

Design and Technology

What's been happening down in the hub?

In our increasingly complex 21st century futures, the ability to think creatively is needed more than ever before. Our recent introduction of Design and Technologies as a subject, aims to equip our students to be aware of the world around them, provide them with the skills and dispositions they will need to take action and to empower them to design a better future for everyone, including the environment.

Even though the students engage in Design and Technologies as a subject, it draws on knowledge from all learning areas taught in classrooms. Skills learnt in our Maker Space, are particularly complimentary to Design and Technology, allowing us to be even more creative in our solutions.

We have been having lots of fun in the hub using the 'human-centred design thinking' approach to tackle problems and to help spark innovative and creative solutions! We have been using the 'Design For Change' FIDS design thinking framework below:

FEEL what matters most to you and others in order to find authentic problems.

IMAGINE ways to improve or solve the situation/problem.

DO what it takes to bring about the change or to solve the problem. Put your ideas into action.

SHARE your solution to inspire and help others.

What does it look like?

After defining a problem that we have ideally observed ourselves, we all participate in coming up with lots of possible solutions. All ideas, no matter how crazy, big or small, are welcomed and respected. We then choose the most effective idea. Students are engaged in planning, designing and verbalising their ideas and, in some instances, taking them from two dimensional to three dimensional prototypes. We give and receive constructive feedback to each other and retest and refine our ideas. Sometimes our ideas do not go to plan! We encourage perseverance, risk taking and we welcome mistakes. The students are learning to manage their time, to be resilient and to collaborate effectively in group design projects. We are required to listen to different perspectives, build on each other's ideas, and utilise existing tools and skills as well as learn new ones. Through the design process, we experiment with many forms of technology through drawing and the manipulation of materials and use it to share and communicate our ideas.

Students have been understanding how empathy, (the first step in the design thinking process), is vital in helping to create effective solutions. Our younger students have been busy practicing empathy with each other to help produce something that the other person wants or needs (the user). They have also been looking at fairy tales as a way to seek solutions to problems and to practice the design thinking process. After revisiting The Three Little Pigs, we thought about the problems faced by all characters, including the wolf. We realised that looking at the cause of the problem -why the wolf was wanting to eat the pigs- would create a better solution. The students concluded that the wolf wanted to eat the pigs because he was hungry. Through brainstorming together, the students came up with many wonderfully creative solutions to provide an alternative food source for the wolf, from opening up a wolf café, to the community collecting already decreased animals for the wolf to eat instead, to designing safe ways for the pigs to leave their left over food out for the wolf.

Our year 3-4 students have recently launched their Genius Hour projects with the design thinking approach in mind. One 5-6 class interviewed Hilary to find out more about a problem she faces every day- she just doesn't have enough hands! The students needed to ask Hilary questions that would help them design a solution that would best solve her problem. Then we got busy designing our solutions. After lots of sewing, gluing and hammering, some of the students have designed and made accessories that she could potentially wear. One group invented a new material that defies gravity which safely holds all her items no matter what position she is in, while others designed

solutions in a virtual environment, using technology as a building material to help solve her problem. We look forward to sharing our creative solutions with Hilary next term!

We have also really enjoyed designing letterboxes and logos for our Student Parliament and engaging in games and tasks requiring us to stretch our creative minds. We have watched inspirational clips about how other students around the world have come up with simple but amazing solutions to real life problems. Recently, we have acknowledged a real need in our own school at the moment- the need to promote kindness and respect. After many wonderful suggestions it was decided that we would have a day where students could organise kindness activities at recess and lunch.

I wonder what term four will bring?!



