

QMEA Scratch Challenge - Module 3

Module Outline

In this module, students will be taken through a variety of different Scratch Programming blocks that they can use to create their Quiz. Follow along with the video, pausing at the appropriate times to give students a chance to use the described blocks. I highly encourage the students to make up a silly quiz as they're following along. I.e. "An ant is taller than a skyscraper. True or False?" This allows them to concentrate on the mechanics of the quiz, before doing research for their submission.

Challenge

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

The content of the quiz could take many forms, including but not limited to

- How a mine site operates
- The various parts of a piece of machinery
- The process that Thies personnel may follow as part of their job
- The journey of a piece of coal throughout its lifespan
- The environmental work that is done around a mine site, before, during and after operation

There are some additional resources at the end of this document to provide more information on personnel processes. We highly recommend that students do additional research to complement their project

Oresome Resources is a great place to start.

<https://www.oresomeresources.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 21st of August 2020.

1. Give the Project a Name. We recommend the following format for Project Names
“Module3_schoolname_studentname” ie - “Module2_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-Thiess Module 3 Submission”
Don't forget to attach the file!

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

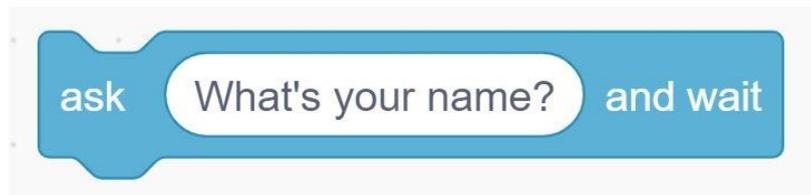
Judging Criteria

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

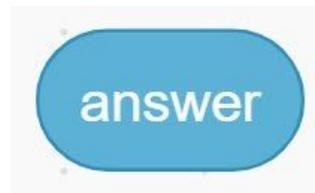
(In no particular order)

- **Content.** Has the student performed some research and come up with interesting and informative questions?
- **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 present in the module?
- **Relevance.** Is their submission relevant to themselves, their school and/or their community?

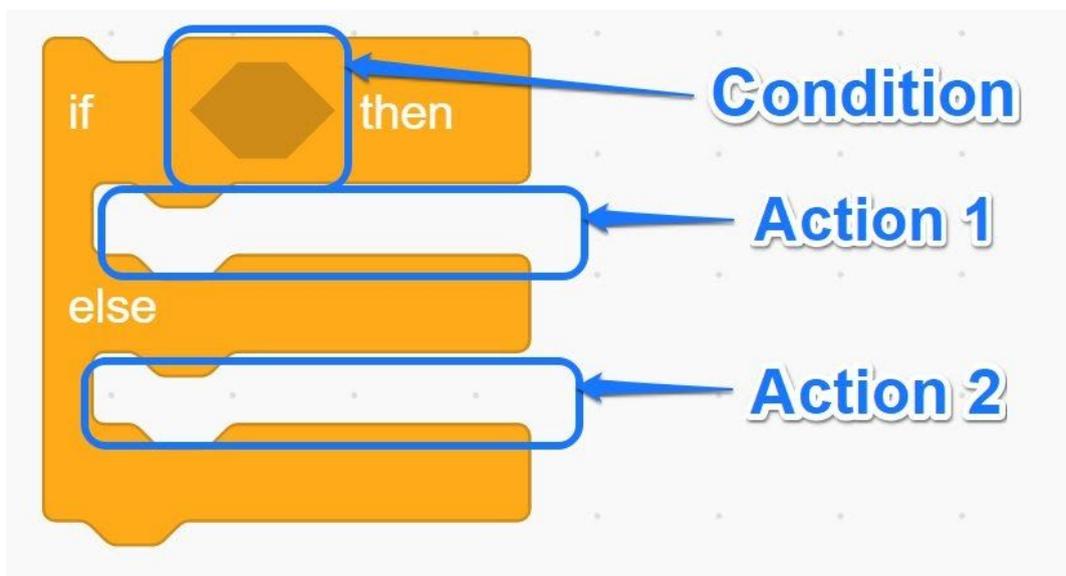
Code Blocks



The sprite will ask the question in a speech bubble and wait for the user to enter some information.



The information that the user enters via the 'ask' block is stored in this block



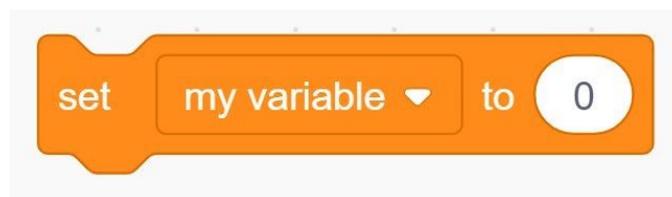
IF a particular condition happens, THEN run the instructions in Action 1. Otherwise (ELSE) run the instructions in Action 2.



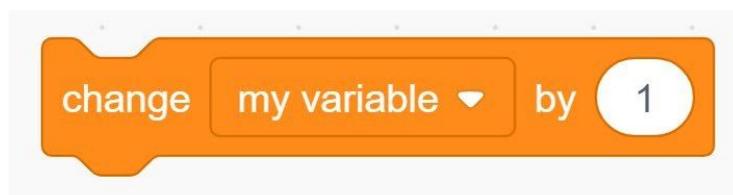
Comparison block. Checks to see if the answer entered by the user is equal to the value in the right hand side. In this example it checks to see if the User typed in “True”



Create a new variable. Make sure it is set to be available “to all Sprites”

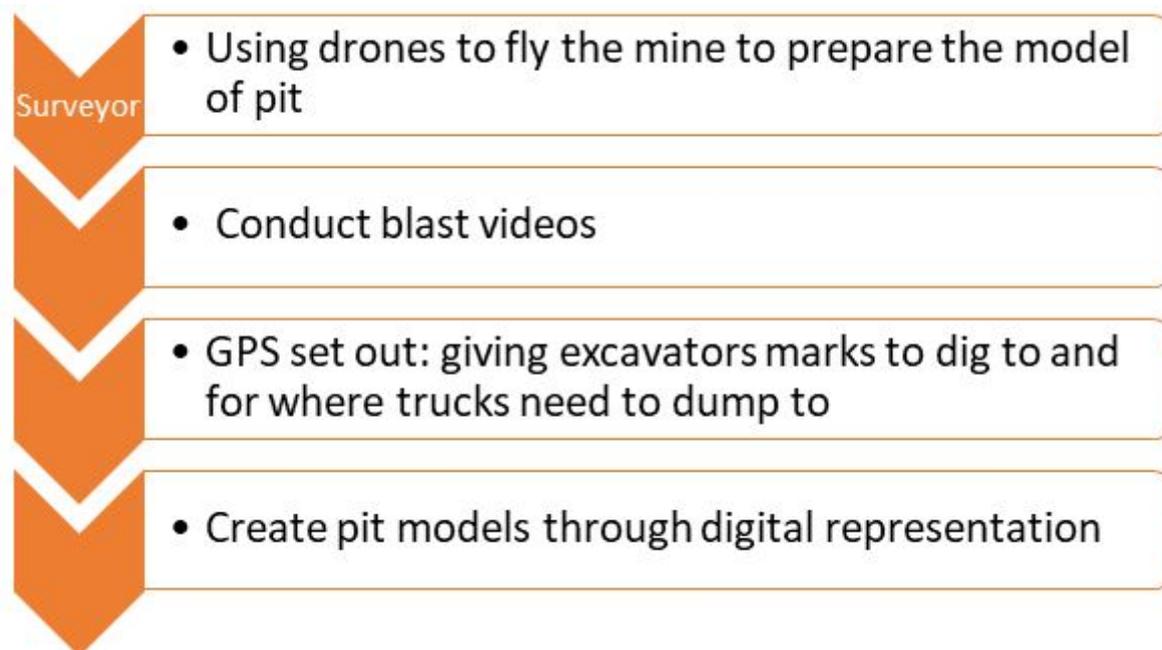
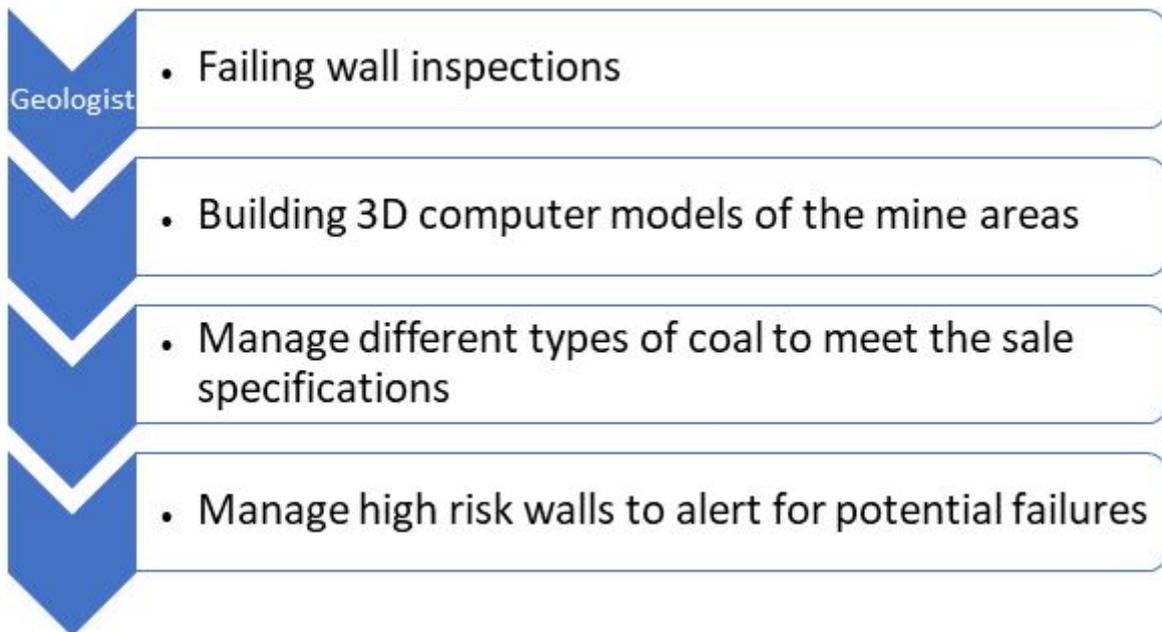


Set a starting value for your variable. This example will set ‘my variable’ to 0.



Change the variable by a set amount. This example will increase ‘my variable’ by 1 each time it is run.

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