**BIG Idea: Web of Interdependent Relationships proposal**

**July 22, 2014**

What is the BIG idea?

The BIG Idea, “Web of interdependent relationships,” suggests that each of us are intricately part of many different types of relationships both direct or indirect, seen and unseen, known and unknown, internally or externally.

Why use this BIG Idea?

“Web of interdependent relationships” as a unifying BIG Idea will help students realize that we are only somewhat conscious of our part in these myriad of relationships which may exist in a dynamic complexity that we may never fully understand. Students need to be conscious that whatever decisions and actions they make will always impact something or someone because they are part of this web of interdependent relationships.

How will this BIG Idea be launched?

This BIG Idea “Web of interdependent relationship” will be launched as part of the introduction to the Next Generation Science Standards’ eight (8) Science and Engineering Practices and seven (7) Crosscutting Concepts during the first week of school using the “C-SUCCESS” framework. As a class we will create a web made out of transparent fishing line. We can watch the Explain It To Me video and a spider spinning a web and waiting for its prey. I can tell a story about how spiders spin webs (like world of wonder) they can tell every time something touched any part of this web or watch Spider Web construction in Slow Motion and normal speed by Michael Bukay at <http://www.youtube.com/watch?v=4Y9K1H6Yn6o>.

C- create (a web of fishing line like a spider, maybe before or after watching video)

S- simple yet (connect to the string game with making cat’s cradle)

U- unexpected, (why would my homeroom teacher ask us to make a model of a web, later in the day or the week they will again spin this time their own individual “web”site)

C- concrete and (though not as sticky as a real spider’s web, our web will be concrete)

C- credible (I hope the web works the way I intend it to so I become credible)

E- emotional (I know many people have arachnophobia so making this web and talking about spiders will definitely be emotional for some anyway)

S- stories (I can suspensefully and dramatically tell the story of a(n orb) spider with silk coming from its abdomen to spin a sticky web everyday to lay in wait for the unfortunate soul that touches any part of the web. A spider, with spidey tingly senses like spiderman, who could scamper to its stucked clueless ‘meal’ gift wrap it quickly with more silky thread then bring it over to its home base, a curled leaf, to feast and dine leisurely. Or we can watch another video by ‘Screenshot” that shows the same thing but not as spooky <http://www.youtube.com/watch?v=uf4Ke7Dexgw>.

S- stick (I do hope that the sticky spider web metaphor will help the BIG idea of “Web of interdependent relationships” stick or be sticky because we will revisit it whenever appropriate throughout the school year in whatever context curricular or otherwise.

How will this BIG Idea be used throughout the school year?

Together with the NGSS standards, practices, and crosscutting concepts, the BIG Idea “Web of interdependent relationships” will be referred to explicitly as modeled initially by the teacher in every possible opportunity throughout the school year. The goal is for students to develop and acquire the habit of using the BIG idea(s) as a mental tool, as a lens or scientific perspective to make sense and figure out new phenomena, both inside and definitely outside the classroom in the real world. If possible, the BIG Idea(s) will be used to help students see the world in wonder identifying, explaining patterns, causal and other types of relationships within and among systems, using models and data as evidence to support claims.

Most importantly, the BIG Idea(s) will be embedded in the learning experiences of students throughout the year using the [TPACK](https://www.youtube.com/watch?v=FagVSQlZELY) framework. Students will be asked to explore and create evidence that shows their understanding that will be shared and made public as they negotiate the meaning of the world around them.

What preparations are needed to implement this plan?

This plan will be shared with the other middle school science teacher for feedback and uniformity of pedagogical practices. Together or individually, the modeled strategies in the face-to-face summer sessions will be adapted as needed. The habit of developing BIG Ideas and creating a “C-SUCCESS” story developed and presented using appropriate technology will be applied not only to the 8th-grade level but to the 6th and 7th-grade levels as well. The backward planning approach will be used for all grade levels and science units throughout the year. Part of the plan is to provide students more opportunities to showcase their understanding or misunderstanding of concepts and skills using appropriate technology.