

Lesson 1: How to prepare SEM samples (5 minutes)

1. Enter the virtual lab.
2. Walk up the stairs to the second floor and around to the back wall.
3. On the middle of the lab table is the Scanning Electron Microscope (SEM).



4. Using the mouse **double left click** on the monitor for the SEM.
5. A run option box will appear with the question: "Would you like to run Scanning Electron Microscope?" Click "**yes**"
6. Click on the upper left-hand box that reads "How to prepare specimens for the SEM".
7. Click the arrow to play the video.
8. Answer the questions as you are watching the video. You may press "pause" button to stop the tape in order to answer the questions and then press the "play" arrow to continue.

Questions:

1. Josie applies double carbon tape to the stub. What are 2 reasons for doing this? _____
2. What two alloys do they use to coat the specimens? _____

3. What is the gas in the sputter coater chamber that glows bluish purple? _____
4. Why do they rotate the specimen in the sputter coater chamber? _____

5. After your specimen of the sap beetle goes through the sputter coater, what steps would you have to follow in order to load it into the SEM? _____

