

Professional Development Spotlight



Winter 2016/2017

Spatial Intelligence and the Marble Challenge

Did you know...spatial intelligence is the ability to comprehend three-dimensional images and shapes. It is a primary function of the right side of the brain and is used when solving puzzles, figuring out maps and taking part in any type of construction or engineering project. Elementary teachers took part in a learning activity bringing awareness to research suggesting spatial thinking is an important predictor of achievement in STEM, or science, technology, engineering and mathematics (Wai et al 2009; Uttal et al 2013). Teachers were given the challenge to develop a marble run with a duration lasting between 23 and 27 seconds in at least 4 out of 5 trials. The opportunity provided for active participation, a differentiated approach to learning that can be replicated in the classroom, knowledge of resources available in the gifted department, and a little fun through teambuilding. The gifted department has three marble runs available for teachers to use with students. Mrs. Rogers is also willing to guest teach a lesson if you request!



Faith Steelman leads her team to a successful completion of the marble run challenge.



Fifth grade teachers evaluate and test different options to meet the marble run challenge.

Here are some helpful links if you would like to learn more about spatial intelligence:

- <http://ehlt.flinders.edu.au/education/DLiT/2008/multipleintel/spatpg.html>
- <http://institute4learning.com/blog/2013/08/15/11-ways-to-teach-academic-skills-to-visual-spatial-learners/>
- <http://www.parentingscience.com/spatial-intelligence.html>
- <http://www.learning-styles-online.com/style/visual-spatial/>

“ An intelligence is the ability to solve problems, or to create products, that are valued within one or more cultural settings. ”

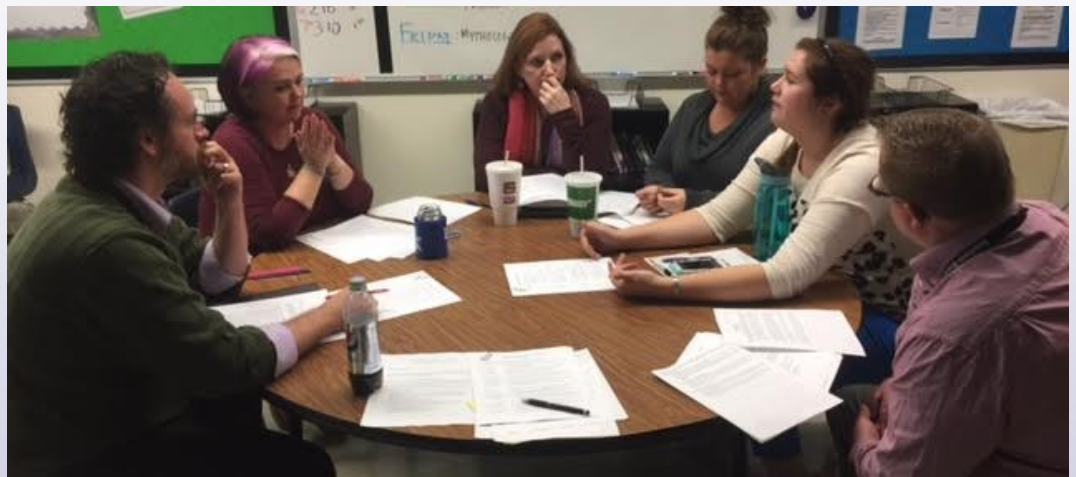
— Howard Gardner
FRAMES OF MIND (1983)



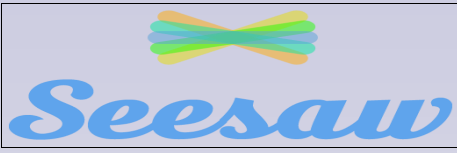
Analyzing Instruction to Improve Student Learning

The Middle School Leadership Team has been working on several aspects to improve student instruction. At the beginning of the school year staff identified priority standards in collaborative teams. We ask each teacher to submit learning goals, or “I can” statements, on a weekly basis. We then, as a leadership team and as a whole staff, discuss the processes we use to create our learning goals and how we align them with our priority standards. We have also led the staff in activities focused on formative assessment. We are looking to build our collective skills in this area by increasing the frequency with which we use formative assessments as well as focusing on collecting proof of learning. We have stressed the need to gain overt, assessable information about kids’ achievement relative to the learning goal.

We have also initiated a protocol within grade level teams, the purpose of which is to facilitate the sharing of data. Our Success Analysis Protocol involves each teacher on a team sharing a lesson or assessment that was particularly successful. The teacher shares all the aspects of the lesson, from what went into planning the lesson to what activities students will be doing during it. In the case of an assessment, the teacher shares the concepts being assessed, the opportunities kids had to practice them, and the format of the assessment. Other teachers then ask clarifying questions. Finally, the group analyzes the lesson/assessment to find pieces that were effective or provides ideas to enhance it. The group collectively looks for pedagogy that can be transferred to other subjects and other assignments. Each team teacher will share once before winter break.



The Eighth Grade Team in action using Success Analysis Protocol to determine the effectiveness of an ELA assessment.

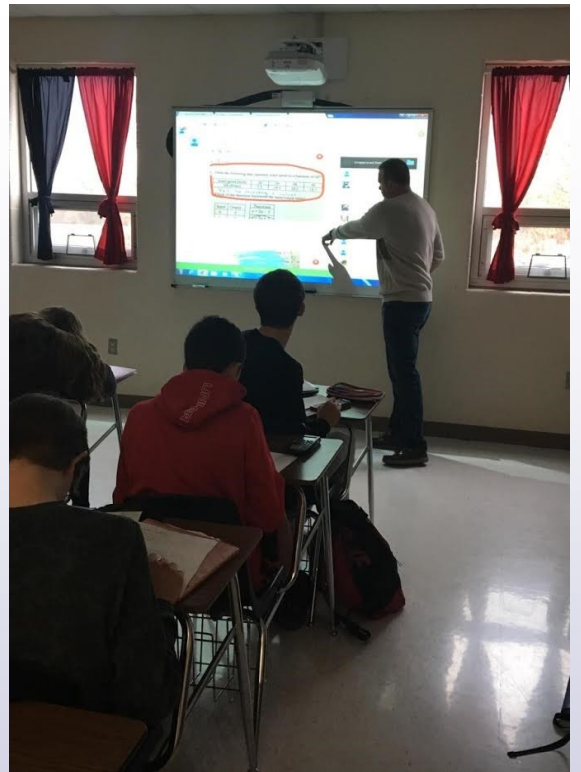


Changing What Instruction and Collaboration Looks Like for Students in Mathematics

Wade Vandelicht teaches Algebra, Geometry and Calculus to high school students five days a week while still being a huge Super Mario fan and participant in Southern Boone's eMINTS program. Seesaw is a way for Wade to incorporate technology in his lessons increasing student learning and engagement. The app is a Facebook type interface where students can post pictures, drawings, and text that the teacher must approve. When students post things (usually an answer to a problem that nobody else has posted) not only can students review each other's answers, but they can comment on them. Extra credit points for students who comment first and point out a mistake from another student's post in a nice constructive way. Mr. Vandelicht states, "It has been a good way in my class to break up the regular old *review* or *worksheet* format and get students collaborating and using technology."

Having students solve problems in this format also gives Wade the added advantage of having a visible tool for formative assessment. He can do a quick scan of the problems on Seesaw (he typically has this displayed on the smart board) to diagnose those problems which are causing students the most difficulty and to see which students are struggling.

Seesaw can save you time on organization and communication, makes formative assessment easy, and provides a safe place to teach 21st Century skills. To learn more about this instructional tool you can visit Mr. Vandelicht or contact Karen Pfingsten.



Mr. Vandelicht discusses with students what is on the Seesaw Class Feed to meet lesson learning goals.

M.A.R.R.E. Conference

The primary school Title I team and two classroom teachers attended the MARRE conference this year. We each participated in six sessions over two days and came home with many takeaways to make our instruction more effective.

One of our sessions was on Dyslexia and the new assessments/regulations that may be coming to the state of Missouri. Linda Dorn and Kent Layton shared upcoming changes in helping students with dyslexia. They discussed data collected, research currently being studied, and effective vs. ineffective intervention models. Dorn and Layton shared their concerns about the process in place to select a screening tool to diagnose students with dyslexia and the lack of educator input in the Missouri Legislative Task Force. Teachers were encouraged to research for themselves which assessments and interventions are showing the greatest growth for our most struggling readers. They also warned against any intervention model that does not rely on meaning in the instruction. Many of the "box" interventions use a skill and drill method rather than contextual reading, which research has shown to be less effective. They went on to share their latest intervention for students with dyslexia and gave us the format that they have found to be currently most successful.



Another session discussed the importance of oral language in literacy development. Linda Dorn stated: "Instead of talking about the achievement gap, we need to talk about the background experience gap." Dorn encouraged teachers to read more books that encourage the child to ask questions because "it is impossible to make meaning if you can't ask questions." She shared many texts that encourage children to make deep connections, ask questions, and develop empathy. Children who do not have rich background experiences lack the ability to comprehend texts in the same manner as children who have been given varied life experiences. As teachers, it is our job to introduce language-rich literature in our classrooms to level the playing field and provide meaning to those children who have grown up with limited life experiences. Sharing books with rich language, having relevant discussions and introducing new vocabulary will help all students create meaning as readers.

We wish to thank the PDC committee for providing us with the opportunity to attend this conference and deepen our understanding of how to support our most struggling readers and writers.

LIZ CRAIG BRINGS HER GAME TO SBC ELEMENTARY WITH NEW TECHNIQUES LEARNED DURING THE 2016 MOAHPERD CONFERENCE

I would like to thank the Professional Development Committee for the opportunity to attend the 2016 MOAHPERD Conference. The convention is an opportunity to gain instructional tools and a time to reflect on practices used to promote good health and physical activity. The time spent with other physical education and health instructors is motivating and allows me to return to school with renewed enthusiasm and belief in our ability to impact change!

So far, my classes have played a game called "Turkey Tag" demonstrating their ability to follow rules, cooperate with teammates and apply a simple strategy in a lead-up game. This was one of the first holiday games taught to help students gain fundamental and specialized skill sets in a game situation. Students loved to be turkeys and hunters in this fun tagging event.



"Aerobic Bowling " is a game students love to play for a warm-up. The activity keeps students engaged as they work together in teams of 3-4 students. Students are able to connect the importance of posture and body positions with the performance of various skills as they are bowling a ball, trying to knock over an upside down cone used for a bowling pin. The first team to 10 wins. Students learn how to demonstrate their skills with increased force, accuracy and control of the ball at different speeds, levels, and directions.

Once again, thank you for the opportunity to attend the MOAHPERD Conference. The presenters did an excellent job and provided me with several new ideas and games to implement in my classroom. It is always a great learning experience, and a way to meet and network with other physical education teachers in surrounding areas.

