#6

COMPLETE

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Page 1: Please review the following:

Q1

Contact Person:

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

Q2

Department:

Biology

Q3

Title of Request:

Animal Tissue Slides for Enhancing Microscopy Skills and Supporting Student Success

Q4

Location of Request:

H-401 and H-222

Q5

Type of Request (Select one):

Equipment: Tangible property with a purchase price of at least $200 and a useful life of more than one year.Technology related items such as hotspots, computers, tablets should be requested through the College Technology Committee

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.

This request is for a set of high-quality animal tissue slides to support laboratory instruction in Bio 120 (General Biology Lab), which will replace Bio 130 and Bio 131 as well as Bio 240 (Organismal Biology). These slides are specifically chosen to enhance students' understanding of key animal tissue types, including cardiac muscle, smooth muscle, skeletal muscle, adipose tissue, mammalian red blood cells, reptilian/bird/amphibian red blood cells, simple squamous epithelium, simple cuboidal epithelium, simple columnar epithelium, dense irregular connective tissue (deep skin), neuron, and bone.
The slides will provide focused, individual tissue samples on separate slides rather than mixed samples. This clarity is critical for general biology and organismal biology students, who often struggle to differentiate tissue types when they are combined on the same slide. The simplified design will reduce confusion and enhance learning outcomes.
A total of 10 sets of these slides are requested to accommodate the growing number of lab sections and classrooms in the H building. These slides will also alleviate the current over-reliance on anatomy slide boxes, ensuring those remain in anatomy classrooms where they are most needed. The slides will be shared between Bio 120 and Bio 240, allowing students across multiple courses to build essential microscope and tissue identification skills, while protecting the integrity of anatomy-specific resources.

Please see attached quote for the breakdown of the slides and their cost.

Q7

Estimated Cost:

$1117.70

Q8

Please attach quote, if available

Microscopy%20Slide%20Supply%20Request%20FA24.pdf (62.8KB)

Q9

Total Cost of Ownership:Your requested item may incur ongoing expenses.What are the ongoing expenses associated with your request? If there are ongoing expenses, please detail how you plan to support these costs with your existing budget by completing the text boxes below.

Initial Cost of Item	**$1117.70**
Service Agreements/Warranties	**NA**
Maintenance	**NA**
Upgrades	**NA**
Impacts to Staffing	**NA**
Replacement Costs	**NA**
Other	**NA**
Total	**$1117.70**
Amount available in departmentbudget to support this requestSmarkey:	**NA**
Remaining requested amount	**NA**

Q10

Justification of Request:The justification of the request is a key area to focus on. The ROC encourages you to strengthen your request by providing a robust rationale detailing all relevant criteria. When writing the rationale, keep in mind that those reviewing the justification may not be familiar with your department and needs. Providing detailed information and context can help clarify the need for your request.Please select the applicable criteria(s) and provide the details of how the criteria(s) relate to your request.

Health and safety,

Critical need,

Program expansion,

Impact on student success and access,

Innovation,

Equity and Antiracism,

Provided details::

The acquisition of individual animal tissue slides is essential to address several critical needs and programmatic goals in our biology department. These slides are required to support the newly developed lab in Bio 131 (soon to become Bio 120), a prerequisite course designed to bolster student skills in microscopy and tissue identification. This foundational knowledge is directly applicable to Bio 140 (Human Anatomy), which has the lowest success rate among our biology courses. By strengthening the preparation students receive in Bio 120, we aim to increase success rates and retention in anatomy, a course that is critical for students in Allied Health pathways. Additionally, these slides will significantly enhance the animal tissue lab in Bio 240 (Organismal Biology), a course for biology majors. This class explores animal form and function, and the slides will provide students with high-quality, single-tissue specimens ideal for studying key structural differences and adaptations. By eliminating the confusion associated with the multi-tissue slides currently used, the new slides will offer students a clearer and more focused understanding of tissue organization in animals. This will improve their ability to connect microscopic tissue structure to broader organismal functions, a skill essential for their progression in the biology or Allied Health major. Health and Safety Currently, students in Bio 131 use shared anatomy slide boxes, which are not well-suited to their learning needs. This practice results in crowding around microscopes, increasing the risk of slides being dropped, broken, or mishandled. The introduction of dedicated slides for Bio 120 and Bio 240 would reduce such incidents, promoting a safer and more efficient lab environment. Critical Need The anatomy slide boxes currently used in Bio 131 are overly complex for general biology students, with slides containing multiple tissues on a single specimen. This creates confusion and hinders comprehension for students who are still developing foundational skills in microscopy. Similarly, Bio 240 students lack access to tissue slides that highlight the specific details they are required to study. With these slides, both courses will benefit from appropriate, focused

materials. As we expand and add more sections of anatomy, it is critical to reserve anatomy slide boxes for anatomy-specific use to ensure the integrity and availability of resources for those courses. Program Expansion As part of the department's strategic growth, we have added more sections of anatomy and general biology to accommodate increased enrollment. With more students using the current slide inventory, we are experiencing resource shortages, missing slides, and damage to shared materials. Investing in dedicated slide sets tailored to the needs of Bio 120 and Bio 240 students ensures the program can scale effectively while maintaining quality instruction. Innovation Providing single-tissue slides for Bio 120 and Bio 240 represents an innovative approach to improving student learning outcomes. These slides simplify the process of tissue identification, helping students build confidence and mastery of microscopy. Clearer visual differentiation of tissues equips students with a deeper understanding, facilitating their progression to more complex coursework in anatomy and biology major pathways. Impact on Student Success and Access Access to dedicated slides directly impacts student success. General biology students will have resources tailored to their learning level, ensuring they can fully engage with and master the material. Bio 240 students will benefit from a deeper understanding of animal tissues, which is critical for comprehending organismal biology concepts. Enhancing preparation in Bio 120 and Bio 240 will reduce attrition and improve outcomes in subsequent courses. Equity and Antiracism This request also supports our commitment to equity and antiracism. Students from historically underserved backgrounds often face greater challenges in mastering complex skills like microscopy due to uneven access to resources or prior educational opportunities. By providing dedicated, clear, and accessible materials in Bio 120 and Bio 240, we level the playing field, giving all students—especially those in underrepresented groups—a fair chance to succeed. This investment aligns with our mission to close equity gaps in retention and success rates in biology courses. In summary, the acquisition of individual animal tissue slides is a critical investment in student preparation, safety, and equity. It supports our growing program while addressing resource constraints, ultimately improving student outcomes and reducing barriers to success in both general biology and biology major courses.

Q11

Program Goal:Please identify the program goal(s), as stated in your current annual or comprehensive program review, that this request would help your program achieve. Provide a brief explanation of how it would do so.

Program Goals:
This request directly supports both Program Goal 1, which focuses on expanding access to biology major-level courses, and Program Goal 2, which aims to reduce equity gaps in retention and success rates for students of color in 100-level biology courses.
Supporting Program Goal 1: The dedicated animal tissue slides will enhance both Bio 120 (General Biology Lab) and Bio 240 (Organismal Biology), courses that are foundational for biology majors. By providing resources that align with the specific learning objectives of these classes, students will be better prepared for advanced coursework, such as Bio 230 (Cell and Molecular Biology) and Bio 240, which are critical for their progression through the biology major. This targeted support aligns with our departmental goal of ensuring students have access to high-quality resources and skills training, fostering a smoother transition into biology major pathways.
Supporting Program Goal 2: The slides address significant equity gaps in retention and success rates for students of color in 100-level biology courses, particularly Bio 120, which prepares students for Bio 140 (Human Anatomy). Anatomy consistently has the lowest success rates among our courses, and students from underrepresented backgrounds are disproportionately impacted. By enhancing preparation in Bio 120 through focused and accessible learning materials, we help students build the foundational skills necessary for success in anatomy and other STEM courses. This investment ensures that all students, regardless of background, have equitable access to resources, which is critical for reducing barriers to success and fostering inclusivity in our program.
By improving both access and equity, this request ensures that the biology department can meet its programmatic goals while supporting a diverse and thriving student population.