**Instructions for Using Drone Discovery on Scratch MIT**

1. Go to <https://scratch.mit.edu/projects/116115355/>
2. Click on See Inside.
3. If you have not yet created an account, you will need to do so.
4. Click on the green flag to tell the drone to “go” and watch what happens.
5. Drag the blue “Glide” block into the scripts field, and connect it to the blue block above it. (You can later use any blue block you wish, and you can change the numbers on each block by clicking on the number.)
6. Again, click on the green flag to tell the drone to “go” and watch what happens.
7. Now click on the Stage 5 backdrops icon on the lower left, then the Backdrops tab on the upper center. Select the Field/Crop Damage backdrop.
8. Now click on the Scripts tab on the upper center, then the Drone icon on the lower left.
9. Remove your added “Glide” block, and add instead add a glide block with x=200, y=0.
10. Again, click on the green flag to tell the drone to “go” and watch what happens. Note the number of infected crops observed increase as the drone flies over the red areas.
11. Now start on the project below. You can use and change as many blue blocks as you like in completing the project.

**Project Requirements**

1. Start at x= - 200, y = 150.
2. Return the drone to these same coordinates within 60 seconds (to avoid crashing the drone due to low battery).
3. Fly over all seven regions with infected crops during that time.

\*The winning project is the one meeting all three requirements with the largest number of infected crops observed.

**Writing Reflection – Write a brief reflection in which you address each of these:**

1. In your own words, summarize what you were trying to do in this programming simulation. Be sure to use the terms “criteria” and “constraints” correctly.
2. In your own words, explain why that was an important thing to achieve.
3. Describe some of the challenges you faced while programming the drone.
4. Describe some of the strategies you used to overcome those challenges.
5. Summarize your results. Did you achieve the goal? How many infected crops were observed?
6. Did you enjoy this project? What will you remember? What surprised you?