Elder Quote/Belief: *Their hats are woven very skillfully and stoutly of fir-roots, with wide brims and a low crown slightly pointed at the top, and they are decorated with various designs. —Gavriil Davydov, from "Two Voyages to Russian America, 1802-1807"*

Grade Level: PreK-12

Overview: Virtual Wardrobe is an augmented reality program specifically designed for the Chguach Region allowing users to digitally try on Sugpiaq clothing.

Goal: To experience virtually wearing traditional clothing from the Chugach Region, and examine the materials the Sugpiaq have used for thousands of years to stay warm, dry and safe.

Lesson Objective(s): Students will:
- Obersve themselves in digital renditions of traditional Sugpiaq clothing.
- Explore the materials used in the five traditional outfits

Vocabulary Words: Sugt'stun Dialects

English:	Prince William Sound:	Lower Cook Inlet:	Eyak:
Clothes		atkuut	si)la'q'Aya'
Coat	atkuk	atquq	kAnaa'd (coat)
Boots	kulusuk (winter)	kulusuq (winter)	giyahgulAXa' yaa

Materials/Resources Needed:
- Virtual Wardrobe kit (with tripod)
- Dedicated classroom space
- Smart board (if available)
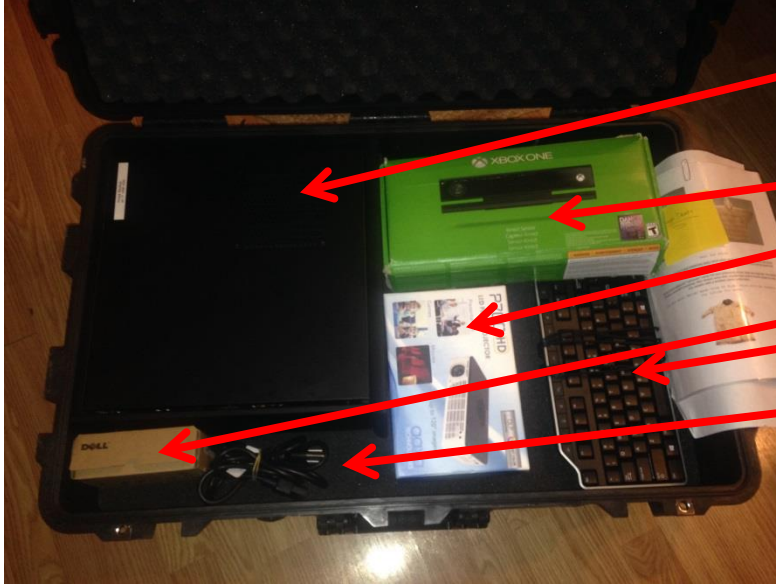- Secure locked storage

Teacher Preparation:
- Review Sim Table Directions
- Review Virtual Wardrobe Clothing Information document
- Set Up Virtual Wardrobe (30-40 minutes)

Opening:
Welcome to Virtual Wardrobe! The set up and take down of virtual wardrobe will take 30 to 40 minutes your first time. It is important to prepare for this ahead of time before any presentation. Allow for a little more time for troubleshooting and adjusting the sensor to fit the screen, smartboard or projector.

Set Up: (directions and pictures bleow)

1. Unlock and open Virtual Wardrobe Pelican Case. Inside you will see the Falcon Desktop computer w/ power cable, X-Box Kinect Sensor with cables, Aaxa Projector, Key Board, and Mouse.

- Falcon Desktop Computer
- Xbox Kinect sensor
- Aaxa projector
- Keyboard/Mouse (USB)
- Computer Power Cable
- Supporting documents

2. Before unloading each Virtual Wardrobe component, please take note (or a photo) of how and where each item is packed in the Pelican Case.
3. Begin by unloading each piece. Start with the Falcon Desktop, Power Cable, Mouse and Key Board.

Computer   **Projector**   **Screen**   **Kinect Sensor**

Placement of Virtual Wardrobe:

The staging of Virtual Wardrobe is a crucial step during set up process. When setting up the virtual wardrobe you will need an open space, minimum 12x16 feet.

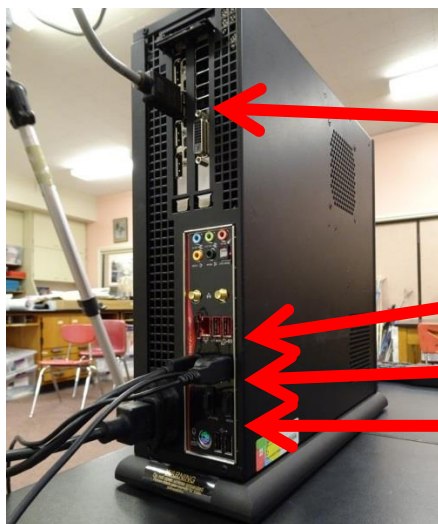Start with setting up the projector and Kinect sensor each with a tripod from the kit.

Each device needs to be secured to the tripod with the use of the removable foot. Remove the foot from the tripod. There will be a small screw on the top side of the foot. Screw the foot into either the Kinect or Projector and secure the foot and device to tripod.

The Kinect Sensor when attached to the tripod the Kinect will need to be placed to the side of the screen or projection wall. The height will be need to be approximately 5 feet. The Kinect sensor can also be adjusted up or down this will help with adjusting the sensor to fit the space and height of users.

The projector will be placed facing the projection wall. The projectors height and spacing will depend on who is using VW. A taller person may need the projector located slightly to the side. Once the projector is turned on choose connection type. Your connection type for this projector will be **HDMI.** To choose the connection type, choose the setup menu option on the top side of the projector. Use the arrow keys to select HDMI or another connection depending on your set up needs.

Smartboards, Large Screen TV or Computer Monitors

Each community and school will have different types of "screens" for us to connect Virtual Wardrobe too. If you are going to use another type of screen, make sure you have the correct cables and adapter plugs to connect to the computer.

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HDMI Cable -> Computer to Projector or HDMI Screen (smart board / Television screen)

USB #1 Key Board/Mouse USB sensor (pre-installed)

USB #2 Xbox Kinect

USB#3 Xbox USB controller stick

Computer Set Up:

Looking at the back of the computer you will connect your power cable, 3 USB cords (all labeled), and the HDMI cable.

Once the Computer (Keyboard and Mouse), Projector, and Kinect are plugged into a power source, start the computer by pressing the top button which will be lit up.

There will be an extension cord and power strip included with the kit if you need them.
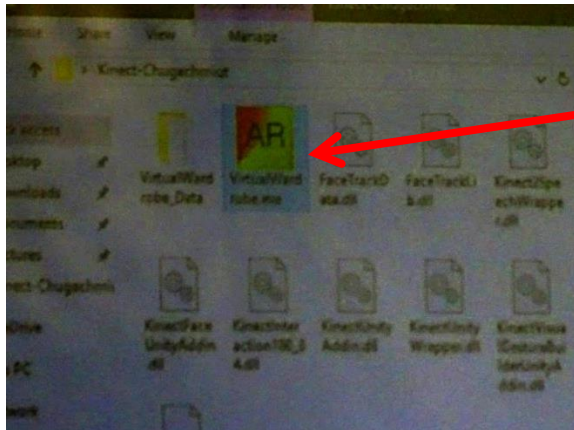
Kinect Sensor Cables:

The Kinect Sensor has 4 cables. These cables are labeled with directions. Each cable is numbered and color coded.

Starting Virtual Wardrobe:

Once the computer starts wait for the windows start screen to load.

- Double Click on **Kinect Chugachmiut** folder to open.
- The folder will open. Double click on the **AR Virtual Wardrobe**, this will activate Virtual Wardrobe.
  - o Virtual Wardrobe will launch and the Kinect Sensor will activate on the screen.

Operating / Adjusting Program, Exiting Program, Packing

Once Virtual Wardrobe has begun operating, you will need to adjust the sensor for height and distance.

To Adjust for Height- Move the **Kinect** sensor (hinged) up or down. You may find you will also need to adjust and level the tripod.

To Adjust for Distance- Move projector forward or backwards from Projection Screen. If you are using a fixed screen (TV) a particular standing point will need to be established. A paper **X** on the floor is useful for participants to stand on for optimal performance.

Operating Virtual Wardrobe with Participants:

The Virtual Wardrobe has many cables in which participants can become unknowingly entangled in. To eliminate this issue, place cables to the side and allow participants an area without cables or hardware present.
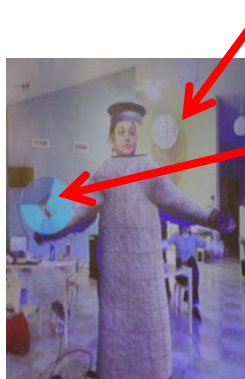

- Cables out of the way of participants
- Entrance without cables

Establishing an area where participants stand is important. Participants need to be able to stand in front of the Kinect sensor and view themselves on the screen.

A. **Switching Between Regalia and Exploring Regalia:**

Once Virtual Wardrobe(VW) has loaded and the sensor engages. Stand in front of the sensor (approximately 6 to 7 feet away) with a view of the screen. The first outfit will appear, practice slowly moving your hands and feet to check the alignment of the devises. This is a good time to adjust the projector and sensor height for optimal performance and/or interference.

There are 5 outfits associated with VW; Hunter, Gatherer, Shaman, Warrior, Dancer. To engage each outfit you will need to stand still with your arms at your side. Raise your arms into a T position (it may take a couple tries to find the right position depending on the sensor level).

When the sensor registers that you are wanting to switch outfits a blue circle will appear and begin to fill with light blue. Keep your left hand in the circle, once it fills (light blue) the outfit will change. Once the regalia has changed place your arms back to your sides. The blue dot will disappear and you can be free to move and engage with the program.

When you switch between each clothing option, you are able to stand closer to the sensor. This will allow to take a closer look at each piece. When you go to switch between participants, simply step outside of the sensors area and allow a new participant to enter the area. The program will start immediately when a new person comes into view.

Xbox Controller: X-Box Controller assist to toggle between clothing outfits.

1) Connect the X-Box controller with the USB stick sensor.

2) Insert the Xbox sensor USB port in the back of the computer. Press small button on USB sensor.

3) Proceed to turn on X-Box controller with the lit up X button. This will pair the devise with the computer.

Left Bumper

Xbox stick sensor

The X-Box controls are as follows:
- **A** to open the menu (Green)
- **B** to close the menu (Red)
- Left bumper to switch outfits (opens the menu if it's not open)
- **Y** to capture the screen

All previous gesture controls remain the same and will work in tandem with controller.

Photos and VW:

Virtual Wardrobe has the ability to capture screen grabs. The screen grab function will only work if you have a USB thumb drive connected with a folder named "ScreenGrabs". To do this, access your USB thumb drive in the files menu, open folder. Add a new fold to your thumb drive rename folder as ScreenGrabs. Return the USB drive to the Virtual Wardrobe computer and start program.

To capture image, have individual pose on screen. Using the connected X-Box controller, press the "Y" button.

To retrieve images, remove thumb drive from computer and download images to your computer for access to images.

Exiting Virtual Wardrobe:

To sign out of Virtual Wardrobe use the combination of keys: **Alt-F4** ; This will bring you back to the main Windows Desktop.

B. Shut Down
It is crucial to properly Shut down the computer once finished with use.in the bottom left corner go to the SHUT DOWN option in the Windows Menu. Shut down.

C. PACKING VW:
 Please pack away each item exactly how you found it, this will ensure that everything fits in the case. Each time the kit moves locations pack and lock the kit. Use the cable ties or rubber bands to secure cables together.

Complete the inventory and lock the pelican case.

- Falcon Desktop Computer
- Xbox Kinect sensor
- Aaxa projector
- Mouse (USB)
- Keyboard (USB)
- Computer Power Cable
- Supporting documents

SECURITY:

Please break down and lock virtual wardrobe kit items back in Pelican case. Lock Pelican case is secure location for overnight storage. Thank you.

If you have any questions please contact Chugachmiut Heritage Preservation Department

- o **Chugachmiut Heritage Preservation office: 907-562-1455**