

JOPLIN HIGH SCHOOL & FTC - BUILDING SCHOOL IMPROVEMENT PLAN - SEPTEMBER 2015

Five year BSIP beginning October 2015 through May 2020

MATHEMATICS

Department Leadership: Dept Chair: Brian Hancock, Whitney (Algebra I), Rebecca Jakaitis (Geometry), and Adam Bennett (Algebra II)

| | |
|----------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>S.M.A.R.T. Goal: (Student Performance)</p> | <p>The percentage of students scoring proficient or advanced on the Missouri End of Course Math Assessments will be 5% above the state average or increase annually up to 60% by 2019 and increase to 45% in 2016. In addition, Math ACT scores will improve each year to reach the target - 22.0 by 2019. And the EoC MPI will be 360 or higher (On Target). The student course passing rate will be 95% or more.</p> <p>100% of students will consistently demonstrate learning through writing in all instructional settings by Feb 1, 2015.</p> |
| <p>Diagnostic Data:</p> | <p>Individual as well as department common assessments will be used to measure student knowledge, skills, and application of Math concepts and procedures. State assessments, ASPIRE, NWEA, and ACT will also be used.</p> |
| <p>District Strategic Plan Standard / Goal:</p> | <p>Standard 1: All areas of student achievement will be on target or exceed expectations in core academic areas.</p> |

| Strategies or Specific Actions | Resources Needed & Costs | Professional Development Needs & Costs | Person(s) Responsible | Notes | Progress / Anticipated Completion |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|--------------------------------------------------------------------|------------------------------------|
| <p>1) Required Math courses will be aligned with Course Level Expectations and the upcoming Common Core. Literacy strategies will also be implemented.</p> | <p>Eagle Advantage Ti-84 Graphing Calculators Printed materials USA Test Prep NWEA</p> | <p>PD meeting to determine needs and protocol Training sessions and guided work sessions will be held to facilitate alignment and prepare for assessments for common core standards</p> | <p>Math Department and CLC's.</p> | <p>Review annually</p> | <p>Reviewed annually</p> |
| <p>2) Course timelines will be developed for required courses. Common assessments will be administered and analyzed. Team action plans will be developed to address weak</p> | <p>USA Test Prep Item Analysis Common projects Common Assessments NWEA</p> | <p>Time to write common projects Training to incorporate common core standards in Geometry timeline</p> | <p>Math Department and CLC's.</p> | <p>Review annually Common projects will be used more often</p> | <p>Reviewed quarterly/annually</p> |

| | | | | | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|----------------------------|----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| areas. | | | | | |
| 3) All Math teachers will develop and incorporate ASPIRE and ACT type questions, respectively in every common assessment and examine results of ASPIRE and NWEA item analysis. | USA Test Prep ASPIRE practice tests ACT Practice tests Ti-84 Graphing Calculators Printed Materials NWEA | USA Test Prep training | Math Department and CLC's. | Reviewed quarterly | Reviewed quarterly |
| 4) EOC data, ASPIRE (or equivalent test), NWEA, and ACT Math data will be reviewed and strategies will be developed to address improvement. | EOC Data PLAN Data ACT Data Formative Assessment Data NWEA | | Math Department and CLC's. | EOC data reviewed annually in the fall PLAN data reviewed in the spring | EOC data reviewed annually in the Fall PLAN data reviewed annually in the Spring |
| 5) Strategies will be developed and implemented in all Math courses to increase achievement (Ex.EOC exams) which will include formative assessments. This will include a daily emphasis on learning intentions and success criteria, to help students be self-regulated learners. | Released items USA Test Prep Next Generation Formative Assessments SBAC Practice Tests NWEA | | Math Department and CLC's. | Extended periods for practice testing | Reviewed quarterly |
| 6) Tutoring will be available before and after school. | Eagle Advantage | Eagle Advantage | Math Department and CLC's. | Review as needed | Reviewed as needed |
| 7) Abbreviated credit recovery will be offered for Pre-Algebra, Algebra I, Geometry and Algebra II classes. | VPL Eagle Advantage | | Math Department and CLC's. | | Reviewed semi-annually |
| 8) Literacy will be a focus throughout the curriculum (where applicable) for the entire department. The focus will be the "Great 8": | Articles (printed materials) Digital resources/ google drive folders to share/ store files Notecards and other | Literacy training with specific Math focus. | Math Department and CLC's. | Lesson plans will be created and literacy standards will be implemented when possible. | Reviewed annually |

| | | | | | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|
| <p>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> | <p>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> | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

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) ASPIRE item analysis and improvement strategies are incorporated (PLAN Goal).
- d) USA ACT Test prep in all core areas to help student improve on the ACT is part of the plan (ACT Goal).
- e) Common assessments and bell ringer strategies are ongoing throughout the school year.
- f) Include professional development needs for all department members and especially new department members.
- g) Uses of differentiated instruction is a part of the plan.
- h) Include tutoring and at-risk student identification for remediation.

- i) Marzano researched based strategies are part of the plan (cooperative learning, identifying similarities and differences, graphic organizers, etc.).
- k) Literacy strategy components will be utilized by the entire faculty where applicable in each department's curriculum from the English department.
- l) Curriculum writing and unit planning will be developed in collaboration addressing the common core standards.
- m) The departments will develop plans to include the Continuous Learning Coaches (CLCs) 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 Unit 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. Cumulative review practice questions: A bank of practice questions for each unit will be developed for use as review before exams.
4. Practice EOC exams: Practice EOC exams have been developed for use as review before the EOC exam. *NOTE:* Practice exams mirror the released items and ASPIRE/ACT. 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
- *Opportunities created for extended class periods throughout the school year for practice testing

DATA-DRIVEN PRIORITIES:

(example: ___ because ___ % of students performed at ___ level in ___ skill on ___ assessment.)

IBDs Algebra 1 & 2 and Geometry:

1. **Algebra I** - Focus on the common core standard "Identify the effect on the graph of replacing $f(x)$ by $f(x) + k$, $k f(x)$, $f(kx)$, and $f(x + k)$ for specific values of k (both

positive and negative); find the value of k given the graphs. Experiment with cases and illustrate an explanation of the effects on... (transformations on graphs) because 59% of students did not perform at proficient or advanced levels on this standard on the EOC assessment. This was the most tested question on the test.

2. **Algebra II** - Focus on the common core standard “Graph functions expressed symbolically and show key features of the graph, by hand in simple cases and using technology for more complicated cases.” because 63% of students did not perform at proficient or advanced levels on this standard on the EOC assessment.

3. **Geometry** - Focus on the common core standard “Given a geometric figure and a rotation, reflection, or translation, draw the transformed figure using, e.g., graph paper, tracing paper, or geometry software. Specify a sequence of transformations that will carry a given figure onto another...” because 45% of students did not perform at proficient or advanced levels on this standard on the EOC assessment. This was the most tested question on the test.