

QMEA Scratch Challenge - Module 2

Module Outline

In this module, students will be taken through a variety of different Scratch Programming blocks that they can use to create their animations. Follow along with the video, pausing at the appropriate times to give students a chance to use the described blocks.

Challenge

Once students have a good understanding of the blocks used, they are then ready to create their own animation.

The content of the animation 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.oresomerresources.com/>



Challenge Submission

Once students have finished their project, it can be submitted. All submissions need to be received by the 7th of August 2020.

1. Give the Project a Name. We recommend the following format for Project Names
"Module2_schoolname_stdudentname" 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 2 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.

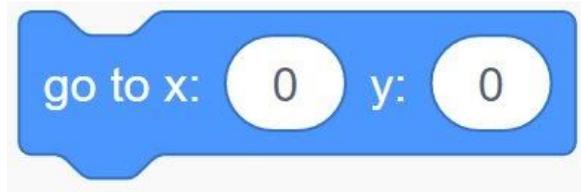
Judging Criteria

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

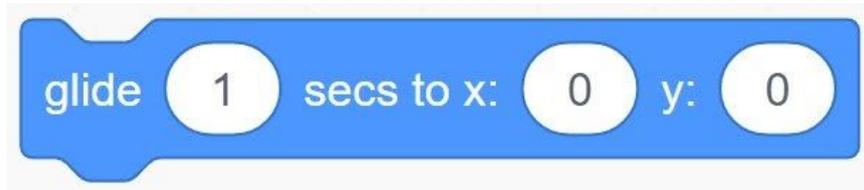
(In no particular order)

- Storytelling. Does the animation tell a story? Is there a logical progression of the animation? Is it engaging?
- 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?

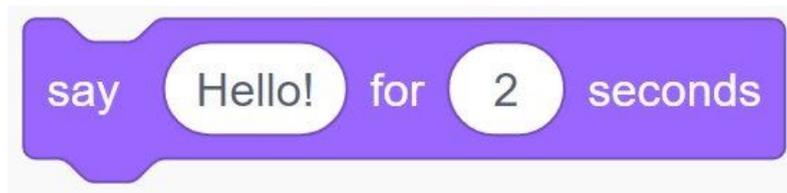
Code Blocks



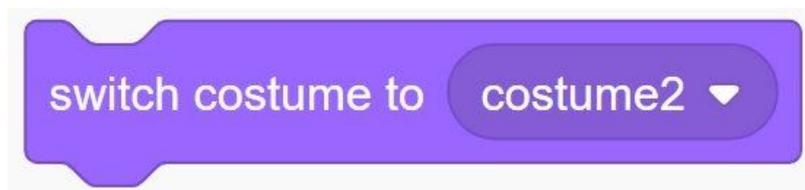
Instantly moves the sprite to a specific x,y location



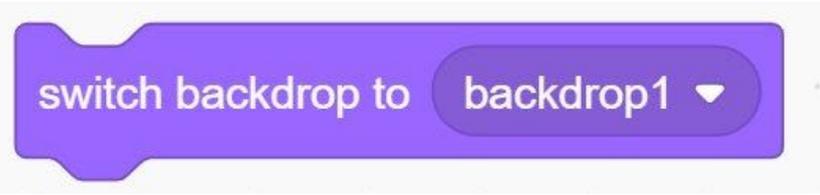
Smoothly glide from the current X/Y location, to the new X/Y location. Change the number of seconds to speedup or slow down the glide.



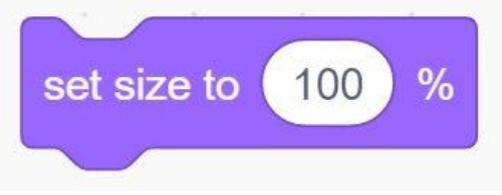
Create a speech bubble for your character and control how long the speech bubble stays visible



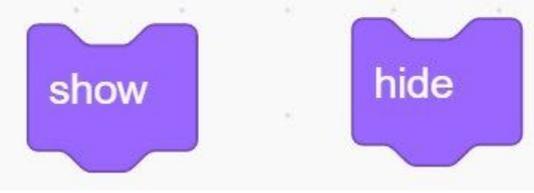
Change the costume of your sprite. Costumes can be found in the 'Costumes' Tab above the code blocks



Change the backdrop of your animation.



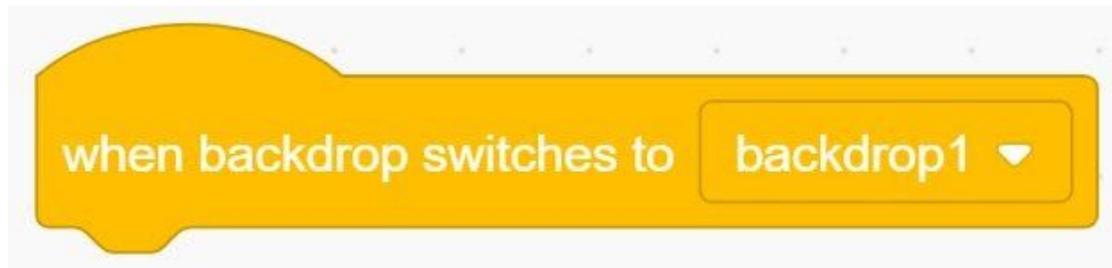
Set your Sprite to the desired size. 100% is the default size of the sprite.



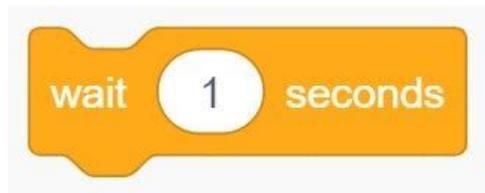
Show and Hide Block. Use these to have your Sprite appear and disappear at various points in your animation.



Green Flag starter block. All blocks that are connected underneath will be run once the green flag above the Stage is pressed

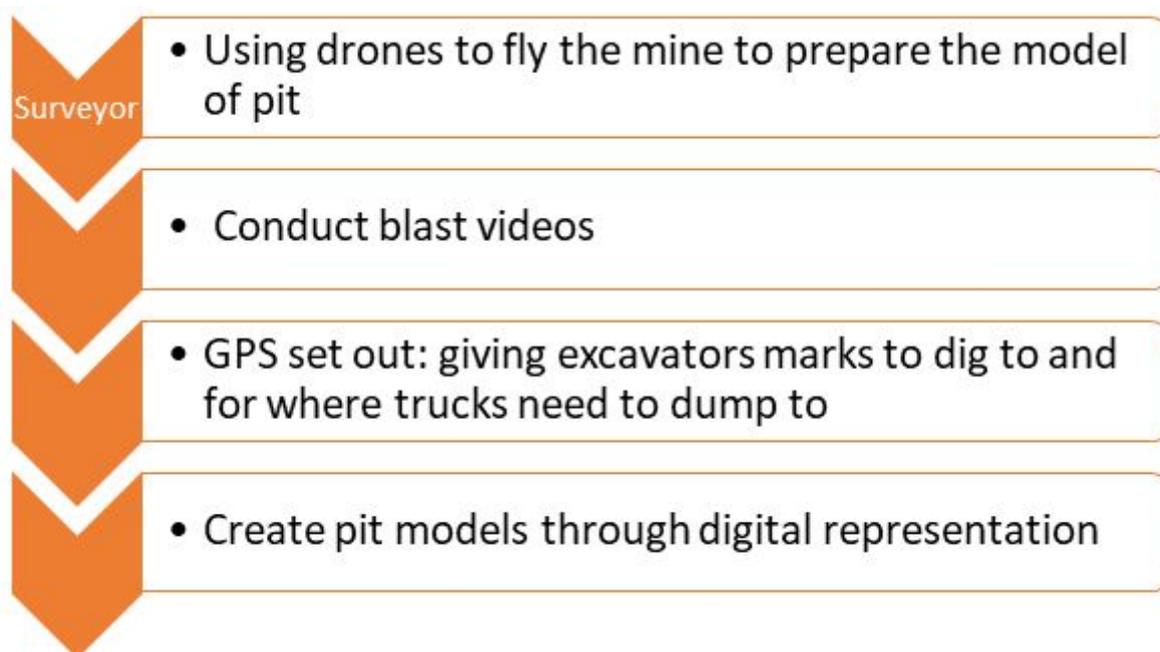
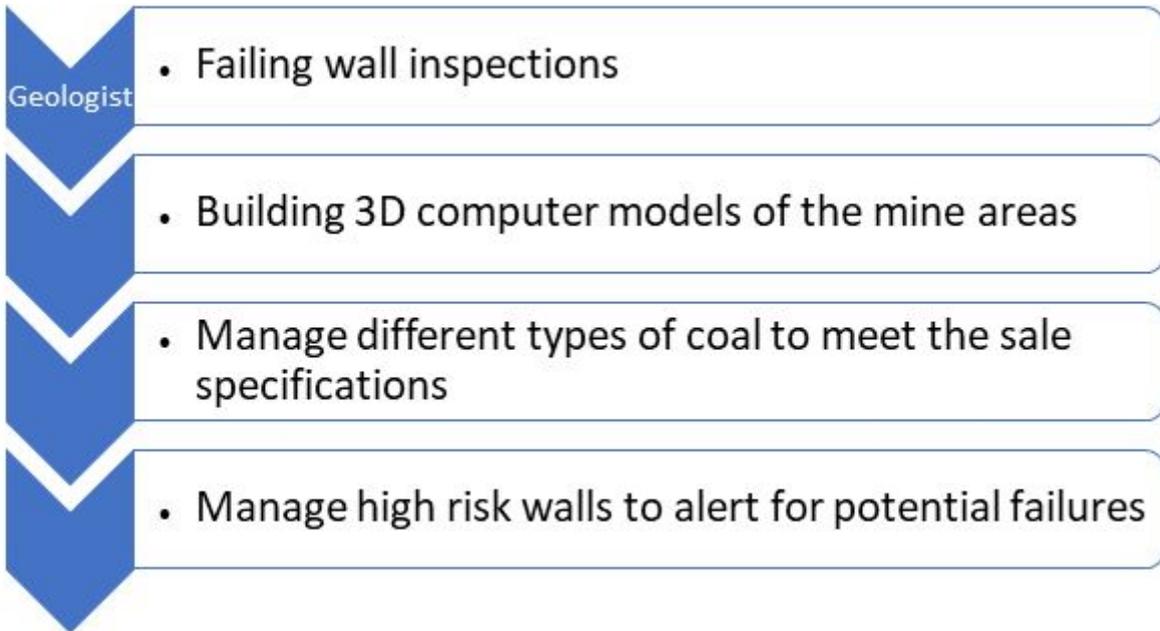


Backdrop Switch Starter Block. All blocks underneath will be run as soon as the background changes to the new Backdrop. Very useful when your animation has several different scenes.



Add a delay to your program. Very useful when coordinating speech bubbles between different Sprites

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