# #22

COMPLETE

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| **Collector:** | Live Link (Web Link) |
| **Started:** | Monday, February 10, 2020 2:33:01 PM |
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## Page 1: Supplies, Equipment, Furniture, and Other Request Form

### **Q1** Contact Person:

| | |
|---|---|
| Name | **Michele Garcia** |
| Email Address | **michele.garcia@gcccd.edu** |

### **Q2** Department:

Biology

### **Q3** Title of Request:

Active learning exercises for Bio 122, 134, 135 and Bio 240

### **Q4** Location of Request:

H222

### **Q5** Type of Request:

Other: Please specify the non-operational other request::
A variety of supplies and equipment necessary to develop active learning exercises for courses that have a botany component.

**Q6** Description of Request:Please provide a description of the supplies, equipment, furniture or other request. When making your request, please be as specific as possible and include information such as make, model, manufacturer, color, quantity, etc.

Through evaluating the SLO for this course, students struggle with understanding the plant anatomy and classification. One of the issues is the lack of supplies available to students. For a class of 32 students, there may be only one microscope slide available. When this happens, students are unable to perform the active learning exercise and struggle to understand the material and meet the SLO. Below is a list of slides that are needed or need to be replaced. These slides will be utilized in Bio 122, Bio 240, Bio 134 and Bio 135.

Another issue students have been facing as witnessed during SLO assessment, is an understanding of plant life cycles. This has been an issue noted in three courses: Bio 240, Bio 122 and Bio 134 and Bio 135. Growing and running experiments on C-ferns, from spores in petri to full sized plants is incredibly successful in assisting in student learning as it provides both an active learning and inquiry based approach to meet the student learning outcomes. The issue to growing these specimen has been that they need to be grown at 80 degrees with a required level of humidity and a constant source of light. Currently, we do not have the equipment to do this properly. An environmental growth chamber with a heating/humidity system is required in order to grow enough of these plants for four courses: Bio 122, 134, 135 and Bio 240.

Microscope Slides

1. Eudicot and Monocot Root Comparison Slides ( https://www.carolina.com/plant-microscope-slides/typical-monocot-and-dicot-roots-cs-12-um-microscope-slide/301892.pr?question=dicot+slides
   - 16 slides needed
   - $130.40 ($8.15/slide)

2. Eudicot and Monocot Stem Comparison Slides (https://www.carolina.com/plant-microscope-slides/typical-monocot-and-dicot-stem-slide-c-s-12-um/302642.pr?question=Monocot+stem)
   - 16 slides needed
   - $131.20 ($8.20/slide)

3. Eudicot and Monocot Leaf Comparison Slides (https://www.carolina.com/plant-microscope-slides/typical-monocot-and-dicot-leaves-cs-12-um-microscope-slide/303514.pr?question=monocot+leaf+slide#)
   - 8 slides needed
   - $132.00 ($8.25/slide)

Plant Growth Chamber (we desperately need this as we have increased our botany offerings over the past 10 years from 0 to 3 courses -Bio 122,134, 135)

1. Plant environmental growth chamber (https://www.carolina.com/growing-systems/carolina-plant-environmental-chamber/666806.pr )
   - $2,236.15

**Q7** Estimated Cost:

$2629.75

**Q8** Please attach quote, if available

**Respondent skipped this question**

**Q9** Total Cost of Ownership:Can this request be maintained with existing funding sources? If not, please explain your plan to maintain this request. Example: potential yearly service agreements, warranties, and replacement costs.

None

**Q10** Justification of Request:Please select the applicable criteria and provide the details how the criteria relate to your request.

**Equipment replacement,**

**Critical need,**

**Impact on student success and access,**

Provided details::

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**Q11** Program Goal:Please identify the program goal(s) this request would help your program achieve and provide a brief explanation of how it would do so.

This is all designed to support new goal # 2 which is to support development of active learning exercises that will be designed to increase student success.