Spotlighted unit

Details on a specific unit of work at the school.

Digital Learning and Teaching Victoria

Digital Technologies case studies project

Level	5	Title / theme	Game Controller Design

Summary / intention	Students design and create a working game controller for a user with colour blindness, using Makey Makey.

Strands addressed ☒ Digital Systems ☐ Data and information ☒ Creating digital solutions

Session	Activity summary	Learning intention	Success criteria	Key resources	Assessment statement
1	Students explore the Makey Makey kits, building a working circuit and testing different materials to see if they are conductible.	We are exploring how data is transmitted.	I can create a working circuit. I can explain how my circuit works. I can make a list of conductible and non-conductible materials.	Makey Makey Laptop Conductible and non-conductible materials.	Students create a working circuit and create a list of materials that are conductible and non-conductible.
2	Students carousel around the room, making annotations on pictures of different game controllers, explaining their opinion on ease of use, button shape, colour choices, fit in hand.	We are learning to analyse designs for ease of use.	I can give my opinion on game controller designs. I can justify my opinion.	Game controller pictures Markers	Students compile a list of features that make a 'good' controller.

3	Students are introduced to project brief – design a game controller for a user with colour blindness. Teacher demonstrates how a range of game controllers look through the eyes of a colour blind person. Students create their first design draft.	We are learning to design a user interface for a purpose.	I can design a controller for a person with specific needs. I can justify my design.	https://www.color-blindness.com/coblis-color-blindness-simulator/ Paper Textas Pencils	Students share their design with the class, justifying their design choices based on their knowledge of colour blindness.
4	Students share their game controller design anonymously on the year level Padlet. Students give anonymous feedback to their peers on the positives and potential improvements of their design.	We are learning to give feedback and justify our opinions.	I can give positive and constructive feedback to a peer. I can justify my feedback with facts.	iPads (or device with camera) www.padlet.com	Students share objective feedback, based on their knowledge of colour blindness.
5	Students check Padlet for their feedback. Students create a second draft of their design with the feedback in mind. Students upload a picture of their design to the colour blind website to check how it looks.	We are learning to design a user interface for a purpose.	I can design a controller for a person with specific needs. I can justify my design.	https://www.color-blindness.com/coblis-color-blindness-simulator/ Paper Textas Pencils iPads (or device with camera)	Students share their final design on paper and through the eyes of a colour blind person.

6 & 7	Students create their game controller using cardboard, paper, split pins, tin foil and textas. Students connect their game controller to the Makey Makey kits to test.	Examine the main components of digital systems.	I can create a game controller with a live circuit I can explain my design choices.	Makey Makey Cardboard Split Pins Textas Tin Foil	Students create their game controllers.
8	Students connect their game controllers to the Makey Makey kits and the laptop. Students write a short blurb, explaining how their game controller met the brief. Students carousel around the room, testing each other's game controllers and leaving feedback on sticky notes.	We are learning to test and review our designs, self and peer assessing.	I can explain how my design met the brief. I can give feedback about other's designs.	Makey Makey Game controllers Paper Sticky Notes	Students share their blurb and objective feedback, based on their knowledge of colour blindness.