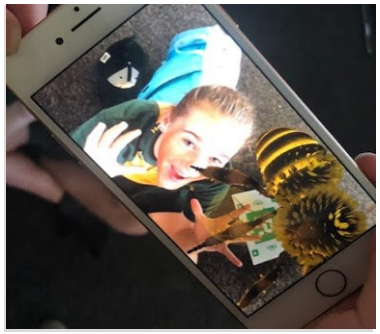
No Bees No Future—Semester Based Design Thinking Program

" The No Bees No Future Project is one that has captured the interests of our students and engaged them in a way that allows them to feel truly empowered by and connected with their own learning." Teacher



"To be honest, I have never seen a group of students so actively engaged, so invested and so passionate about a learning experience. Their ability to confidently use their own voice is a massive achievement for all my students." Teacher

"Teachers are constantly battling with a crowded curriculum and while this project was initially created to meet science and technology outcomes, it has clearly addressed other cross curricular outcomes and general capabilities" Teacher

"Students learnt how to manage a sustainable school project. They also learnt how to communicate effectively their findings to various audiences through initiatives and formal presentations. " Teacher

Semester Based Stage 2/3 Program

Timing 18 week program

Outline

Students will engage in a semester based citizen science, design thinking program exploring scientific and agricultural knowledge, technologies and human interactions as they design a local solution to support the survival of pollinators and future food security.

Students will undertake two immersion days, an ***AgSTEM Scientists Day*** and ***Hackathon-Ideation Day.*** Each school will have access to a ***dedicated website*** to support their learning. Each school will also publish a ***fortnightly blog*** of their learning journey on their dedicated page on the website and share their learning with their semester partners in our Community of Practice Ecosystem.

The final element of the program involves a student led ***Learning Journey Exhibition*** and ***AgSTEM Careers Forum*** with our industry and academic partners.

In Addition schools can access our three Bee Challenges focussing on short film making, infographics and game design.

Centre of Excellence in Agricultural Education

E: richmondagcollege-h.school@det.nsw.edu.au

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"As we progressed through the No Bees No Future Project students work toward outcomes in English, Mathematics, Science, Creative Arts, and Technologies."

Teacher

A huge thank you for the opportunity for have provided to both staff and students. This has definitely been one of the most successful student voice projects that I have seen. We look forward to continuing to work with you." Principal

We have also begun our very own website to educate others in our community how important bees are and how they can all help to save the bees just like us! We cannot thank you enough for letting us be part of this learning journey with you all." Students Stage 2/3

Congratulations on this wonderful, successful program. I am sure staff will be eager for future partnerships, given the outstanding student learning and engagement. I have learnt far more about bees from my discussions with students." DEL

"We created a Bee Club, we educated other students. We decided our school needed a Bee Garden. The bee garden has shown the school our passion for this project. We have already noticed an increase in the number of bees." Students

Curriculum Links

This program supports teaching and learning in the areas of:

Geography, Science & Technology and ***Careers Education***

GE2: Environments—Cultural Values– Sustainable Agriculture

GE3:Changing Natural Environments and Planning

GE Tools: M-F-GS-ST-VR

ST2: Life Cycles—Agricultural Processes– Digital Systems and Data

ST3: Environmental Conditions– Sustainable Agriculture— Data—Digital systems

ST: Working Scientifically: predictions- observations—investigations—data—reports

ST: Design Thinking processes

Cross Curricula: Sustainability and Aboriginal Knowledges

Careers Education: Careers in AgSTEM

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No Bees No Future—Hackathon/Ideation Immersion Day

"This was a great day, I learnt to be a better group member, how to take on feedback and how to provide useful feedback."

Stage 3 student.

We had such a wonderful day, thank you to the team! You not only up-skilled our kids but upskilled us too."

Teacher

" I learnt how to take a big idea, consider all the factors and then turn it into a workable plan"

"I learnt that I can work collaboratively and that I have a growth mindset."

Stage 2 students

"Thank you for involving me in this fabulous day. I can see the ide of imagineering used in so many areas in the classroom but also with staff development." Teacher

"The children have been buzzing with excitement. It's really rewarding as educators to see children so enthusiastic about learning." Asst Principal

"Working together is important. We need to work collaboratively. Having two or more different types of minds is important for learning."

Student Stage 2

"Thank you. Such a great experience for the children. " "Thanks for giving our kids this great opportunity. Parents

"Students clustered ideas and resources, risk assessed and planned for their ideas before engaging in peer to peer and peer to teacher feedback. Students worked collaboratively and creatively to come up with a plan to put two project designs into action."

Teacher

Timing 9.30am—2.30pm

Outline

Take your student's current learning to the next level.

Students will work through an intense day and prototyping using Design Thinking principles.

Students will apply their theoretical and scientific knowledge to a community focused inquiry question and begin imagining possible solutions.

Give every student a voice

The process ensures every student has a voice through collective imagineering.

Students develop their team work skills through structured negotiations, constructive feedback and prototyping.

Gain consensus on the direction of your group project.

The day allows for clear categorisation and testing ideas against known parameters allowing groups to gain consensus and a clear project direction.

Develop student's General Capabilities.

Creativity—Innovation- Communication –Collaboration—21st Century Literacies– AgSTEM Knowledge-—Leadership and Responsibility—Social and Ethical Skills.

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No Bees No Future—AgSTEM Scientist Immersion Day

Today I learnt how to test soil. I learnt what soil needs to be healthy and that honey bees love lavender. My favourite thing we did today was EVERY-THING, it was all AMAZING."

Stage 2 student.

"

Today I learnt about bees and pollinating. I learnt about the soil but the best part of the learning was using the Google Earth."

Student Stage 2

Students were able to deepen their understanding with soil testing, mapping water sources and pollinator counts to support their research projects. This hit the areas of the research project we were missing and needed to progress in our research. Highly recommend! Teacher

Today I learnt about the different kinds of science. I learnt that agriculture has so many jobs, like being a biosecurity officer. I had an amazing day and I hope we can do this again someday as I loved it so much." Stage 2 student.

"Students learnt about the local bees in our area and completed a pollinator count. They learnt how to complete a soil test to know where is the best place to build a garden in our school yard. It was a awesome day and the students and teachers learnt a lot from the day." Teacher

Timing 9.30am—2.30pm

Outline

Students will rotate through a series of interactive scientific workshops including pollinator identification and counts, soil testing and vegetation mapping. The program also allows for a tailored workshop with a literacy, digital mapping, art or technology focus.

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ST: Design Thinking processes

Careers Education: Careers in AgSTEM

Cross Curricula: Sustainability and Aboriginal Knowledges

Capabilities: Communication –Collaboration—21st Century Literacies– AgSTEM Knowledge

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