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UPPER ST. CLAIR SCHOOL DISTRICT  
FAST TRACK CURRICULUM RECOMMENDATIONS FOR 2013-2014



Name: Jennifer Kirk

Level: High School

Area: Guidance

Date: December 18, 2013

**Curriculum Recommendation**

**1. Study and formalize a framework for a comprehensive career interest program to cultivate career decision making skills in students.**

Reason(s) for Recommendation	Implementation Steps	Cost	Administrative Reaction
<p>1. The Strategic Plan indicates an academic standard that students will have an “Understanding of career options in relationship to individual interests, aptitudes and skills including the relationship between changes in society, technology, government and economy and their effect on individuals and careers.”</p> <p>2. Job shadowing and internships are considered a best practice and a critical component of any career development program.</p> <p>3. USCHS students have expressed interest in exploring career interests outside of the school setting. A more formal program will give them greater access and more choices of potential sites.</p> <p>4. We currently offer Internship opportunities through the Gifted Program and Community - Based Learning opportunities; both reaching a minimal number of students. A more extensive career interest program will provide accessibility to “in the workforce” opportunities for all students.</p> <p style="text-align: center;">(Cont’d.)</p>	<ol style="list-style-type: none"> <li>1. Administrative approval.</li> <li>2. Complete a Needs Assessment that identifies career areas of interest.</li> <li>3. Utilize local resources such as Community Foundation, Rotary, etc. for professional contacts.</li> <li>4. Identify local companies, agencies, schools, etc. to serve as hosts for career exploration.</li> <li>5. Develop resources to be utilized during a future pilot to include regulations, guidelines, and targets and participant feedback.</li> <li>6. Review, modify, and adjust, as needed.</li> </ol>	<p>No cost.</p>	<p><b>Approved.</b></p> <p>This will be important in helping students to more accurately and effectively make career decisions.</p>

UPPER ST. CLAIR SCHOOL DISTRICT  
FAST TRACK CURRICULUM RECOMMENDATIONS FOR 2013-2014



Name: Jennifer Kirk

Level: High School

Area: Guidance

Date: December 18, 2013

**Curriculum Recommendation**

**1. Study and formalize a framework for a comprehensive career interest program to cultivate career decision making processing skills in students. (Cont'd.)**

Reason(s) for Recommendation	Implementation Steps	Cost	Administrative Reaction
<p>5. The Community Foundation has established a collaborative relationship with the high school to pursue and support this endeavor through it's pilot year.</p> <p>6. "Job shadowing and internships can help students figure out what they want to do with their lives-or, perhaps what they don't want to do." Adams, C. (2013). Job Shadowing and Internships Can Give Students College Direction. <i>Education Week</i>. Retrieved from: <a href="http://blogs.edweek.org/edweek/college_bound/2013/01/job_shadowing_and_internships_can_give_students_college_direction.html">http://blogs.edweek.org/edweek/college_bound/2013/01/job_shadowing_and_internships_can_give_students_college_direction.html</a></p> <p>7. "Job-shadowing is often touted as a career-exploration activity for middle-school and high-school students to help them determine a career path to follow. Shadowing also helps students see how their textbook learning can be applied to the real world." Hansen, K. (2013). Job Shadowing: An Overview. <i>Experience</i>. Retrieved from: <a href="https://www.experience.com/alumnus/article?channel_id=experience&amp;soiource_page=home&amp;article_id=article_1196784952835">https://www.experience.com/alumnus/article?channel_id=experience&amp;soiource_page=home&amp;article_id=article_1196784952835</a></p>			

UPPER ST. CLAIR SCHOOL DISTRICT  
FAST TRACK CURRICULUM RECOMMENDATIONS FOR 2013-2014



Name: T. M. Wagner Level: Middle School  
 Area: English Language Arts Date: December 18, 2013

**Curriculum Recommendation**

**1. Pilot new novels in grades 5-8 as additional options for customized reading instruction.**

Reason(s) for Recommendation	Implementation Steps	Cost	Administrative Reaction
<p>1. This recommendation is a result of the Spring 2011 recommendation to evaluate novels for grades 5-8 based on reading level, interest level, genre, age appropriateness, and interdisciplinary connections.</p> <p>2. Additional novel titles are needed for customized learning in the reading classroom. These titles will provide the ability to differentiate novel selection based on reading levels.</p> <p>3. Identified pilot novels have been selected based on novel evaluation criteria.</p> <p><i>10,000 Days of Thunder</i> (Caputo, 2005) – 8<sup>th</sup> grade  <i>All the Broken Pieces</i> (Burg, 2009) – 6<sup>th</sup> grade  <i>Flush</i> (Hiaasen, 2005) – 5<sup>th</sup> grade  <i>Heartbeat</i> (Creech, 2004) – 6<sup>th</sup> grade  <i>Crispin</i> (Avi, 2002) – 6<sup>th</sup> grade</p>	<p>1. Administrative approval.</p> <p>2. Continue to provide training to teachers regarding customized reading instruction and best practices in middle school literacy.</p> <p>3. Develop lessons appropriate for novels and grade levels, while also exploring resources that provide accessibility for students who require accommodations.</p> <p>4. Pilot novels during the spring term, 2014.</p> <p>5. Study the effectiveness of the pilots during the summer of 2014.</p>	<p>Total anticipated costs for novels is \$1,657.80. This is already in the 2013-2014 ELA budget.</p>	<p><b>Approved.</b></p> <p>The ongoing efforts to enhance the middle school literature experience is important and beneficial.</p>

UPPER ST. CLAIR SCHOOL DISTRICT  
FAST TRACK CURRICULUM RECOMMENDATIONS FOR 2013-2014



**Name:** J. Bulazo & T. M. Wagner      **Level:** Elementary & Boyce (Grades K-6)  
**Area:** English Language Arts      **Date:** December 18, 2013

**Curriculum Recommendation**

**2. Pilot *Write Source* grammar support materials to supplement rigorous instruction and align with the PA Core grammar strands.**

Reason(s) for Recommendation	Implementation Steps	Cost	Administrative Reaction
<p>1. The PA Core standards are published in the English Language Arts (ELA) areas of reading, writing, and grammar. The new grammar strands were studied by a USCSD ELA Common Core Committee (CCC) during the 2012-2013 school year.</p> <p>2. The CCC determined an appropriate instructional scope and sequence in grammar for grades K-12. In so doing, current grammar curriculum was aligned with the PA Core. While some new curricula was already aligned with current practice, many provisions for changes to alignment and pacing were necessary.</p> <p>3. Following the realignment and pacing of grammar content in grades K-8 during the summer and fall of 2013, a need for additional instructional support materials arose.</p> <p>4. Given the importance in leveraging technology and providing opportunities for customized instruction in grammar instruction, <i>Write Source</i>, a product of the Houghton Mifflin Company, was identified as meeting the needs of students in grades K-6. After reviewing a variety of potential instructional supplements, grades K-6 were selected by the curriculum leaders and the teaching staff to pilot <i>Write Source</i> because of its fit for learners at these ages.</p>	<p>1. Administrative approval.</p> <p>2. Explore ways to implement customized grammar instruction using <i>Write Source</i> as an instructional tool.</p> <p>3. Develop lessons with provisions for both core instruction and second chance learning opportunities.</p> <p>4. Revise and/or develop assessments that call upon the content and skills identified by the PA Core grammar strand. Engage in discussion around how grammar assessment may integrate into a component of an authentic assessment.</p> <p>5. Study the effectiveness of the <i>Write Source</i> pilot during the summer of 2014 and make provisions for the acquisition of additional materials for the 2014-2015 school year if warranted.</p>	<p>Total cost for Boyce materials is \$2,670.56.</p> <p>Total cost for elementary materials is \$7,231.80.</p> <p>This is already in the 2013-2014 ELA budgets.</p>	<p><b>Approved.</b></p> <p>The shift to the English and Language Arts Common Core Standards will continue to require us to research, develop and invest in appropriate materials.</p>

UPPER ST. CLAIR SCHOOL DISTRICT  
FAST TRACK CURRICULUM RECOMMENDATIONS FOR 2013-2014



Name: Michael Ghilani & Melissa Tungate

Level: High School

Area: English Language Arts

Date: December 18, 2013

**Curriculum Recommendation**

**1. Pilot a new course, Multimedia Journalism, which will give students in grades 10-12 the ability to gain practical skills in the field of communications.**

Reason(s) for Recommendation	Implementation Steps	Cost	Administrative Reaction
<p>1. This recommendation is a follow-up to a fast-track curriculum recommendation approved during the 2012-2013 school year to study possible changes to communications course offerings.</p> <p>2. Currently, students who would like to take courses like video/media, newspaper journalism, and yearbook often are unable to do so because of scheduling conflicts.</p> <p>3. This course would allow students to explore the core content in areas of journalism: copywriting, photography, videography, and broadcast journalism. The course would be structured around an introductory unit for all students and then project-based group assessments in a flexible meeting schedule.</p> <p>4. Creating a course that allows flexible meeting times can enable more students to learn the skills involved in multimedia journalism and to take advantage of the media outlets available to them, truly customizing their learning.</p> <p>5. Such a course would enable students to develop 21<sup>st</sup> century skills, not only with technology, but also with communications, project management, and collaboration.</p>	<p>1. Administrative approval.</p> <p>2. Create course unit plans and update Rubicon Atlas.</p> <p>3. Update <i>Program of Studies</i> for 2014-2015 to include the course and remove Mass Communications, Online Mass Communications, Journalism-Newspaper, and Journalism-Yearbook.</p> <p>4. Inform counselors, students, and parents about the new course offering and its flexible scheduling.</p> <p>5. Provide additional workshop time for teachers to continue to develop materials for the course and to continue to study possible development of the program beyond this first course.</p>	<p>Camera equipment = \$1500 (approx)</p> <p>Up to 2 days with substitutes X up to 3 teachers = \$540; up to 18 hours of summer workshop time (\$30.20/hr) X up to 3 teachers = \$1630.80</p> <p>Up to 12 hours of flex time X up to 3 teachers</p>	<p><b>Approved.</b></p> <p>The efforts to customize this course and to provide relevant and practical experiences for students are phenomenal and provide a great way to address this content.</p>







UPPER ST. CLAIR SCHOOL DISTRICT  
FAST TRACK CURRICULUM RECOMMENDATIONS FOR 2013-2014

Name: Steve Miller

Level: High School

Area: Mathematics

Date: December 18, 2013

**Curriculum Recommendation**

**1. Offer College in High School Calculus through the University of Pittsburgh in place of our current Calculus class and change the name of the Introduction to Calculus course to Calculus.**

Reason(s) for Recommendation	Implementation Steps	Cost	Administrative Reaction
<p>1. The current Calculus course closely matches the curriculum for the University of Pittsburgh’s “Math 0120 Business Calculus” course (see attachment). No change in textbook is required and there is no cost to the District to be part of the University of Pittsburgh’s College in High School (CHS) Program.</p> <p>2. Students taking the CHS course would have the option of taking the course for college credit (4 credits at a current total cost of \$225 per student) or taking the course for high school credit only. Providing students the option to receive college credit along with their high school credit would give students greater flexibility in their future academic decisions.</p> <p>3. Every year, a significant number of students who are recommended for the Introduction to Calculus course do not follow the recommendation because they mistakenly believe that the Introduction to Calculus course is a pre-calculus course. Changing the name of the Introduction to Calculus course to Calculus better communicates the true nature of the course, increasing the likelihood that students will take the course that is most appropriate for them. This should allow students to experience greater success at the beginning of the year, alleviating the stress and difficulties that arise from changing course schedules after the school year has begun.</p> <p>4. No curriculum changes would be made to the current AP Calculus AB and AP Calculus BC courses</p>	<p>1. Administrative approval.</p> <p>2. Change the names of the Introduction to Calculus to Calculus in the <i>Program of Studies</i>.</p> <p>3. Replace the current Calculus course with College in High School Calculus in the <i>Program of Studies</i>.</p> <p>4. Update the curriculum for the current Calculus course to match the University of Pittsburgh’s Math 0120 Business Calculus course.</p> <p>5. Have the appropriate teachers apply to teach the course through the University of Pittsburgh’s application process.</p> <p>6. Provide training time through the University of Pittsburgh for 2-3 teachers. Training is one orientation day in June and one day per year thereafter in the fall.</p>	<p>12 summer flex hours* 2 teachers = 24 hours and 18 workshop hours * 2 teachers * \$30.20 = \$1087.20</p> <p>3 teachers * 2 days * \$90 per substitute = \$540.</p>	<p><b>Approved.</b></p> <p>This provides a great opportunity for our students.</p>

***Business Calculus***  
***Math 0120***  
***4 Credits***

1. This course is an introduction to calculus for students in business, economics and other social sciences. Application of concepts is stressed throughout the course.
2. A rigorous high school algebra that includes exponentials and logarithmic functions or precalculus is a prerequisite for the course. Proficiency in algebraic manipulation is essential.
3. The grade is determined by the student's performance on three exams and a comprehensive final.
4. The recommended text for this course is Brief Applied Calculus by Berresford and Rockett, 5<sup>th</sup>. ed. Brooks/Cole, Cengage Learning.

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**The following topics are covered in the University of Pittsburgh Math 0120 course:**

**1. Derivatives**

## Limits

- Introduction to limits
- Approaching infinity
- One-sided limits

## Continuity

- Tangents as rate of change
- Definition of derivatives

## Rules for derivatives

- Polynomials
- Products
- Quotients
- Chain Rule
- Powers
- Implicit

## Marginal analysis in business

- Related rates
- Relative rates of change

**2. Application of the Derivative**

## Graphing using:

- First derivative
- Second derivative
- Asymptotes and intercepts

## Absolute extrema on a given domain

- Optimizing problems
- Differentials

**3. Exponential and****Logarithmic Functions**

- Algebraic properties review
- Graphs of exponential/log functions
- Constant  $e$
- Compounding Interest
- Derivatives
- Chain Rule
- Elasticity of Demand

**4. Integration**

- Indefinite integral
- Procedures for integrating
  - Polynomials
  - Powers
  - Exponentials/logarithmic
  - By substitution
- Growth and decay equations
- Definite integral
- Area
  - Under the curve
  - Between curves
- Definite integral as a limit of a sum
- Using Riemann Sums, Trapezoidal and/or Simpson's Rule

## Applications

- Average Value of a function
- Continuous income stream
- Consumer and producer's surplus
- Equilibrium price
- Integration by parts
- Improper integrals
- Integration Tables
- Differential Equations (Separation of variables)

**5. Multivariable calculus**

- Functions of several variables
- Partial derivatives
- Maxima and minima, the D test
- LaGrange multipliers

**OPTIONAL:**

- Method of least squares
- Double integrals over rectangular regions
- Logistic Growth

**Trigonometric functions**

- Review of basic trigonometric values, graphs, and laws
- Derivatives
- Integrals
- Arithmetic Geometric Progressions**

UPPER ST. CLAIR SCHOOL DISTRICT  
FAST TRACK CURRICULUM RECOMMENDATIONS FOR 2013-2014

Name: Steve Miller and Lou Angelo

Level: High School

Area: Mathematics

Date: December 18, 2013

**Curriculum Recommendation**

**2. Study the possibilities available for remediating ninth-grade students who were not proficient on the Algebra I Keystone in eighth grade.**

Reason(s) for Recommendation	Implementation Steps	Cost	Administrative Reaction
<p>1. Proficiency on the Algebra I Keystone (or completion of a project-based assessment) is a graduation requirement beginning with the class of 2017. Successful remediation is an important step in helping students that are not proficient to fulfill their graduation requirement.</p> <p>2. It is widely understood that success in Algebra I is an essential building block for further mathematical study and a strong predictor of college success. A remediation program focusing on student success with Algebra I material is necessary for students to meet their potential in future academic pursuits.</p> <p>3. In order to make the most informed recommendation regarding the need for remediation in Algebra I, it is important to compare the data resulting from the Keystone examinations with our internal data. The results of that evaluation could provide the potential needs that exist for an Algebra I remediation.</p>	<ol style="list-style-type: none"> <li>1. Administrative approval</li> <li>2. Gather data including 8<sup>th</sup>-grade algebra scores, Keystone examination scores, Keystone retest examination scores, IEP and 504 student data, and progress through the current Study Island remediation program.</li> <li>3. Analyze the data gathered to find opportunities for improvement in our remediation program.</li> <li>4. Make a recommendation in the spring of 2014 for any changes to the remediation resulting from the study.</li> </ol>		<p><b>Approved.</b></p> <p>Deep data analysis will hopefully provide greater insight into needs and delivery systems. The practical challenges of secondary remediation and the varying levels of individual need require careful study.</p>

UPPER ST. CLAIR SCHOOL DISTRICT  
FAST TRACK CURRICULUM RECOMMENDATIONS FOR 2013-2014

Name: Steve Miller and Todd Ollendyke

Level: High School

Area: Technology Education

Date: December 18, 2013

**Curriculum Recommendation**

**3. Convert the year-long Introduction to Robotics course into a semester course offered both in the fall and spring.**

Reason(s) for Recommendation	Implementation Steps	Cost	Administrative Reaction
<p>1. In the current format, we are able to accommodate 32 students due to equipment constraints. Turning the course into a semester course offered twice a year would allow us to double the number of students able to take this course.</p> <p>2. The current year-long format prohibits the from offering of a next level robotics course because of equipment constraints. A semester long course would open up greater possibilities in this regard.</p> <p>3. The current school year is the first year that Introduction to Robotics has been offered. Experience with the students currently taking the course indicates that the content of an introductory curriculum naturally fits into a single semester.</p> <p>4. A single semester course would enable students to take other electives in the opposite semester.</p>	<p>1. Administrative approval.</p> <p>2. Update the description of the course in the <i>Program of Studies</i>.</p> <p>3. Update the curriculum in Rubicon Atlas to reflect that it is a semester course.</p>		<p><b>Approved.</b></p> <p>Monitoring course content and pacing during the first year of this course was important. Semester courses should allow more students to access this opportunity.</p>

UPPER ST. CLAIR SCHOOL DISTRICT  
FAST TRACK CURRICULUM RECOMMENDATIONS FOR 2013-2014



Name: Lynn Kistler Level: High School  
 Area: Science Date: December 18, 2013

**Curriculum Recommendation**

**1. Replace AP Physics B curriculum with the new AP Physics 1 curriculum as per changes in the course dictated by the College Board.**

Reason(s) for Recommendation	Implementation Steps	Cost	Administrative Reaction
<p>1. This recommendation is a follow-up to a previous curriculum recommendation during the 2013/2014 school year to continue to study the differentiated offering of AP Physics B.</p> <p>2. After review of the AP Physics B course by the National Research Council and the National Science Foundation, the College Board has agreed that the present course encourages a “cursory treatment of important topics in physics” rather than foster deeper understanding of physics concepts. To encourage an in-depth, student-led, inquiry approach to physics, the College Board has decided to replace the AP Physics B with two separate courses. AP Physics 1 will be a year-long course that will cover Newtonian mechanics, including rotational motion (absent in the present course), work, energy, mechanical waves and sound. AP Physics 2 will be a year-long course taken after AP Physics 1 that will include fluid mechanics, thermodynamics, electricity and magnetism, optics, nuclear and atomic physics.</p> <p>3. The curriculum framework for the new course aligns with present USC curriculum framework including big ideas, essential questions, knowledge and skills, following the Understanding by Design model.</p>	<ol style="list-style-type: none"> <li>1. Administrative approval.</li> <li>2. Update the <i>Program of Studies</i>.</li> <li>3. Submit course syllabus to the College Board for approval.</li> <li>4. Update Rubicon Atlas.</li> <li>5. Provide separate course sections for AP Physics 1, and IB SL &amp; IB HL year 1 as the courses no longer align.</li> <li>6. Provide Summer Workshop time for teachers to develop inquiry-based learning opportunities to align with the curriculum.</li> <li>7. Provide opportunity for AP Physics training for teachers.</li> <li>8. Survey students in Fall 2014 to determine interest in offering AP Physics 2.</li> </ol>	<p>24 hours @ \$30.20 = \$724.80 (2 teachers for 12 hours each)</p> <p>AP Training: \$2000</p>	<p><b>Approved.</b></p> <p>The AP requirements need to be adhered to for integrity to content and in the best interest of our students. Staffing will be monitored.</p>

UPPER ST. CLAIR SCHOOL DISTRICT  
FAST TRACK CURRICULUM RECOMMENDATIONS FOR 2013-2014



Name: Lynn Kistler Level: High School  
 Area: Science Date: December 18, 2013

**Curriculum Recommendation**

**2. Adopt the IB Computer Science SL curriculum and implement as a Group 4 Science elective for students.**

Reason(s) for Recommendation	Implementation Steps	Cost	Administrative Reaction
<p>1. The International Baccalaureate Organization has revised the curriculum of IB Computer Science course and moved it from Group 5 Mathematics to Group 4 Science.</p> <p>2. The addition of another option for IB students to meet the science requirement for the Diploma Program will allow the IB student to customize their coursework to meet their interests and talents.</p>	<p>1. Administrative approval.</p> <p>2. Update and re-structure the <i>Program of Studies</i> so that IB students are aware of the additional Group 4 course.</p> <p>3. Provide IB Computer Science training to appropriate staff.</p> <p>4. Continue to offer the course as an independent study as has been past practice since 2004-05.</p>	<p>Summer Workshop Time 30 hours @ \$30.20 = \$906</p>	<p><b>Approved on the condition that the course remains an independent study.</b></p> <p>Continuation of the course should be considered during the fall curriculum panel process.</p>

UPPER ST. CLAIR SCHOOL DISTRICT  
FAST TRACK CURRICULUM RECOMMENDATIONS FOR 2013-2014



Name: Douglas Kirchner

Level: High School

Area: Social Studies

Date: December, 17, 2013

**Curriculum Recommendation**

**1. Formally adopt the one-semester “21st Century Global Affairs” course for students in grades 9-12.**

Reason(s) for Recommendation	Implementation Steps	Cost	Administrative Reaction
<p>1. This recommendation is a result of a fast track recommendation to pilot “21<sup>st</sup> Century Global Affairs” in the 2012/2013 school year. The pilot resulted in clear student interest with 55 students currently enrolled in two sections of the course.</p> <p>2. The course fits with the goals of USCSD’s strategic plan to challenge students to achieve success in an interconnected world.</p> <p>3. The course is dedicated solely to 21<sup>st</sup> century global affairs and their historical roots. By formally adopting this course into the curriculum, students will be continually challenged to analyze the ever-shifting problems and events that shape the world. The course establishes habits of mind for ongoing learning and analysis of world affairs.</p> <p>4. The close partnership between USCHS and the World Affairs Council of Pittsburgh has already led to video conferencing and seminar opportunities for our students, e.g. “Facing the Threat of Nuclear Terrorism” and the U.S. Army War College’s “National Security Briefing.” Future collaborations will incorporate in-person and virtual student summits and speakers.</p>	<p>1. Administrative approval.</p> <p>2. Update the <i>Program of Studies</i> book to offer 21<sup>st</sup> Century Global Affairs in the Fall semester <i>and</i> Spring semester (Currently only offered in the Fall semester).</p> <p>3. Work with the World Affairs Council of Pittsburgh to explore opportunities for further collaboration.</p>	<p></p>	<p><b>Approved.</b></p> <p>It is exciting that the pilot was successful and that our students are interested in exploring this type of coursework.</p>

UPPER ST. CLAIR SCHOOL DISTRICT  
FAST TRACK CURRICULUM RECOMMENDATIONS FOR 2013-2014



Name: Douglas Kirchner Level: High School  
 Area: Social Studies Date: December 17, 2013

**Curriculum Recommendation**

**2. Formally adopt the year-long “AP World History” course for students in grades 10-12.**

Reason(s) for Recommendation	Implementation Steps	Cost	Administrative Reaction
<p>1. This recommendation is a result of a fast track recommendation to pilot “AP World History” in the 2012/2013 school year. The pilot resulted in clear student interest with 35 students currently enrolled in two sections of the course.</p> <p>2. The course creates an array of options for students in 10<sup>th</sup> grade and an additional AP option for students in 11<sup>th</sup> and 12<sup>th</sup> grade, which matches the district’s focus on customizing based on LSI (level of learning, style of learning, and interest).</p>	<p>1. Administrative approval.</p> <p>2. Update the <i>Program of Studies</i> book to include AP World History.</p>		<p><b>Approved.</b></p> <p>Increasing the variety and type of AP courses for students adds to the District’s customized approach to instruction.</p>



UPPER ST. CLAIR SCHOOL DISTRICT  
FAST TRACK CURRICULUM RECOMMENDATIONS FOR 2013-2014



**Name:** Douglas Kirchner and Michael Ghilani      **Level:** High School  
**Area:** Social Studies      **Date:** December 17, 2013

**Curriculum Recommendation**

**3. Adopt the *World Civilizations: The Global Experience 6<sup>th</sup> Ed. AP\* Edition* multimedia package for the AP World History course.**

Reason(s) for Recommendation	Implementation Steps	Cost	Administrative Reaction
<p>1. This hybrid package of resources (text, e-text, supplemental materials) is designed to directly align with the 5 themes and 6 historical periods of the College Board’s AP World History curriculum. It was created specifically for AP World History.</p> <p>2. The structure and content of the text encourages students to grasp concepts and patterns across a huge breadth of time (8,000 B.C.E. to the present), therefore matching the course’s chronological <i>and</i> thematic (“big picture”) approach to world history. This book helps students understand the ways in which facts and events fit into the larger context. The other texts reviewed failed at this very important concept.</p> <p>3. The quantity and quality of supplemental materials (both print and digital) for teachers and students are vastly superior to the other textbook supplements that were reviewed. For example, the MyHistoryLab eText resources are extensive and student-friendly.</p>	<p>1. Administrative approval.</p> <p>2. The Social Studies Department has obtained 45 copies of the textbook for use as a classroom supplement for the purpose of evaluation and review. Upon administrative approval, students will be given a copy of the textbook for use at home, along with an access code for the eText.</p> <p>3. Purchase 33 copies of the textbook (12 free textbooks have been negotiated). The eText* version, MyHistoryLab*, and other supplemental materials are included in the price of the book.</p> <p style="text-align: center;">* = 6-year license</p>	<p>33 textbooks @ \$122.97 = \$4,058.01</p> <p>+ \$324.64 for shipping and handling =</p> <p>\$4,382.65</p>	<p><b>Approved.</b></p>

UPPER ST. CLAIR SCHOOL DISTRICT  
FAST TRACK CURRICULUM RECOMMENDATIONS FOR 2013-2014



**Name:** Douglas Kirchner and Michael Ghilani      **Level:** High School  
**Area:** Social Studies      **Date:** December 17, 2013

**Curriculum Recommendation**

**4. Pilot a one-semester “Experimental Psychology” course for students in grades 11-12 during the 2014-2015 school year.**

Reason(s) for Recommendation	Implementation Steps	Cost	Administrative Reaction
<p>1. A course in Experimental Psychology not only directly aligns with USCSD’s critical and growing commitment to STEM initiatives, but expands upon them.</p> <p>2. As a social studies offering, the course extends STEM opportunities for students beyond science, mathematics, and technology education into a underrepresented, yet essential content area.</p> <p>3. The large number of students currently enrolled in AP/IB Psychology (7 sections), Intro to Psychology (3 sections each semester), and Sociology (2 sections each semester) illustrates considerable student interest in the behavioral sciences.</p> <p>4. The course will be designed to study psychology as a laboratory science, using entry-level (descriptive) statistics and lab procedures to collect and analyze experimental data. All ethical guidelines established by the APA will be followed.</p> <p style="text-align: center;">(Cont’d.)</p>	<ol style="list-style-type: none"> <li>1. Administrative approval.</li> <li>2. Update the <i>Program of Studies</i> book to include the new course name and description.</li> <li>3. Before taking a course in Statistics, students must pass Algebra II. Therefore, Experimental Psychology will only be offered to students in 11<sup>th</sup> and 12<sup>th</sup> grade.</li> <li>4. Write curriculum/units of study and incorporate them into Rubicon Atlas (Appendix A Course Description).</li> <li>5. Work with members of the Mathematics and Science departments to plan for intentional interdisciplinary initiatives.</li> <li>6. Provide summer workshop time for teacher(s) to develop the course curriculum and materials.</li> <li>7. Pilot the new course offering in 2014-2015.</li> </ol>	<p>30 summer workshop hours @ \$30.20 per hour X 1-2 teachers = \$906 to \$1,812.00</p>	<p><b>Approved.</b></p> <p>Exposing students to the research process and design will be of benefit to future work in any content area.</p>

UPPER ST. CLAIR SCHOOL DISTRICT  
FAST TRACK CURRICULUM RECOMMENDATIONS FOR 2013-2014



**Name:** Douglas Kirchner and Michael Ghilani      **Level:** High School  
**Area:** Social Studies      **Date:** December 17, 2013

**Curriculum Recommendation**

**4. Pilot a one-semester “Experimental Psychology” course for students in grades 11-12 during the 2014-2015 school year. (Cont’d.)**

Reason(s) for Recommendation	Implementation Steps	Cost	Administrative Reaction
<p>5. As a STEM course, it will be inquiry/project-based and career focused. Learning opportunities will have real-world, authentic applications.</p> <p>6. Initial discussions with members of the Mathematics and Science departments have generated support for the course, along with ideas for interdisciplinary collaboration.</p> <p>7. A survey of students (grades 9-11) currently in AP/IB Psych, Intro to Psych, and Sociology found that 93 students would be either “Highly Likely” or “Likely” to enroll if the course was offered. 91 seniors said they would have enrolled had the course been offered this year.</p>			

UPPER ST. CLAIR SCHOOL DISTRICT  
FAST TRACK CURRICULUM RECOMMENDATIONS FOR 2013-2014



Name: Mike Ghilani, Fred Peskorski, Clayton Yonker, and Steve Miller

Level: High School

Area: STEM

Date: December 18, 2013

**Curriculum Recommendation**

**1. Pilot a year long project based STEM course during the 2014-2015 school year for students in grades 10, 11, and 12.**

Reason(s) for Recommendation	Implementation Steps	Cost	Administrative Reaction
<p>1. This recommendation continues the expansion of formal STEM opportunities for students. During the 2011/2012 school year the STEM week-long summer academy pilot was approved and implemented.</p> <p>2. The purpose of this course is to expose students to real-world problem-solving using Human Centered Design. Students will solve tasks generated by industry partners and students themselves, and work in teams to engineer solutions to these problems. Students will be required to collaborate creatively in order to design, develop, test, and improve their solutions. Students will present, explain, and defend their rationale to instructors and clients. This course will be run in conjunction with a team of students and teachers at South Fayette High School. The Common Core, The Next Generation Science Standards, and current state and federal education reform all focus on the importance of authentic, unpredictable, real-world problem solving that requires students to apply learned knowledge from STEM related coursework.</p> <p>3. The Luma Institute’s concept of human centered design has been embraced by all sectors of industry and education as an effective approach to problem solving and innovation. As the underlying framework for the course students would gain a skill that is not only portable but extremely attractive to colleges and future employers.</p>	<ol style="list-style-type: none"> <li>1. Administrative approval.</li> <li>2. Arrange for teacher training through the Luma Institute</li> <li>3. Collaborate with South Fayette to design scope and sequence of the course as well as the industry partnerships.</li> <li>4. Develop a course application that would be communicated and distributed to students.</li> <li>5. Create course unit plans and update Rubicon Atlas.</li> <li>6. Update <i>Program of Studies</i> for 2014-2015 to include the course.</li> <li>7. Inform counselors, students, and parents about the new course offering and its flexible scheduling.</li> </ol>	<p>\$1,000 Training for 3 teachers by the Luma Institute.</p> <p>30 summer workshop hours @ \$30.20 per hour X 1-2 teachers = \$906 to \$1,812.00</p>	<p><b>Approved.</b></p> <p>This will be a unique and powerful experience for students. Careful monitoring of staffing needs will be necessary.</p>

UPPER ST. CLAIR SCHOOL DISTRICT  
FAST TRACK CURRICULUM RECOMMENDATIONS FOR 2013-2014



**Name:** Mike Ghilani, Fred Peskorski, Clayton Yonker, and Steve Miller      **Level:** High School  
**Area:** STEM      **Date:** December 18, 2013

**Curriculum Recommendation**

**1. Pilot a year long project based STEM course during the 2014-2015 school year for students in grades 10,11,and 12. (Cont'd.)**

Reason(s) for Recommendation	Implementation Steps	Cost	Administrative Reaction
<p>4. Engaging students in real world projects provided by industry partners gives students an authentic experience of what it is like to work in a STEM related career.</p> <p>5. Industry partnerships could lead to extremely rich and robust internship opportunities.</p> <p>6. A student driven application based course that has students solve real world problems could increase the number of students who decide to pursue STEM related majors in college.</p>			

UPPER ST. CLAIR SCHOOL DISTRICT  
FAST TRACK CURRICULUM RECOMMENDATIONS FOR 2013-2014



Name: Brad Wilson

Level: All Boyce 5<sup>th</sup> grade and ELA/WL/Sp. Ed

Area: Customization/Instructional Technology

Date: December 18, 2013

**Curriculum Recommendation**

**1. Research and develop a model of instructional delivery that most effectively utilizes one-to-one mobile technology at the middle school level, with consideration that a one-to-one model could be established for all students in the near future.**

Reason(s) for Recommendation	Implementation Steps	Cost	Administrative Reaction
<p>1. In this information age, society continues to have an increasingly stronger reliance on technology to support the ways in which we function in everyday life. It is natural that technology has had a similar impact in the area of education.</p> <p>2. To prepare our students to function in this technology-fueled environment, the District has invested significant time and resources over the past three years into researching the opportunities that can be afforded to students through the use of mobile technology. A number of pilots at the middle school level have yielded positive feedback, supporting the need for continued investments in this area.</p> <p>3. Specific benefits highlighted by 1:1 iPad participants (students and teachers) in these pilots include: the benefit of immediate feedback to students, improved access to content (24/7), increased opportunities for customization of learning materials, and improvements in the quantity and quality of authentic assessment opportunities. In addition, high levels of student satisfaction and engagement have been reported, supporting the need for all students to have the advantage of this mobile technology.</p> <p style="text-align: center;">(Cont'd.)</p>	<p>1. Administrative approval.</p> <p>2. Formation of a core planning team that includes: administrators, curriculum-specific iPad users and a non-user that will be able to meet on a monthly basis.</p> <p>3. The core planning team can establish a system for oversight of the early planning phase and develop a related budget to support this early process. Future recommendations will address the budget in more detail as a result of the work of this team.</p> <p>4. In addition to the core planning team, a larger development team would be created. The responsibilities of this team would include:</p> <ul style="list-style-type: none"> <li>• researching, developing , and ultimately determining the best uses of the iPad for content-specific purposes,</li> <li>• developing training sequences for teachers that range from basic to more complex, content-specific uses over the course of one or more school years.</li> <li>• developing and recommending protocols for technology considering best practices and infrastructure challenges.</li> </ul>		<p><b>Approved.</b></p> <p>Working off of the successes of the pilot classrooms will help this process. Assuring equity in access to tools and information is a worthy goal.</p>

UPPER ST. CLAIR SCHOOL DISTRICT  
FAST TRACK CURRICULUM RECOMMENDATIONS FOR 2013-2014



**Name:** Brad Wilson **Level:** All Boyce 5<sup>th</sup> grade and ELA/WL/Sp. Ed  
**Area:** Customization/Instructional Technology **Date:** December 18, 2013

**Curriculum Recommendation**

**1. Research and develop a model of instructional delivery that most effectively utilizes one-to-one mobile technology at the middle school level, with consideration that a one-to-one model could be established for all students in the near future. (Cont'd.)**

Reason(s) for Recommendation	Implementation Steps	Cost	Administrative Reaction
<p>4. The possibility of moving from a pilot phase to one-to-one technology for all middle school students presents new challenges which will require intensive planning and preparation. This includes the ability for key personnel to plan and collaborate and to create and evaluate extensive training and support programs for teachers. Identification of effective practices that should be replicated in all classrooms in each content area will also need to be identified.</p>			

## APPENDIX A

[DRAFT]

### Experimental Psychology Course Description

This course is designed to introduce students to the techniques of research employed in the study of human behavior. As an activity centered course, basic principles of statistics, research design, formal APA presentations, and areas of psychological study will set the foundation for student exploration. Students will learn how to plan, conduct, and analyze their own experimental research, and how to communicate the results of their research to others. Non-experimental (descriptive) research techniques also will be covered for purposes of comparison and breadth, and because they are often incorporated into experiments.

#### Course Outline [DRAFT]

1st 9 Weeks: Foundations of Research Design

2nd 9 Weeks: Authentic Student Experimentation

#### Possible Psychological Areas of Study:

- Development
- Memory/Cognition
- Conditioning
- Sensation & Perception
- Social
- States of Consciousness (Dreaming)

#### Intro to Scientific Reasoning

- Psychology is a Way of Thinking
- Theoretical Perspectives

#### Possible Psychological Areas for Student-Designed Research

- Development
- Memory/Cognition
- Conditioning
- Sensation & Perception
- Social
- States of Consciousness (Dreaming)

#### Exploration of Research Question

- What question about behavior do you want to answer (or what hypothesis do you have about behavior that you want to test)?

- Research Foundations for Any Claim
- Ethical Guidelines for Psychology Research
- Populations & Samples
- Validity & Reliability

#### Tools for Evaluating Frequency Claims

- Non-Experimental (Descriptive) Research

- Surveys

- Observations

#### Tools for Evaluating Association Claims



Correlational Research  
Correlation does not equal Causation  
Use of Statistics  
    Effect Size  
Tools for Evaluating Causal Claims  
    Intro to Simple Experiments  
        Experimental Variables  
        Independent Measures  
        Repeated Measures  
Experiments with One Independent Variable  
Experiments with More Than One Independent Variable  
Writing Research Reports  
    APA Writing Style  
    Organization of the Report  
    Intro to Lit Reviews  
    Citing and Referencing Sources  
Applying Statistical Tests  
    Descriptive Statistics  
    Statistical Significance Tests

Sample of overarching course goals:

1. Learning to review the primary literature (improving library research skills, increase familiarity with scientific writing and reading scientific journals);
2. Getting a research idea (specification of a testable research idea, develop hypotheses on several topics in psychology);
3. Development and execution of a research plan (choosing appropriate research method to test specific hypotheses, ethical guidelines, how to collect data);
4. Basic analysis of research results;
5. Presentation of the results (including verbal, written, and poster presentations).

Sample of Course Objectives:

1. Identify the and explain the principles of empiricism, including how these are applied to implementation of research.
2. Identify and describe the fundamental components of published research papers.
3. Describe the principles and procedures of data acquisition and the application of methods of experimental control.
4. Describe the distinct differences and distinguish between the goals of basic vs. applied scientific research.
5. Describe the fundamental differences between the methods of carrying out an experiment vs. systematic observation and their effect on questions of causation.
6. Describe the fundamentals of sampling methods and how representative samples are obtained.
7. Identify the different research designs and their appropriate application to hypothesis testing.
8. Differentiate between the distinct methods of experimental control of extraneous variables, and determining their appropriate application in research design.
9. Identify sources of confounding and data contamination in published research.
10. Demonstrate skills in research criticism by identifying errors in experimenter's conclusions given the data gathered.
11. Identify and apply appropriate statistical tests with respect to measurement scales and experiment characteristics.