SOS Map-Making Activity

Materials: *If doing many maps
Map 8.5 x 11" (attached below)
iPad or smartphone camera
Lamp for well-lit picture
*Sticky corners for sticking maps to the wall
*Script for auto-cropping image (attached below)
*Dropbox account
*Tripod

1. On the SOS Computer:
   - Log on to SOS computer next to the sphere. If it's not accessible to you use TeamViewer to pull up a virtual SOS desktop on a laptop near the sphere. (You'll need to download TeamViewer on the laptop and open TeamViewer on SOS computer and get the login & password.)
   - Make a folder in /shared/sos/media/site-custom/: map-making
   - Make another folder in /shared/sos/media/site-custom/map-making/: maps
   - Using TextEditor, make and save a playlist.sos file & include at least:
     name = Map-Making!!!
     data = maps
     category = site-custom
     fps = 1
     animate = 0
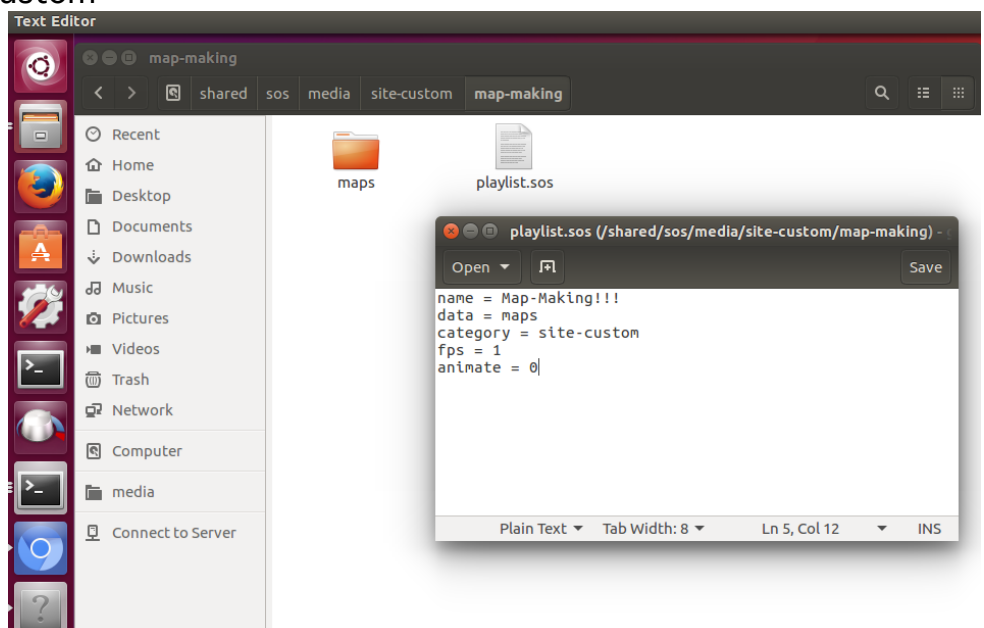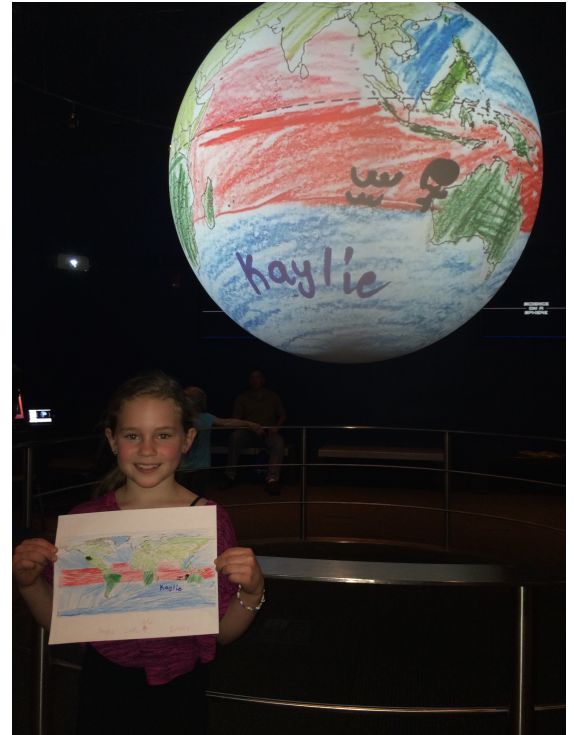
2. <u>Setting up the for the photo:</u>
- Set up a well-lit area on the wall for taking photos of the maps.
- Use photo corners or tape in order to take the same picture every time (if you have many maps to project).
- Set up tripod and iPad or camera and don't move once it's set!

3. <u>Coloring time!</u>
Have learning goals but keep it fun and allow students to add their own flair.

4. <u>Scanning the maps!</u> (*If only scanning a few, follow these easy steps.*)
- Place the map on the wall.
- Take a well-lit picture of the map.
- Crop it.
- Email it to yourself as an attachment.

- Download attachment on SOS computer and move to: /shared/sos/media/site-custom/map-making/maps/
- Update the library from SOS Stream GUI (Library menu > Update Library menu option). After updating the library that first time, you can simply reload the dataset after each map is added to the directory.

4a. <u>Scanning the maps!</u> *(If scanning several maps, follow these steps.)*
- Make a text file called *script.sh* with the attached script (#see below). Save it to your dataset directory: /sos/media/site-custom/map-making/
- Connect your Dropbox to your iPad photo directory to look for new photos.
- Connect your Dropbox to your SOS computer as a directory.
- Change the x and y crop numbers in *script.sh* based on the map position.
- Place the map on the wall.
- Take a well-lit picture of the map, one at a time.
- Sync Dropbox with your camera library.
- Open a terminal and navigate to your dataset directory by typing: cd /shared/sos/media/site-custom/map-making/
- Run the script by typing in the terminal: ./script.sh
- Update the library from SOS Stream GUI (Library menu > Update Library menu option). After updating the library that first time, you can simply reload the dataset after each map or sequence of maps is added to the directory.

5. <u>Load the dataset for all to see!</u>
      4: Newest maps will show up at the end of the dataset sequence.
      4a: Newest maps will show up first but they will all be there as frames in the same dataset.

#SOS Cropping script:

```bash
#!/bin/bash
#Copy all images from camera and crop to use in SOS format

#NOTE: The usb location will need to be adjusted based on when and where the
camera is conne$

#NOTE: The crop values will need to be adjusted based on the camera distance
and zoom. Use t$

sourceDir=/home/sos/Dropbox/Came*
destDir=/shared/sos/media/site-custom/map-making/maps

numSourceFiles=$(find $sourceDir -name "*.jpg" | wc -l)
numDestFiles=$(find $destDir -name "*.jpg" | wc -l)

if [ $numSourceFiles -gt 0 ]
then
xcrop="108"
ycrop="130"
size="2456x1254"

#move all destination files up by one in image sequence so new image is at
position 1
cd $destDir
find $destDir -name "*.jpg"| sort -r | mawk -va="$numDestFiles" -
vmod="$numSourceFiles" 'BEG$

#convert files found in sourceDir
i=1
for image in $sourceDir/*jpg; do
echo $image
newF=$(printf "%05d.jpg" "$i")
convert "$image" -crop $size+$xcrop+$ycrop $newF
mv -- "$image" ../orig/.
let i=i+1
done


fi
```

Equator