

JOPLIN HIGH SCHOOL & FTC - BUILDING SCHOOL IMPROVEMENT ASPIRE - OCTOBER 2015

Five year BSIP beginning October 2015 through May 2020

SCIENCE

**Department Leadership: Dept Chairs: Karisa Boyer (also SLL for BIO) & Jay Reed,
Tim Oster (CHEM subject level leader) & Kris Garrett (Phys Science subject level leader)**

S.M.A.R.T. Goal: (Student Performance)	<p>The percentage of students scoring proficient or advanced on the Missouri End of Course Science Assessments will be at 74% or at or above the state average. In addition, the Science ACT scores for students completing Chemistry will increase to 22.5. NOTE: End of Course exam annual targets will be established after receiving operational test data. The student course passing rate will be 95% or more. And the EoC MPI level will be 353 or higher (2020 Target).</p> <p>100% of students will consistently demonstrate learning through writing in all instructional settings.</p>
Diagnostic Data:	<p>Individual as well as department common assessments will be used to measure student knowledge, skills, and application of scientific concepts and procedures. State assessments and ACT will also be used.</p>
District Strategic ASPIRE Standard / Goal:	<p>Standard 1: All areas of student achievement will be on target or exceed expectations in core academic areas. Waypoint 4: Comprehensive science instruction will be provided to all students to ensure growth and proficiency of science curriculum standards.</p>

Strategies or Specific Actions	Resources Needed & Costs	Professional Development Needs & Costs	Person(s) Responsible	Notes	Progress / Anticipated Completion
<p>1) Required science courses will be aligned with the MO Learning Standards. Literacy strategies will also be implemented.</p>	<p>Curriculum Tracker, A+ competencies, Course Level Expectations, DOK, and USA Test Prep (already purchased).</p> <p>Clickers/ Smart Software also will be implemented (already purchased)</p> <p>Printed materials- minimal costs</p>	<p>Training on USA Test Prep; various PD opportunities as available</p> <p>Training as new standards are revised for common core</p>	<p>JHS Science Department</p>	<p>Reviewed annually</p>	<p>Reviewed annually</p>

<p>2) Course timelines will be developed for required courses. Common and formative assessments will be administered and analyzed. Team action plans will be developed to address weak areas.</p>	<p>Course level expectations, Curriculum Tracker, Common assessments, and item analysis. In addition, common projects/ units of study will be utilized.</p> <p>Printed materials (minimal cost)</p>	<p>Training as new standards are revised for common core</p>	<p>JHS Science Department</p>	<p>Reviewed quarterly</p>	<p>Reviewed quarterly</p>
<p>3) Physical Science and Chemistry teachers will develop and incorporate ACT type questions, respectively in every common assessment and examine results of item analysis.</p>	<p>ACT practice test items. USA Test Prep/ Clickers utilized (already purchased)</p> <p>printed materials (minimal cost)</p>		<p>JHS Physical Science and Chemistry teachers</p>	<p>Reviewed quarterly</p>	<p>Reviewed quarterly</p>
<p>4) EOC data and ACT science data will be reviewed and strategies will be developed to address improvement.</p>	<p>EOC data and ACT data, activities developed by science teachers.</p>		<p>JHS Science Dept (entire dept) and TLC's</p> <p>Note: Physical Science needs to look at how to help prep students for this.</p>	<p>Reviewed annually in the Fall; EOC data also reviewed in Spring as review sessions are planned</p>	<p>Reviewed annually in the Fall; EOC data also reviewed in Spring as review sessions are planned</p>
<p>5) Strategies" will be developed and implemented in required science courses to increase achievement on the EOC exam.</p>	<p>Course level expectations, released items, activities developed by science teachers, USA Test Prep</p> <p>printed materials (minimal cost)</p>		<p>JHS Science department and TLC's</p>	<p>Review quarterly.</p>	<p>Review quarterly.</p>
<p>6) Tutoring will be available before and after school.</p>	<p>JHS Science teachers have volunteered for the regular (present) tutoring sessions before and after school.</p> <p>Eagle Advantage</p>	<p>Eagle Advantage</p>	<p>Eagle Advantage teachers before/ after school.</p>	<p>Review and amend as needed.</p>	<p>Review and amend as needed.</p>

<p>7) Abbreviated credit recovery will be offered for Physical Science, Biology, and Chemistry.</p>	<p>Abbreviated credit recovery curriculum (already developed)</p> <p>Eagle Advantage</p>	<p>Eagle Advantage for revisions as well as after school time for students to complete the program</p>	<p>All science teachers of the offered content are responsible for helping to develop the curriculum; teachers volunteer to supervise after school sessions.</p>	<p>Revisions made annually before program begins; as curriculum changes, so does the credit recovery program.</p>	<p>Review and amend as needed.</p>
<p>8) Literacy will be a focus throughout the curriculum (where applicable) for the entire department. The focus will be the “Great 8”:</p> <ol style="list-style-type: none"> 1. Editing/Revision Checklists 2. Annotated Text Strategies 3. Summarizing/Paraphrasing 4. Close Reading 5. Informal Writing (Quickwrites, Freewrites, Exit tickets) 6. Note-Taking Strategies (Cornell) 7. Organization (GO, Cubing, Outlining) 8. Vocabulary (Academic and Content) 	<p>Articles (printed materials)</p> <p>Digital resources/ google drive folders to share/ store files</p> <p>Notecards and other various items to implement the reading/ writing strategies</p> <p>https://drive.google.com/a/joplinschools.org/?tab=mo#folders/0BxPp4fnBppVrN08ySFd2eXBhQ3c</p> <p>Resource Book: <u>Max Teaching With Reading and Writing: Classroom Activities for Helping Students Learn New Subject Matter While Acquiring Literacy Skills</u> by Mark A. Forget, Ph.D.</p> <p>Continuous Learning Coaches</p> <p>Principals</p>	<p>Literacy training</p>	<p>JHS Science Department; Literacy Committee will assist when possible</p>	<p>lesson plans will be created and implemented when possible</p>	<p>Reviewed as needed.</p>
<p>9. Learning Intentions and Success Criteria will be posted daily and communicated to students. Teachers will work with students to become self-regulated learners.</p>	<p>MO Learning Standards</p> <p>Expo markers and possibly extra whiteboard space for writing</p>	<p>PLC meetings will be utilized</p>	<p>entire department</p>		<p>Reviewed as needed.</p>

IMPORTANT CONSIDERATIONS FOR EACH ACADEMIC AREA

- a) Practice End of Course exams and extensive strategies are developed for state assessment improvement including USA Test Prep Assessments in each tested area.
- b) Depth of Knowledge (DOK) levels are utilized.
- c) USA ACT Test prep in all core areas to help student improve on the ACT is part of the plan (ACT Goal).
- d) Common assessments and bell ringer strategies are ongoing throughout the school year.
- e) Include professional development needs for all department members and especially new department members.
- f) Uses of differentiated instruction is a part of the plan.
- g) Include tutoring and at-risk student identification for remediation.
- h) Marzano researched based strategies are part of the plan (cooperative learning, identifying similarities and differences, graphic organizers, etc...).
- i) Literacy strategy components will be utilized by the entire faculty where applicable in each department's curriculum from the English department.
- j) Curriculum writing and unit planning will be developed in collaboration addressing the common core standards.
- k) The departments will develop plans to include the Teaching and Learning Coaches (TLCs) in various roles from data analysis to modeling and providing constructive feedback for lesson planning and implementing lesson plans in the classroom.

ATTACHMENT:

Specific strategies developed to increase achievement in EOC exam

- 1. Common assessments: Instructors have produced quarterly common assessments during collaborative meetings that mirror the EOC exam.

2. Bellringers: Teachers have developed bellringer activities that give further review and practice for the performance event section of the EOC exam.
3. Unit review practice questions: A bank of practice questions for each unit will be developed for use as review before the operational exam.
4. Practice EOC exams: Practice EOC exams have been developed for use as review before the operational exam. *NOTE:* Practice exams mirror the released exam; approximately 22 of the questions from Strand 3, 13 questions from Strand 4, and a 20 point Performance Event. Exam questions have also been written at the appropriate DOK level. Miscellaneous review activities have also been designed.

Implementation of the above strategies:

- *Common assessments and bellringer strategies are ongoing throughout the school year.
- *Two weeks (minimum) before the scheduled operational EOC exam, teachers will review their students by first reviewing each tested unit. (Tested units for Biology include: Scientific Method, Cell Structure and Function, Heredity, and Ecology).
The unit review practice questions will be used during this segment of the review.
- *Practice EOC exams along with the released test will be given during the 2-week review to help prepare students for the exam.