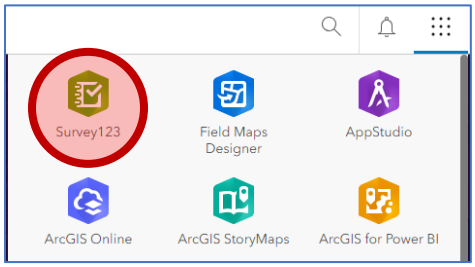
Protocol for exporting images from Survey123

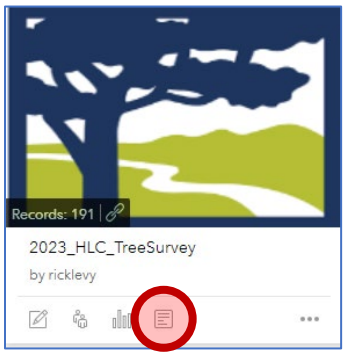
To export all images from a Survey123 survey, a python script must be used to extract the image attachments from a file geodatabase. ArcGIS Pro must be installed on your machine and you must have an ArcGIS Online account and access to the survey of interest.

Exporting the File Geodatabase

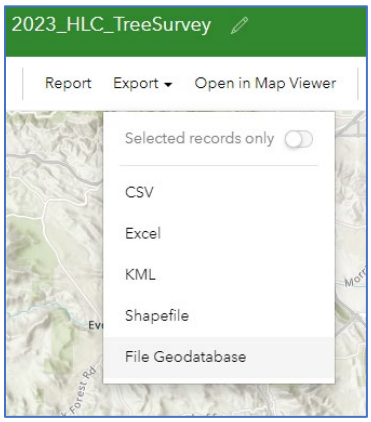
1. Log into ArcGIS online.
2. Navigate to Survey123



3. Locate the survey of interest and click the Data icon.



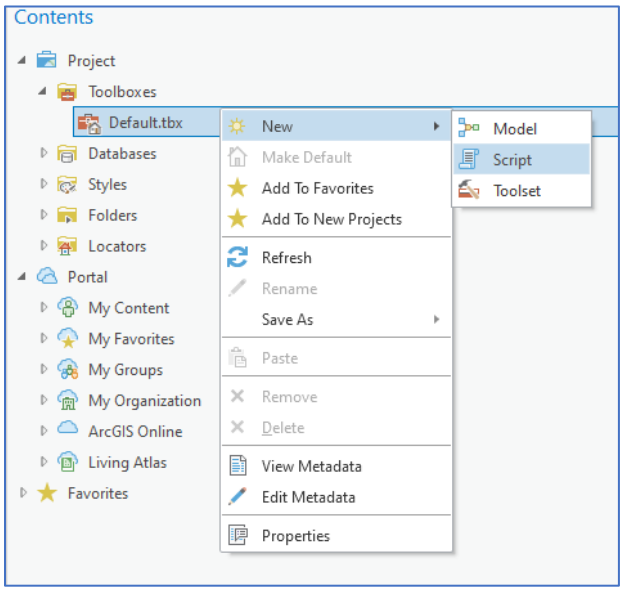
4. Export the Survey as a File Geodatabase.
5. A zip file will be downloaded. Extract the contents into a folder.



Creating the Script

This section is only necessary if you do not have an ArcGIS Pro Project saved with the script in the toolbox. If a project with a script already exists, skip to the* Run the Script *section.

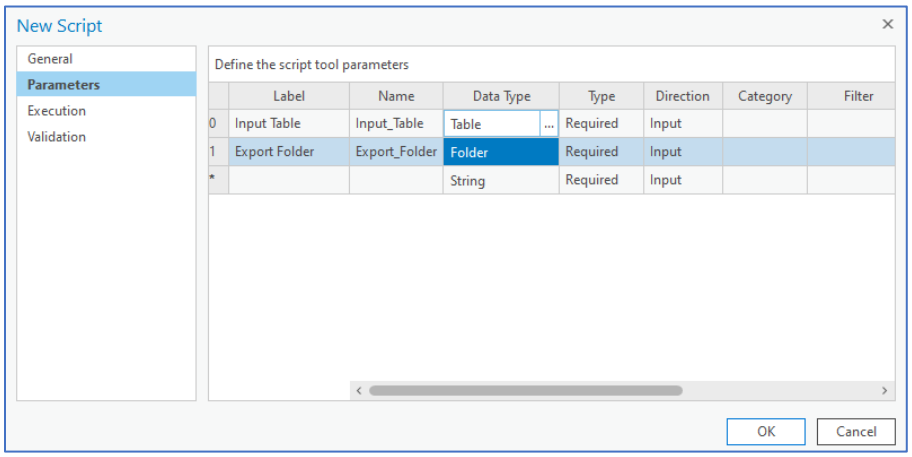
1. Open ArcGIS Pro.
2. Select “Start without a template”.
3. Open the Catalog Menu. It can be found under the View menu.
4. Expand Toolboxes. Right click on the Default.tbx file and select New>Script



5. Give the script a name and label.

Define Parameters

1. Create the first parameter. This will be the input attachment table from the file geodatabase. Label it “Input Table” and set the Data Type to “Table”.
2. Create the second parameter. This will be the destination location where you would like the images to be exported to. Label it “Export Folder” and set the Data Type to “Folder”



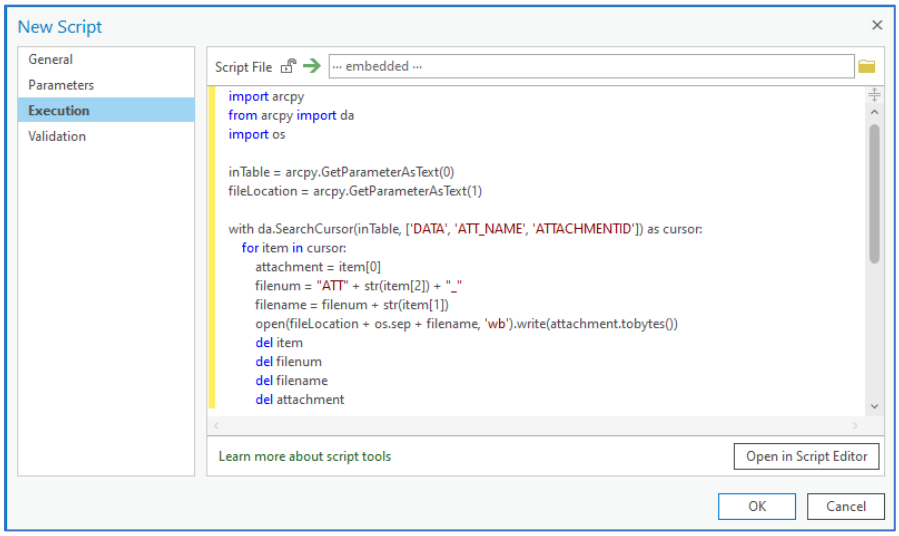
Define the Execution

1. Paste the following code into the text window, or link to an existing .py file containg the script using the folder icon.

```
import arcpy
from arcpy import da
import os

inTable = arcpy.GetParameterAsText(0)
fileLocation = arcpy.GetParameterAsText(1)

with da.SearchCursor(inTable, ['DATA', 'ATT_NAME', 'ATTACHMENTID']) as cursor:
    for item in cursor:
        attachment = item[0]
        filenum = "ATT" + str(item[2]) + "_"
        filename = filenum + str(item[1])
        open(fileLocation + os.sep + filename, 'wb').write(attachment.tobytes())
        del item
        del filenum
        del filename
        del attachment
```

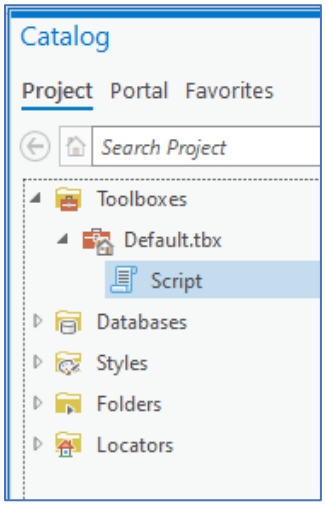


2. Click “OK”.

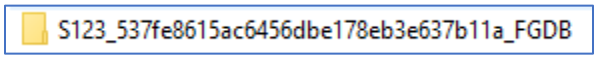
Run the script

If you are picking up here after exporting the File Geodatabase, open this project in ArcGIS pro: **https://arcg.is/18XWnj0**

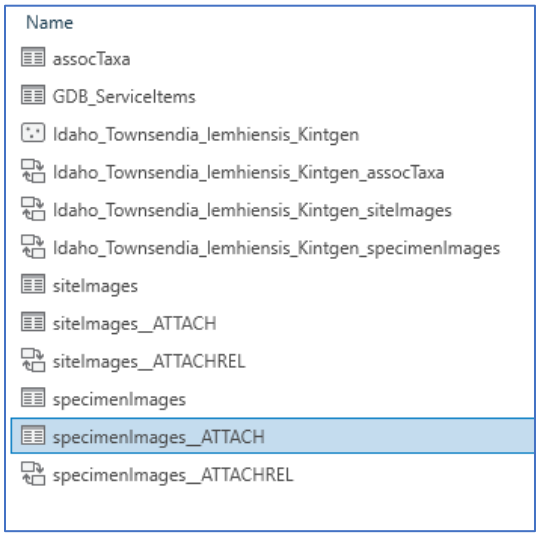
1. In the Catalog Pane, double click the Script that was created in the previous step. A Geoprocessing pane will open.



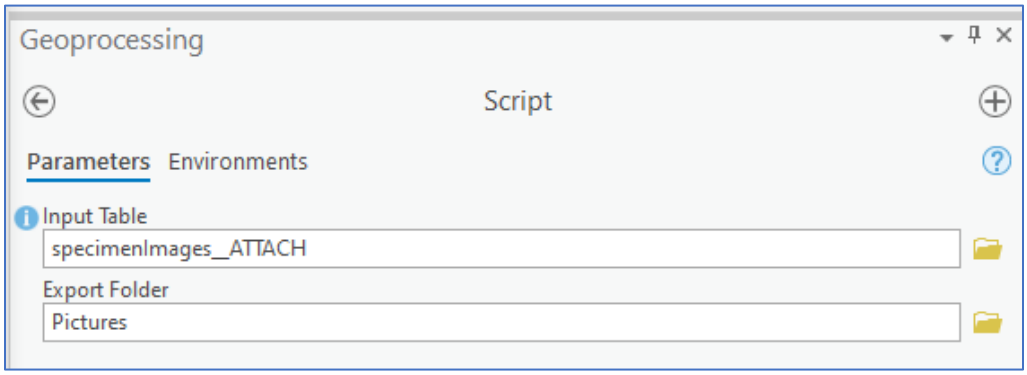
2. For the Input Table field, click the folder and navigate to the File Geodatabase that was downloaded and extracted into a folder. The folder will have the prefix “S123” then a GUID and the suffix “FGDB”.



3. Open the folder, open the .gdb file within it, then select the ATTACH file containing the images you wish to export. There may be several, depending on how many types of images were recorded during the survey. For example, this FGDB contains a table for specimen images as well as site images.



4. For the Export Folder field, click the folder icon, navigate to the destination folder where you would like the images to be saved, and set it as the location.



5. Click “Run” at the bottom of the Geoprocessing pane.

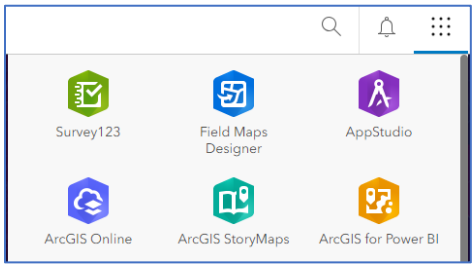
If successful, the image files should be saved in the destination folder.

Matching images with data

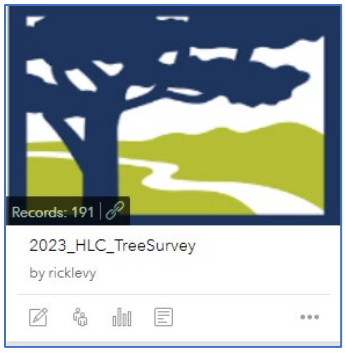
Once images are downloaded, it is likely that they need to be made more useful by linking them with their respective parent records and the associated data. This can be achieved through renaming the images or simply by combining the image file names, image metadata table, and the survey data table. Here is one, labor intensive, method. **Double check your work!**

Exporting the Data

1. Log into ArcGIS online.
2. Navigate to Survey123



3. Locate the survey of interest and click the Data icon.



4. Export the Survey as a CSV.
5. A zip file will be downloaded. Extract the contents into a folder.
6. There will be multiple files. One for the data recorded in the survey form and others that contain image metadata.

Adding Image File Names to the CSV

Open the CSV containing the image metadata.

Create a column to add the original file names.

Locate the directory containing images exported from the file geodatabase. Sort the image files in order from first taken to last. The file names should be numbered, so sorting them by name should work.

Select all the image files with CTRL+A

Hold shift and right click on the FIRST image listed in the directory. Select Copy as path.

In the image metadata CSV, paste the paths into the new column.

Incorporating Survey Data

Open the CSV containing the Survey Data.

Using VLOOKUP in the image metadata CSV, the survey data records can be integrated based upon the ParentGlobalID field.

If you wish to rename the image files so that the file names contain something from the survey data, prepare your spreadsheet to contain the new file names along side the original file names. If there are multiple images per record, be sure to add a number or some other type of suffix to ensure the new image file names will be unique.

Use the ren function command prompt to rename the images. CD into the directory containing the image files. Use the format:

ren originalImageFileName.jpg newImageFileName.jpg