

SI Biology - Full Discipline Demo

Using the V-Scope

Final Report - Answer Guide

Institution	Science Interactive University
Session	SI Biology - Full Discipline Demo
Course	SI Biology - Full Discipline Demo
Instructor	Sales SI Demo

Test Your Knowledge

Categorize each statement as true or false.

⚡ The SI V-Scope is a virtual microscope program which simulates the use of a compound light microscope.	
⚡ The stage adjustment knobs are used to center the slide on the stage prior to focusing.	
⚡ The V-Scope should be used whenever a microscope is called for in the procedures of a lesson.	
⚡ Virtual slides are located in the view slide tab.	
True	False
1	2

Correct answers:

1

The SI V-Scope is a virtual microscope program which simulates the use of a compound light microscope.

The V-Scope should be used whenever a microscope is called for in the procedures of a lesson.

The stage adjustment knobs are used to center the slide on the stage prior to focusing.

2 Virtual slides are located in the view slide tab.

Exploration

The SI V-Scope allows users to ____.

- ☐ adjust microscope components
- ☐ select, view, and focus on virtual slides
- ☐ download images for labeling
- ☒ All of the above



The turret controls the ____.

- ☐ light source
- ☒ objective lenses
- ☐ stage position
- ☐ All of the above



The quick reference guide is located in microscope controls tab located below the microscope.

- ☐ True
- ☒ False



The download image function should be used whenever lesson procedures state to take a microscope photo.

- ☒ True
- ☐ False



Exercise 1

Describe the two functions of the coarse focus knob on the SI V-Scope.

The coarse focus knob functions to raise and lower the stage when changing slides and also functions to initially bring a slide image into focus.

Describe two methods of accessing a slide for viewing on the SI V-Scope.

Slides are accessed in the slide library by either scrolling through the alphabetized list or by using the search tool and typing the first letters of the slide name.

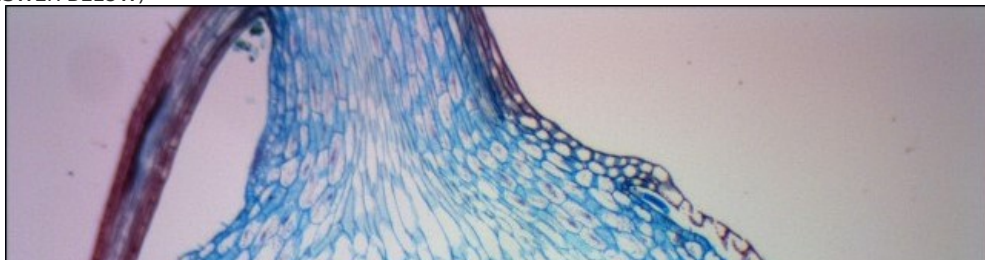
List the steps that must be completed before selecting a slide for viewing on the SI V-Scope.

1. Move the stage to the lowest position.
2. Turn on the illuminator.
3. Select the low power (4x) objective lens.

What would occur if an unfocused slide image was downloaded?

If an unfocused image were downloaded, the resulting download would also be unfocused.

Photo 1: Antheridium Low Power
(SAMPLE ANSWER BELOW)



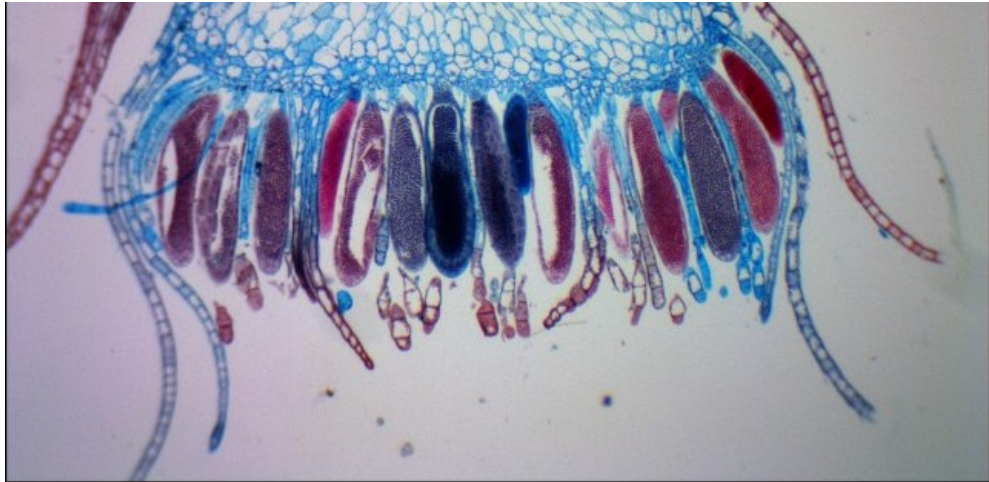


Photo 2: Antheridium Medium Power
(SAMPLE ANSWER BELOW)

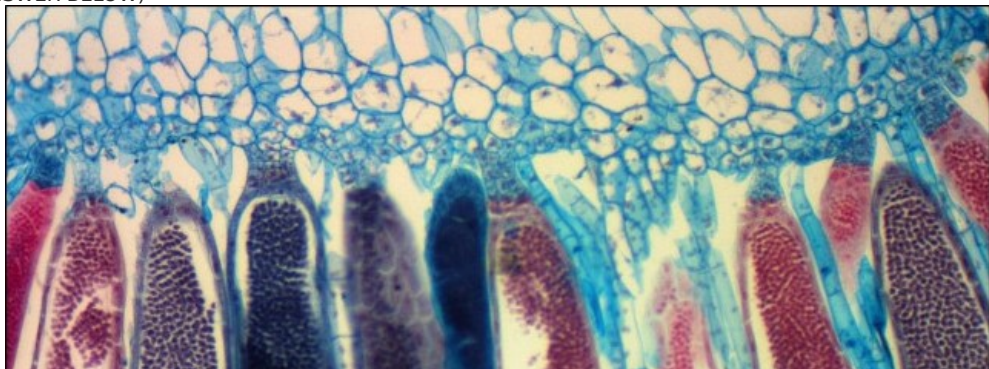
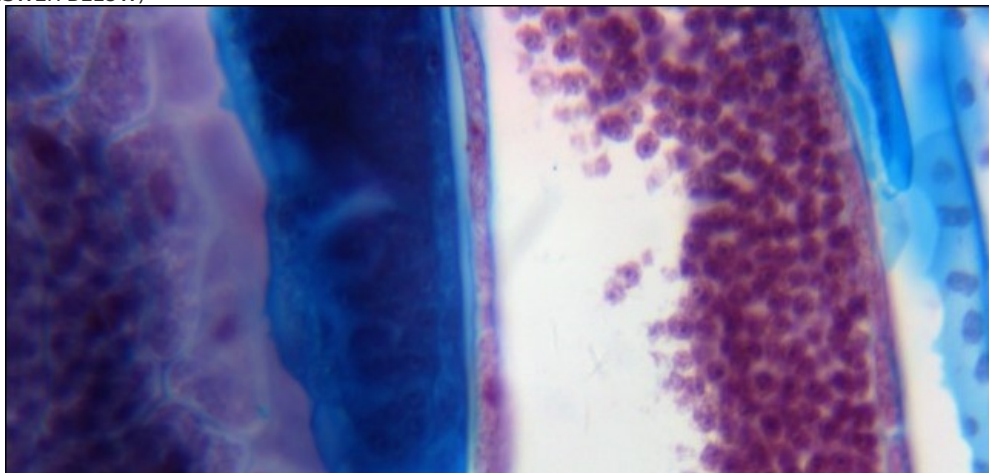




Photo 3: Antheridium High Power
(SAMPLE ANSWER BELOW)



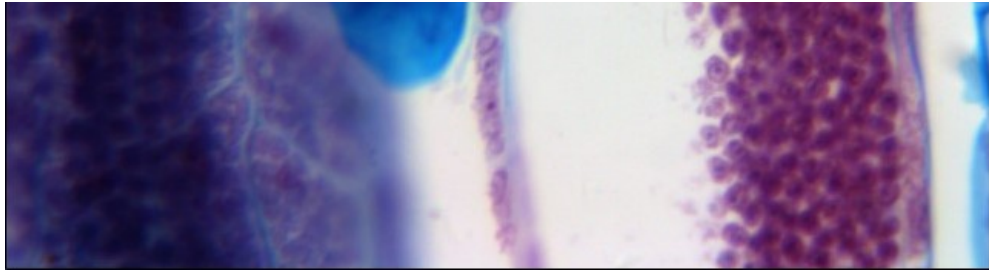


Photo 4: Simple Columnar Stomach Low Power
(SAMPLE ANSWER BELOW)

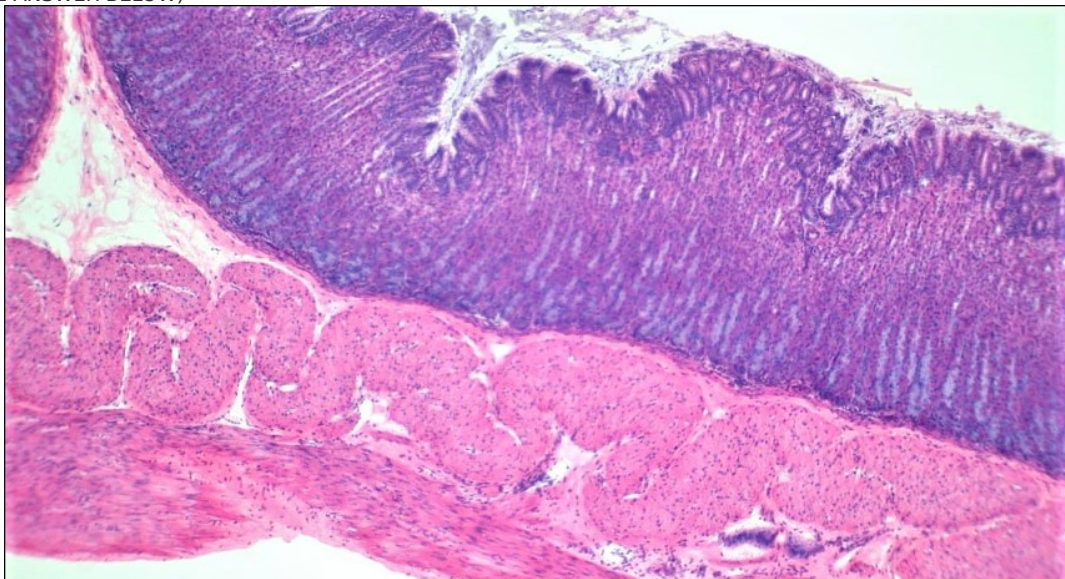




Photo 5: Simple Columnar Stomach Medium Power
(SAMPLE ANSWER BELOW)

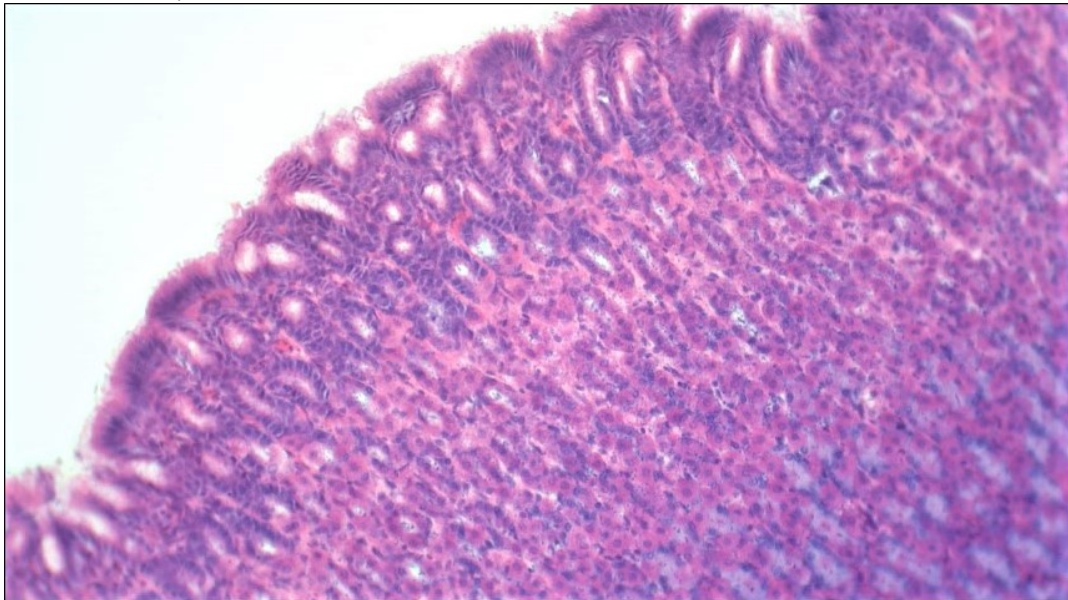
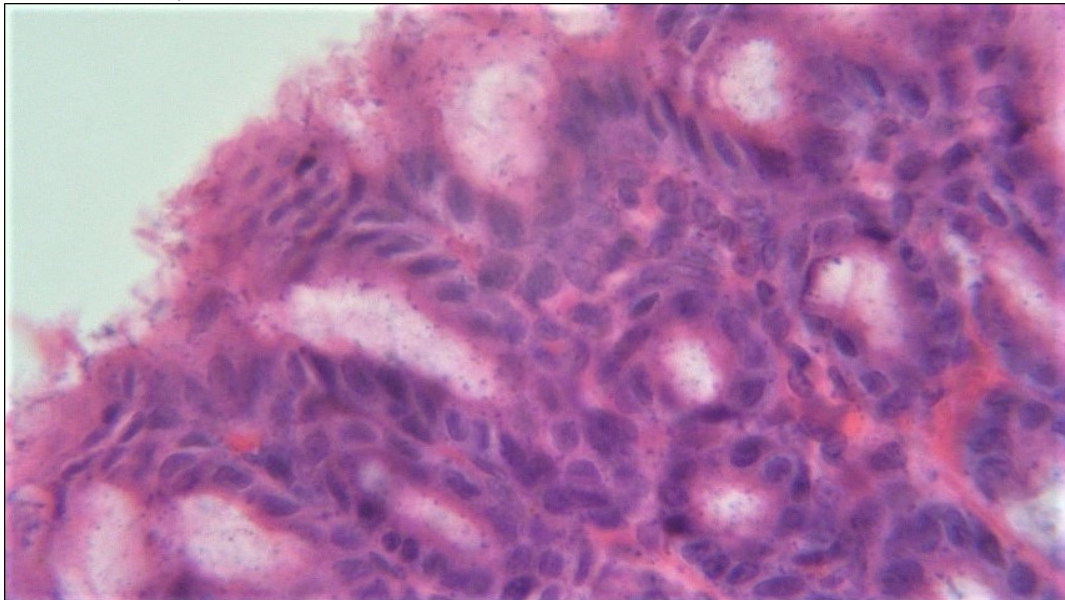


Photo 6: Simple Columnar Stomach High Power
(SAMPLE ANSWER BELOW)



Competency Review

The ____ is an adjustable feature of the SI V-Scope.

- ☐ coarse focus knob
- ☐ illuminator switch
- ☐ stage
- ☒ All of the above

✓

The microscope controls tool displays a labeled image of the V-Scope.

- ☒ True
- ☐ False

✓

Slide images are downloaded as ____ files.

- ☒ jpeg ✓
- ☐ tiff
- ☐ word
- ☐ pdf

The total magnification for a slide viewed with the high power lens should be reported as ____.

- ☐ 40x
- ☐ 150x
- ☒ 600x ✓
- ☐ 1000x

The illuminator should be turned on before placing a slide on the stage of the SI V-Scope.

- ☒ True ✓
- ☐ False

A slide should be centered before viewing with the ____ power lens.

- ☐ low
- ☐ medium
- ☐ high
- ☒ All of the above ✓

Slides are arranged in the order of lesson sequence in the slide library.

- ☐ True
- ☒ False ✓

The download image tool should be used ____.

- ☒ after the slide is focused ✓
- ☐ as soon as the slide is placed on the stage
- ☐ when the illuminator is turned off
- ☐ as soon as the objective lens is changed

Extension Questions

How does using the SI V-Scope compare to using a physical microscope? Include at least three similarities and three differences in your answer. (SAMPLE ANSWER BELOW)

The SI V-Scope has many of the adjustable features of a physical compound light microscope, including an adjustable stage, illuminator on/off switch, adjustable coarse and fine focus knobs, stage adjustment knobs, and selectable objective lenses. Just like a physical microscope, the SI V-Scope must be operated in a sequence of steps to successfully focus on images. Differences between the SI V-Scope and a physical compound light microscope include: no micrometer function available for V-Scope, no ability to view the actual self-prepared slides with V-Scope, no threat of breaking a glass slide by contact with a high power objective when using V-Scope, no lenses to clean when using a V-Scope.