

Assignment 9: QGIS Graphical Modeler

(60 Points Total)

Data available under [Resources>UK Data](#).

The provided [uk_data.gpkg](#) GeoPackage contains a variety of data layers for the United Kingdom, including the following that you will use in this assignment:

[district_bound](#): boundaries of districts of the United Kingdom

[geo_dykes](#): polygons of geologic dyke extents.

The geology data are from the British Geological Survey. The political boundaries are from the United Kingdom Data Service.

Description of Problem

Use the **Graphical Modeler** to create a model that will allow a user to do the following:

“Count the number of [geologic dykes](#) that have their [centroid](#) in each [district](#). A user should be able to build an **expression** to subset or extract dykes that meet certain criteria.”

The model should:

1. Allow a user in input layers representing the [geologic dykes](#) and [districts](#). (6 Points)
2. Specify the attribute column name that provides a unique identifier for each [district](#). I used the “name” attribute. (6 Points)
3. Build an expression to [extract](#) a subset of the [dykes](#). (6 Points)
4. Perform all operations needed to return the correct result. (6 Points)
5. Generate a table that contains the [district name](#) and the [count of geologic dykes](#) that **met the defined criteria**. (6 Points)
6. Only return the **summary table**. All intermediate outputs should now be returned. (6 Points)
7. Have well formatted **help documentation** so that a user can figure out how to use your tool. (12 Points)
8. Have meaningful and helpful **parameter names** as displayed in the tool window. (6 Points)

Q1: Which district has the largest number of [dykes](#) that are of the type “FELSIC-ROCK” (Hint: use the “RSC_D” attribute from the [geologic dyke](#) layer). (6 Points) Highland

Deliverables

- Answer to the question, image of graphic model in PNG format, screen capture of model window set up to answer Q1, model as a .model3 file.