

QMEA Scratch Challenge - Module 4

Module Outline

In this module, students will be taken through a variety of different Scratch Programming blocks that they can use to create a Game. Follow along with the video, pausing at the appropriate times to give students a chance to use the described blocks. Encourage the students to think about which Sprites they want to have for their final game.

Challenge

Once students have a good understanding of the blocks used, they are then ready to create their own game. Encourage them to use blocks that they have used in previous modules.

While the basic structure of the game is fairly straightforward, encourage them to make changes and modification to add more interest to their game.

We highly recommend that students do additional research to complement their project

Oresome Resources is a great place to start.

<https://www.oresomerresources.com/>

and

<https://qrc.org.au>



Challenge Submission

Once students have finished their project, it can be submitted. All submissions need to be received by the 11th of September 2020.

1. Give the Project a Name. We recommend the following format for Project Names
“Module4_schoolname_studentname” ie - “Module4_WHSS_MaryBloggs”



2. Save your project to your computer



Scratch Projects are saved with a .sb3 extension.

3. Email your sb3 file to damien@damienkee.com
Subject - “QMEA-Santos Module 4 Submission”
Don't forget to attach the file!

Judges consisting of Damien Kee, QMEA staff and Santos Staff will evaluate the submissions and select some to be recognised and showcased.

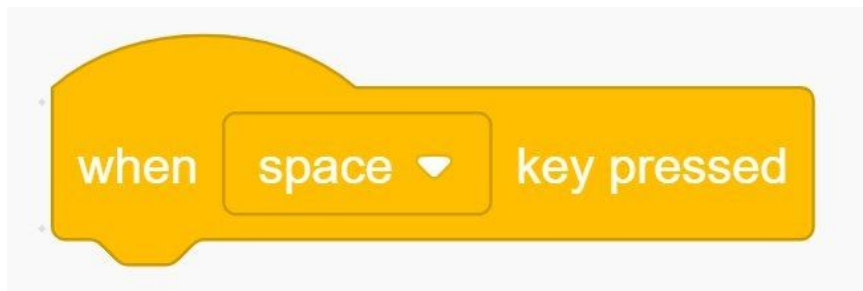
Judging Criteria

Judges will be looking at the following criteria when evaluating each submission.

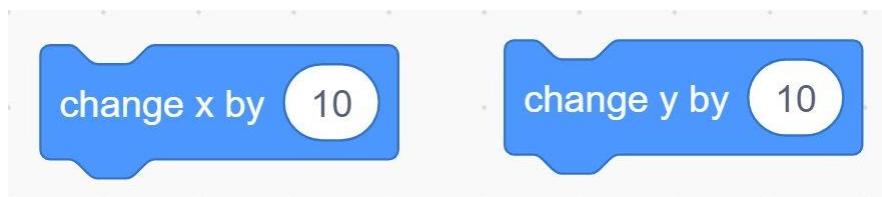
(In no particular order)

- Content. Has the student performed some research and added some interesting content into their game?
- Use of Code. Has the student used a variety of different Scratch coding blocks to enhance their submission? Have they gone above and beyond what has been presented in the module?
- Relevance. Is their submission relevant to themselves, their school and/or their community?

Code Blocks



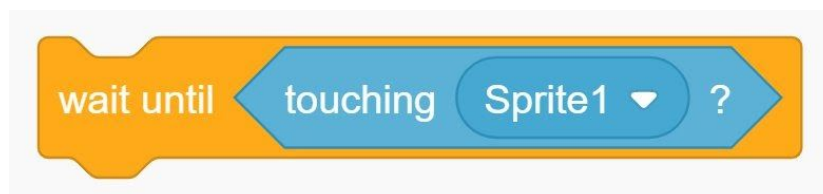
Trigger a set of instructions from a keyboard keypress.



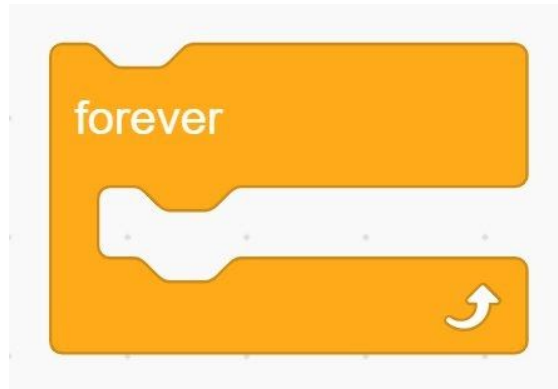
Change the position of the sprite along the horizontal (x) or vertical (y) axis.



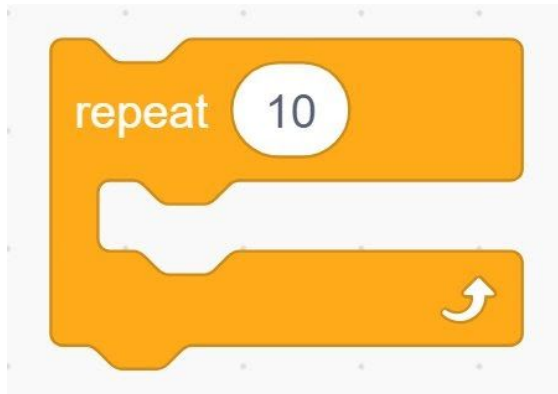
When this block is used, the program will pause and wait until the condition inside is achieved.



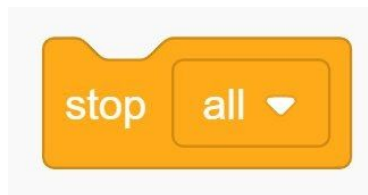
Wait at this instruction in the program until the Sprite is touching another Sprite (Sprite1).



Repeat a set of instructions over and over again.

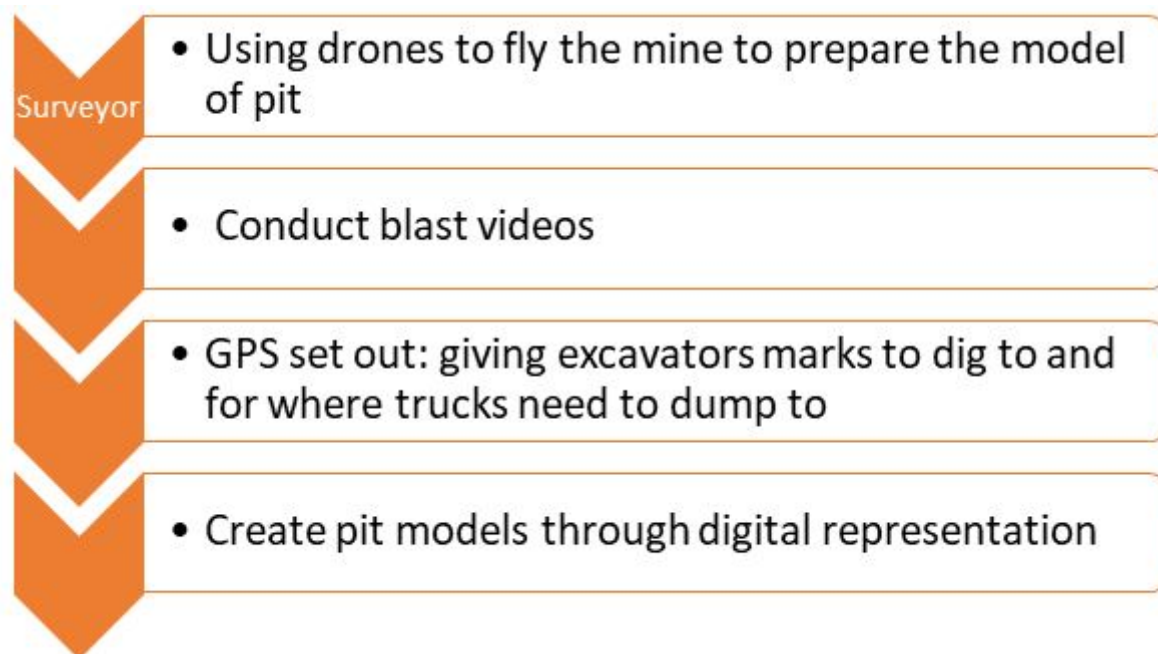
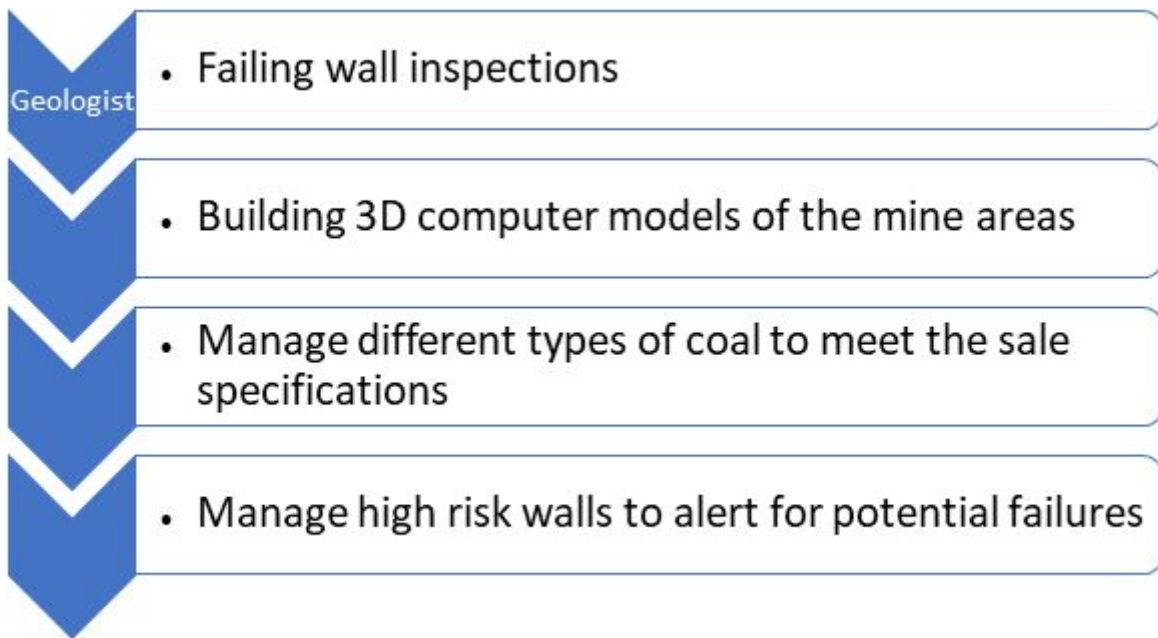


Repeat a set of instructions for a set number of times.



Stops all scripts within the program from running.

Personnel Roles and Responsibilities



Drill and Blast
Engineer

- Design blast patterns and subsequent blasts
- Spend time working with drills/drillers
- Work with explosives teams

Mining
Engineer

- Design roads and ramps for haul trucks
- Use of various software tools to track haulage
- Monitoring the amounts of coal/waste being hauled
- Design dozer push, excavator dig areas and dump areas

Mechanical
Engineer

- Working in, under, around large mining equipment everyday
- Coordinate upgrades for equipment: trucks and excavators
- Work with high risk equipment such as tyres / manage high risk work environments