences, **ET staff**

St Hilda's School on the Gold Coast has always emphasised the sciences and mathematics and the girls' school is also big on music and the arts so they've been doing STEAM for a while, long before it became STEAM.

But with the launch of the STEAM Projects at the school, arts and technology teaching at St Hilda's has been crystalised; cross pollination between arts and the sciences is delivering rich, collaborative learning experiences for the school's junior students and is ushering in some wholesale changes in the way that St Hilda's operates.

"We're looking at the way that we're recording information, the way that girls are taking the evidence of their learning forward. One of the beauties of this type

of learning is that it has our children look at the strategies they're using when they learn and starting to understand a bit more of themselves; it's more about learning to learn, understanding their strengths and their abilities," Head of Junior School Tracey Maynard says.

The initiative launched in 2017 for Years 3 to 6, with an accent on clever, engaging projects embracing the very wide field of STEAM with a strong element of student agency and self-direction. Students dedicate 12 to 14 weeks to the projects.

"Students from Years 3, 4, 5 and 6 are clustered together and the girls select what they would like to do.

"There are numerous projects for the students to get involved in, like Marvelous Mathematicians which takes them through numbers, measurements and engineering. Students use a range of concrete

materials to come up with ways of measuring things, creating different objects and designing house plans, floor plans..." says Maynard.

All elements of the STEAM Projects were generated by teachers, each motivated by an area of special interest.

"There are artbots [basically robotic cups with pens attached that draw patterns when activated] maths music mashups so they're putting those two areas together, laser labs, sport sciences...

just a lot of different focus areas,” Ms Maynard says.

“We have the teachers take on the role of coordinating the projects, we’ve listened to students

in the past and taken note of their particular areas of interest and of course we looked at the spaces and the resources that we have to make sure the ideas were actually feasible,” she says.

St Hilda’s gives the students a short run down of what each learning area involves and what each might expect when they’re getting amongst the STEAM Projects.

“STEAM projects is not about the teacher up the front of a class dispersing information, it’s more an inquiry, project based learning approach; the teacher presents what they are working on and they work on it together and discover together.

“Along the way the students will come across things that don’t quite work so they will make adjustments and come up with a better approach. The girls can work in pairs, in groups or alone but the ability to share and work collaboratively is a big part of it,” Maynard says.

“They love it, any chance for them to choose what they are doing means they’re passionate about those choices. Working with others who have a like mind is also important and ultimately they love sharing their learning.”

The students have responded to the program as it’s a very organic way of learning, they’re meeting with people who are interested in what they’re up to and are accessing what Maynard calls, “roll your sleeves up, hands on sort of learning”.

STEAM Projects is integrated into the curriculum, there is one full session per week dedicated to it so students can access teachers’ expertise and concentrate on what they’re doing within the program.

And while STEAM learning happens all over the school, St Hilda’s now has a large flexible area which they’ve called the STEAM Building, it houses the Year 6 students but there is also a

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large area dedicated to fabrication. Teachers have been trained to use the equipment and there's a go-to member of staff who acts as a mentor if there are questions.

"A lot of our classes, particularly when they're looking at technology will use the flexible learning area. I know that our girls just love the space, they're very positive about it and very confident.

"You see them coding, working with robots, using their iPads – they're creating and innovating and it seems to be very natural for them. When I

observe them there doesn't seem to be any sense of it being strange or new they're so comfortable in that space which is a fantastic thing," Maynard says.

After the students have worked on their projects over the 14 weeks the results are presented at the St Hilda STEAMfair which is an assessment of sorts but with an emphasis on the students showing what they've learned.

"The STEAMfair is a really important opportunity for the girls to share their learning with an actual live

audience. We encourage visitors to ask the girls probing questions about their projects and what they have learned and have them reflect on their learning, perhaps ask what they would do differently next time," says Maynard.

The STEAMfair is held in the school hall with each group of students manning a stand, they display artefacts they've created, work they've made online, quizzes, display boards all manner of creativity made real.

While there are no marks given to projects Maynard feels that assessment will be made by the students themselves and their peers.

Teachers have come to value the program because it gives them opportunity to get to know girls that aren't in their classes and helps them with their understanding of all the girls in the school.

"It's a really strong learning community that we've developed, one of the amazing things about it is that the teacher is not always the expert in the room, they're more guides, asking the big questions, helping with resourcing reflecting back on questions. It really is a shared learning journey.

"Technology is incredibly important to us. We're looking at as many opportunities as we possibly can, we're not just supplementing or substituting, we're looking at ways we can redefine and looking at ways of using technology differently," Maynard says.

