

Memo

To: Melissa Baker, Superintendent
From: Lisa Kudwa, Assistant Superintendent for CITA Services
Date: May 2, 2016
Re: **Recommendations for Anatomy and Physiology materials purchase**

In response to the State of Michigan's revised graduation requirements, the Anatomy and Physiology Subject Area Curriculum (SAC) Committee began working during the 2015-2016 school year to make recommendations about a new high school course, Anatomy and Physiology. Properly outfitting this new course requires purchasing new student, teacher and laboratory materials.

The committee seriously considered three Anatomy and Physiology textbooks. Teachers on the committee carefully examined the books' student and teacher materials, including online resources. They looked closely at features such as: readability, quality of images/diagrams, depth of information covered and whether the material could be easily differentiated for different levels of learners. The committee also determined whether the texts met with the expectations of South Lyon Community Schools and were instructionally appropriate for the varied abilities of the students expected to be enrolled in this course.

SAC representatives have piloted one or more lessons with their students since reaching a consensus on which text to purchase. Aspects of the student and teacher resources that resonated with the teachers were the number real-world examples for students, and the discussion questions, topics to highlight and suggested responses offered in the online instructor's manual.

Student responses to the pilot lesson(s) were very positive as well. Students scored items on the short survey very high when considering criteria such as: writing style, readability, available resources to reinforce/review learning, how engaging the lessons are and the likelihood of remembering the material presented to them. In the comments section of the survey, students wrote, "I think it's awesome there are so many ways you can review for a test, especially online," "The pictures and tables help a lot with visual learning," and described how excited they are to take this new course next year.

Based on the teacher review of the materials and the feedback from the small group pilot: **The Anatomy and Physiology Subject Area Curriculum Committee is recommending the purchase of *Hole's Essentials of Human Anatomy and Physiology (2015)* for use in the new high school course, Anatomy and Physiology, beginning in the 2016-2017 school year.**

Item	Price per item	# needed	Total
AP Essentials of Anatomy & Physiology Print w/ Connect+ 6 YR Package (10% shipping/handling)	\$123.60	190	\$23,484.00
Lab Materials for both high schools; includes models, prepared slides, dissecting specimen and dissecting tools (10% shipping/handling)			\$14,521.96
GRAND TOTAL			\$38,005.96

Textbook Adoption Recommendations by SAC or Department Anatomy & Physiology, 2016

1. Name of the current textbook (title, author, publisher and date of edition)

There is no current textbook. This is a new course for high school math credit.

2. Name of the recommended textbook (title, author, publisher and date of edition)

Title: *Hole's Essentials of Human Anatomy & Physiology*

Authors: David Shier, Jackie Butler, & Ricki Lewis

Publisher: McGraw Hill Education

Date of Edition: 12th Edition, 2015

3. Reason for the considered change:

As a result of the updated graduation requirements released in late 2014, the district wanted to afford students more choices when earning credits toward graduation. Offering a science elective such as Anatomy & Physiology gives students an additional option when completing their science requirement.

4. Evaluation criterion matches district standards for textbook purchases. (Use the District Evaluation Form on the Intranet and provide a summary/average by item of all who evaluated the text.) If the average of any item is below a 3, please explain. The recommended textbook must have an overall average of a 3 or better.

*The recommended textbook received an average rating of **3.875** which exceeds the standard for adoption.*

5. Number of textbook series reviewed?

The SAC Committee reviewed three textbook series in all. The most common reasons for not choosing one of the two other textbooks: readability of font and content; depth or lack of content; quality of photos and other images, and the amount of information presented per page.

6. Describe the pilot, e.g. how was this text reviewed or used by students?

SAC representatives have piloted one or more lessons with their students since reaching a consensus on which text to purchase. Aspects of the student and teacher resources that resonated with the teachers were the number of real-world examples for students, as well as the discussion questions, topics to highlight and suggested responses offered in the online instructor's manual.

Student responses to the pilot lesson(s) were very positive as well. Students scored items very high on the short survey considering criteria such as: authors' writing style, readability, available resources to reinforce/review learning, how engaging the lessons are and the likelihood of remembering the material presented to them. In the comments section of the survey, students wrote, "I think it's awesome there are so many ways you can review for a test, especially online," "The pictures and tables help a lot with visual learning," and described how excited they are to take this new course next year.

7. Budget Impact: (item cost, total cost, shipping & handling, and grand total).

See attachment

8. Source of funds: Building budget, CITA budget, Other (please indicate)

CITA budget is paying for all materials and the shipping and handling for the first year. High School building budgets will replace consumables (lab specimen) in upcoming years.

***Anatomy & Physiology Textbook Purchase
2016-2017 School Year***

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Appendix D
South Lyon Community Schools
Textbook Evaluation Form

Title: *Hole's Essentials of Human Anatomy & Physiology*, 12th Edition

Author: David Shier, Jackie Butler, & Ricki Lewis

Publisher: McGraw Hill Education

Edition/Copyright: 12th Edition, 2015

Evaluator's Name: Amy Conant, Olivia McKinney

Position: Anatomy/Physiology SAC Committee members; high school science teachers

GENERAL	SCORE 1 = Lowest, 4 = Highest
1. Textbook is correlated to District, State, and MEAP Standards. (provide teacher/SAC verified alignment).	4 New district standards will be developed for this course.
2. Textbook articulates with standards from upper and lower grade levels providing a cohesive program of study.	4 Textbook is at an appropriate level for students who have completed freshman Biology and Analytical Chemistry. Textbook is a good complement to the AP Biology course curriculum, which has cut much of its anatomy and physiology content.
3. The length of time to deliver a lesson is reasonable and appropriate.	4
4. Programs (vendors) will provide ongoing in-service and support materials.	4
5. Students' involvement and enthusiasm is generated by the textbook series.	4
6. The textbook series addresses a variety of student learning strengths and needs (provide page numbers of examples).	4 Example: Ch. 9 Nervous System, page 224. Aids to Understanding Words (in chapter intro, with complete list at back of book) defines word roots and parts. Throughout: excellent illustrations to support content, end of section questions, end of chapter assessments.
7. Lessons provide for active involvement of students in constructing meaning leading to critical thinking and concept mastery (provide page numbers of examples).	4 Each chapter has learning outcomes at the start (p.143) and each section has practice questions at the end (p.146) to make sure students are meeting the learning outcomes as they progress.

	<p>Each chapter has a summary of topics at the end (p.182-183) as well as an assessment with many question formats (p.183-184). Online resources provide students with opportunities for practice & exploration (p.184).</p>
8. Technology is an integral part of the program.	<p>4 Book is good by itself; technology adds multiple additional features.</p>
CONTENT	
1. Matches SLCS curriculum expectations.	<p>4 The book has content and vocabulary at an appropriate level for our students.</p>
2. Vocabulary is appropriate for instructional program (matches MSTEP, State and District Standards).	<p>4 The book has content and vocabulary at an appropriate level for our students.</p>
3. Reading level is appropriate.	<p>4 The book has content and vocabulary at an appropriate level for our students.</p>
4. Textbook provides examples of real-world context for aiding in student transferring of subject area content.	<p>4 There are numerous real-world examples: Vignettes at the beginning of each chapter, Career Corner articles, Clinical Applications articles, Facts of Life present interesting additional info, Genetics Connections explore illnesses related to content.</p>
5. Concept development moves from concrete experiences to abstract thinking. (provide page numbers or examples)	<p>4 Ex: Ch. 8 Muscular System, page 188. Chapter begins with basics of muscle structure, moving from large to small. Then, the chapter moves to more challenging concepts such as sarcomere function, cellular respiration, and muscular contraction.</p>
6. Sensitive to multi-ethnic, multi-cultural and gender considerations. (Individuals representing gender, various cultures, races and persons of special needs can use the materials without feeling excluded, estranged or diminished.)	<p>3 Individuals of both genders and multiple races/cultures are shown. However, there are fewer pictures overall of real people than in some other textbooks.</p>
7. Assessment items measure essential skills, critical thinking, problem solving, reasoning, etc., at levels consistent with District and MEAP considerations.	<p>4 Content knowledge is requested in various forms, including multiple choice, matching, compare & contrast,</p>

	descriptions, and explanation based constructed response.
8. Assessment items are appropriate for the grade level.	4 The assessments match the content delivered in this text.
PHYSICAL CHARACTERISTICS	
1. The text has an attractive cover and the subject area is easily identifiable.	4 Cover shows a neuron and a female ballet dancer.
2. The size of the text is appropriate for its intended user.	4 Text is thin and lightweight.
3. The cover and binding are durable.	4 Hardcover with sturdy binding; lightweight text puts less strain on structural integrity.
4. The print size and type are suitable for the grade level of the student.	3 Font is a bit large, rounded, and light, but still very readable.
5. The artwork and photographs are functional and appropriate for the intended audience.	4 Artwork is abundant, clear, and vibrant.
6. Page layout is balanced with respect to headings, printed material, and illustrations.	3 Layout is good but almost too busy: Text, illustrations, practice questions, fact boxes, and information boxes compete on some pages.
7. The index, table of contents, and glossary facilitate the use of the text.	4 These items are clear and easy to use.
8. The textbook has clear and concise headings.	4 Color and size of headings and subheadings is easy to follow.
TEACHER'S RESOURCES	
<i>Note: There is no hard copy Teacher Edition. All teacher resources are exclusively online.</i>	
1. Platform is intuitive and easy to use	4
2. The teacher's edition features margin notes on replicas of student pages.	Not applicable to online teacher materials.
3. The teacher's manual is well-indexed.	4
4. Background information is clear and appropriate for intended lesson.	Not applicable to online teacher materials.

5. There is a conceptual development in each lesson that encourages meaningful interaction between the teacher and students.	3 Online Instructor's Manual provides key discussion questions, important topics to highlight, and suggested responses.
6. Suggestions for motivating or extending lesson content are included.	3 (see items listed in #8 below)
7. Directions are given for making and using instructional aids.	Not applicable to online teacher materials.
8. A variety of teaching and learning strategies are incorporated in each section. (provide examples)	4 In general: Presentation Tools; Lab Manual and answer key; Instructor's Manual; answer keys to Case Studies, Integrative Questions, Chapter Assessments, Study Outlines, and Study Guides,
9. Technology supplements/aids are incorporated.	4
Average Score	3.875

***Scoring Key:**

1 = not found or rarely displayed

2 = limited use or not to the level of district expectations

3 = supports teaching and learning at the level of MSTEP assessment (Bloom's 4-6)

4 = expands concepts beyond District and MSTEP expectations

Hole's Essentials of Human Anatomy & Physiology. David Shier Jackie Butler Ricki Lewis. Created by Dr. Melissa Eisenhauer Head Athletic Trainer/Assistant Professor. Supplemental Texts / Materials: Study Guide for Hole's Essentials of A & P Rust, A Guide to Anatomy and Physiology McMinn, Color Atlas of Human Anatomy Coloring Atlas for A&P Netter's Anatomy Flashcards Permacharts (or other brand plastic study sheets). Muscular Attachments. Skeletal System, Nervous System, Articulations. 2. Expected Course Learning Outcomes. 1. Identify selected structures of the human body. 2. List the organ systems of the human body and explain their functions. 3. Relate the structures of the human body to their functions. Start by marking Hole's Essentials of Human Anatomy and Physiology as Want to Read: Want to Read saving! Want to Read. The unparalleled teaching system is highly effective in providing students with a solid understanding of the important concepts in anatomy and physiology. Users who purchase Connect Plus receive access to the full online ebook version of the textbook. Read instantly in your browser. Hole's Essentials of Human Anatomy & Physiology 12th Edition. by David N. Shier Dr. (Author), Jackie L. Butler (Author), Ricki Lewis Dr. (Author) & 0 more. 4.2 out of 5 stars 180 customer reviews. ISBN-13: 978-0073403724. A popular educator for more than thirty years at Grayson College, Jackie has taught microbiology and human anatomy and physiology for health science majors. Her experience and work with students of various educational backgrounds have contributed significantly to the revision of Hole's Essentials of Human Anatomy & Physiology and Hole's Human Anatomy & Physiology. Jackie Butler received her B.S. and M.S. degrees from Texas A&M University, focusing on microbiology, including courses in immunology and epidemiology.