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COMPLETE

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Page 1: Supplies, Equipment, Furniture, and Other Request Form

Q1 Contact Person:

Name	Michelle Garcia
Email Address	michelle.garcia@gcccd.edu

Q2 Department:

Biology

Q3 Title of Request:

Equipment/materials to support development of active learning exercises in Bio 240

Q4 Location of Request:

H222

Q5 Type of Request:

Equipment

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.

1. Echinoderm Collection: 4 different representative classes of echinoderms (<https://www.carolina.com/preserved-starfish-and-sea-urchins/echinoderm-collection-preserved/226000.pr>)

- o 8 sets are needed (32 students/4 per group)
- o \$280.00 (\$35.00/set * 8)

2. Animal Survey Set: 21 different preserved animal specimen from sponges to fish (<https://www.carolina.com/multi-organism-dissection-kits/animal-survey-set-1/221285.pr?question=Animal+kingdom+specimen+set>)

- o 8 sets are needed (32 students/4 per group)
- o \$1,296.00 (\$162.00/set * 8)

Microscope Slides

1. Grantia Sponge Choanocyte slides (<https://www.carolina.com/animal-microscope-slides/grantia-near-median-ls-microscope-slide/305842.pr>)

- o 16 slides needed
- o \$134.40 (\$8.40/slide)

2. Animal Tissue Sets (<https://www.carolina.com/basic-science-microscope-slides/all-about-me-microscope-slide-set/311960.pr>)

- o 8 sets
- o \$376.00 (\$47.00/set)

3. Motor nerve ending slides (<https://www.wardsci.com/store/product/8881935/motor-nerve-endings-in-muscle-reptile>)

- o 4 slides
- o \$86.60 (\$21.65/slide)

Q7 Estimated Cost:

\$2172.90

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.

No maintenance required.

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,

Innovation,

Provided details::

These items are all designed to support replacement of old materials that are used in Bio 240. The materials we are currently using are simply falling apart and no longer appropriate for use. See new goal #1 in program review report. Currently the evolution and identification of 8 different animal phyla is very difficult for students to understand. This critical need was clear when assessing SLO data. The instructors for this course discussed solutions to this critical need for our students. One of the biggest impediments to the student's understanding is old materials that are impossible to identify. Being able to visually see and compare different animal groups from sponges to sea stars major will give our students the ability to fully understand the concept of descent with modification by seeing the changes in these organs from one species to the next with these preserved specimen. Microscope slides are also needed, as the stains fade over time. As a number of these slides are 15+ years old, the images are faded or gone and students no longer of the ability to view the organisms or anatomical features of these organisms. Due to the redevelopment of Bio 240, new materials are needed to support the new, more active activities that are being implemented. Through SLO evaluation, we found students really struggling to understand animal physiology and the different tissues comprising animal organs., A laboratory exercise was developed to allow students to learn the material utilizing a hands-on approach to view and understand the four different types of animal tissues. However, we do not have the materials required to make this lab fully successful. This request is for microscope slides that represent the four tissue types of animals in order to support student success The SLO data for this course shows that the most successful student outcomes correlate with material that is taught utilizing active learning strategies. This supports the need for continuation and development of innovative active learning strategies to teach the evolution of these organs and organisms within Kingdom Animalia.

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 lines up with new program goal number 1; Currently the evolution and identification of 8 different animal phyla is very difficult for students to understand. This critical need was clear when assessing SLO data. The instructors for this course discussed solutions to this critical need for our students. One of the biggest impediments to the student's understanding is old materials that are impossible to identify. Being able to visually see and compare different animal groups from sponges to sea stars major will give our students the ability to fully understand the concept of descent with modification by seeing the changes in these organs from one species to the next with these preserved specimen.

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