

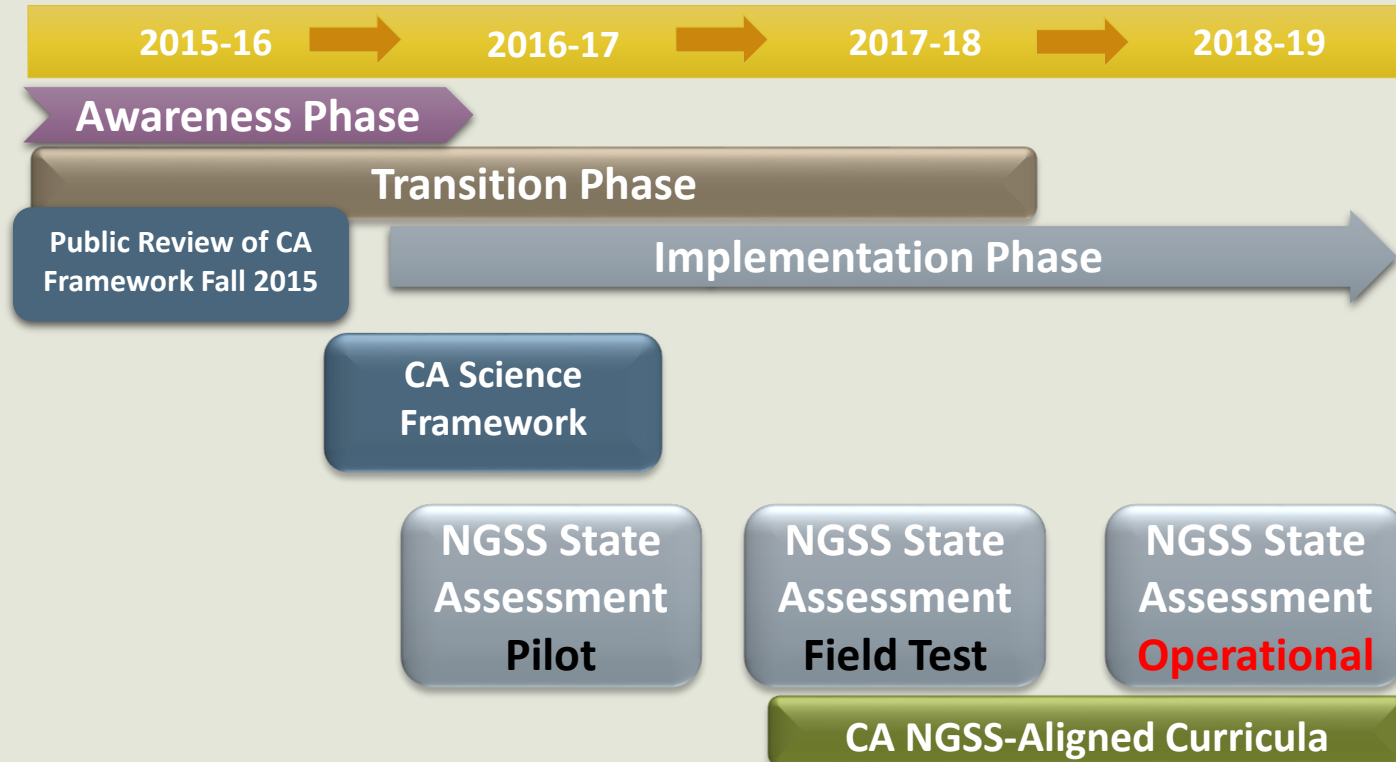
The background is a dark chalkboard with various white chalk sketches. In the top left, there is a large letter 'V'. Below it is a detailed drawing of a microscope. To the right of the microscope is a globe on a stand. In the bottom left, there is a stack of books. In the bottom center, there is a plus sign and an open book. In the bottom right, there are mathematical symbols including a percent sign, a division sign, and a less-than sign.

# IUSD

# NGSS Implementation

Education Advisory Committee  
August 2016

# NGSS Timeline





# The Journey



# Day 1 (January 6, 2016)



## Guiding Questions

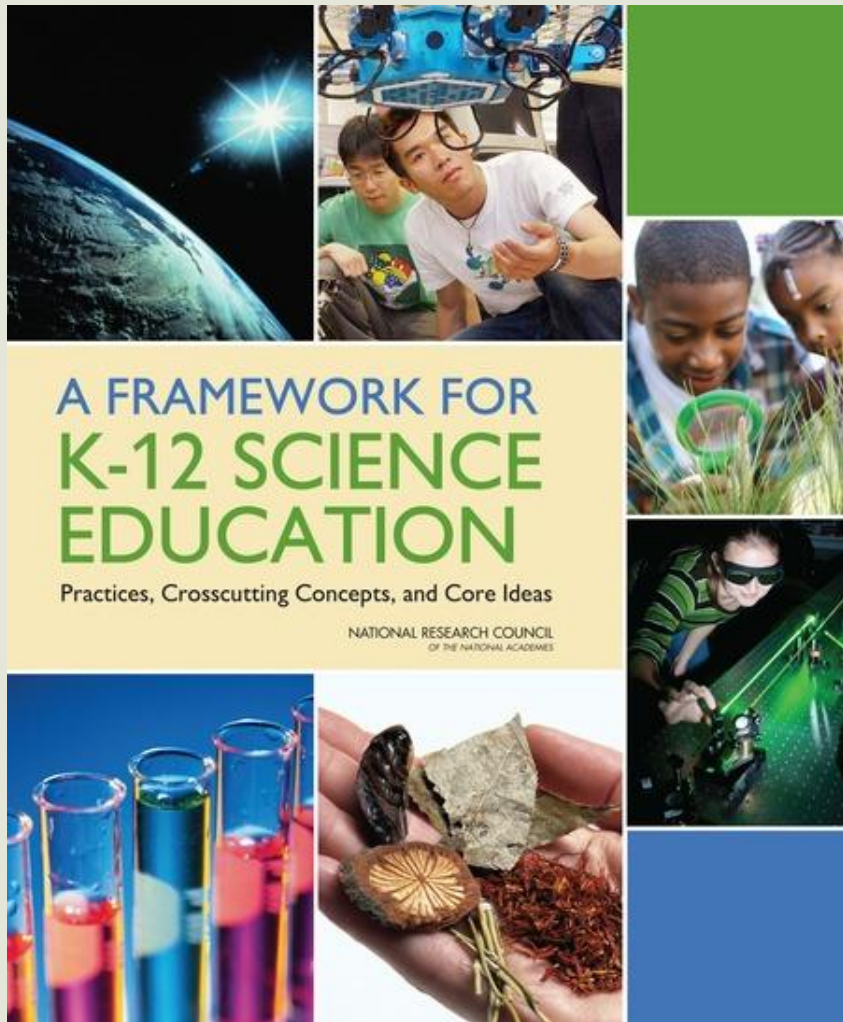
What does a rigorous 21<sup>st</sup> Century STEM Education Look Like?

How will we define STEM literacy for all, STEM expertise for some?

STEM experiences K-12?

Do course progressions ensure all standards for all students?

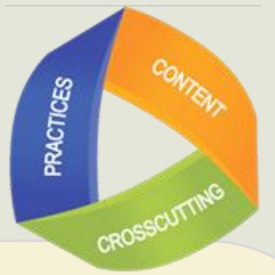
# Day 1 (January 6, 2016)



## Key Implementation Principles

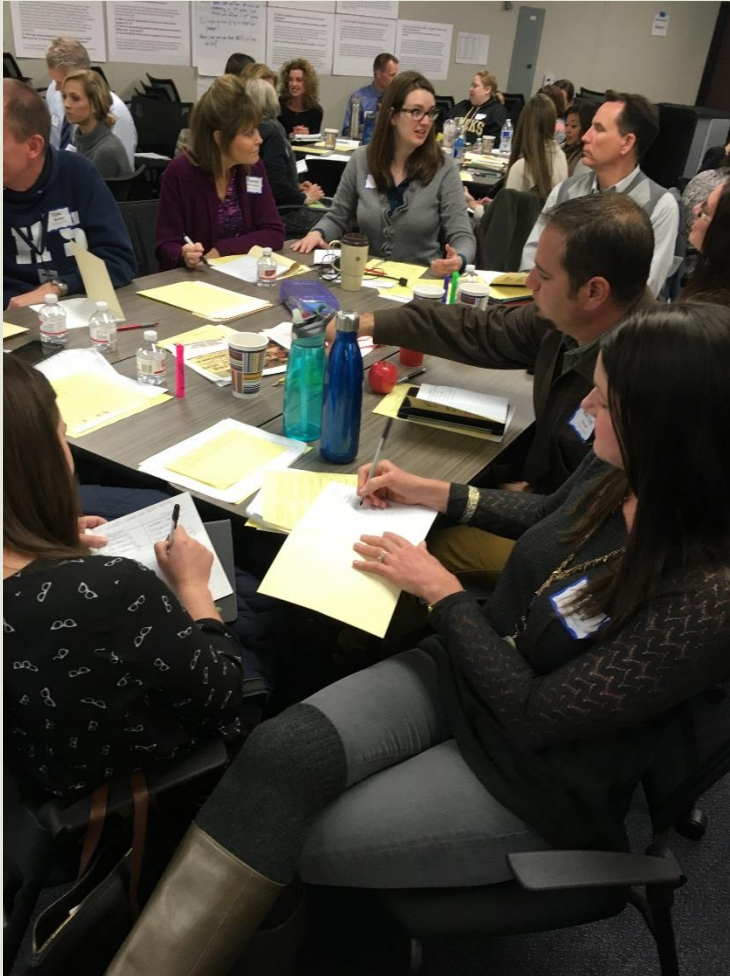


By the  
end of  
12<sup>th</sup>  
grade *all*  
students:



- have an appreciation of the beauty and wonder of science; possess sufficient knowledge of science and engineering to engage in public discussions on related issues
- are careful consumers of scientific and technological information related to their everyday lives
- are able to continue to learn about science outside school
- have skills to enter careers of their choice, including but not limited to careers in science, technology, and engineering

# Day 1 (January 6, 2016)

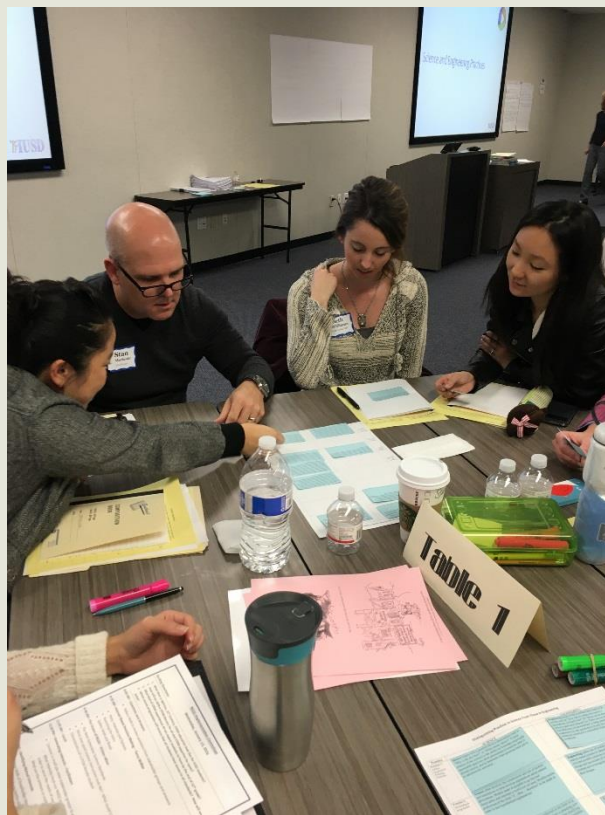
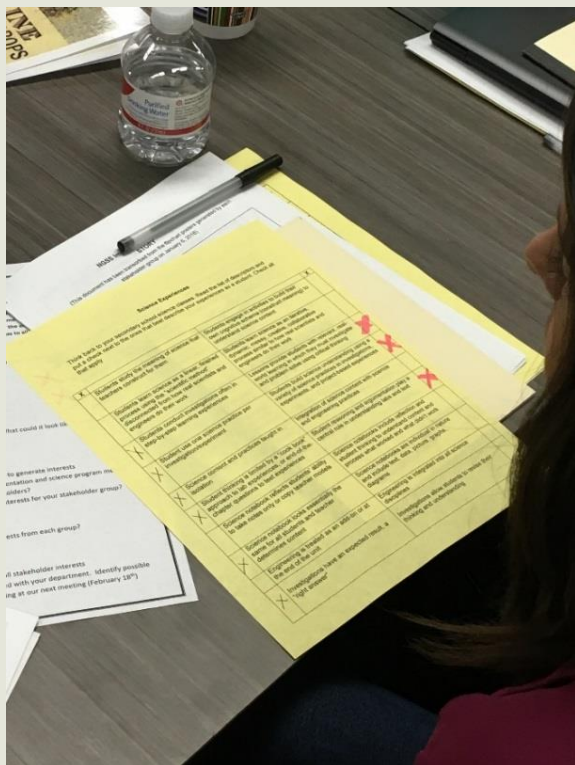


## **Interest Based Decision Process**

## **Generating the Story of Science education in IUSD**

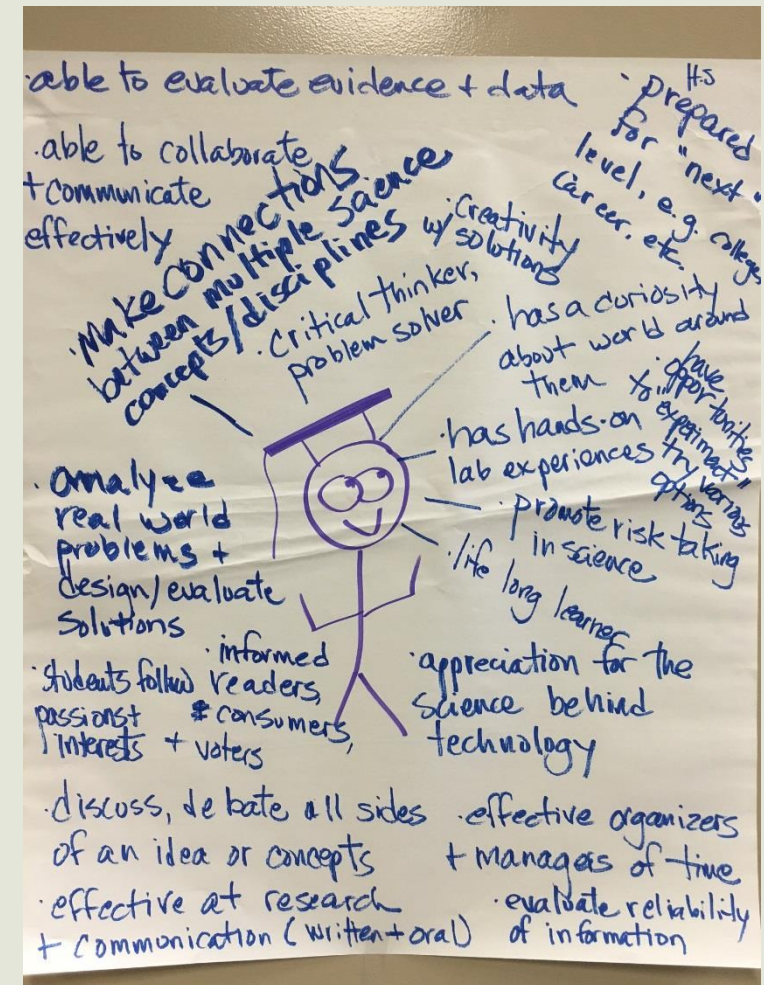
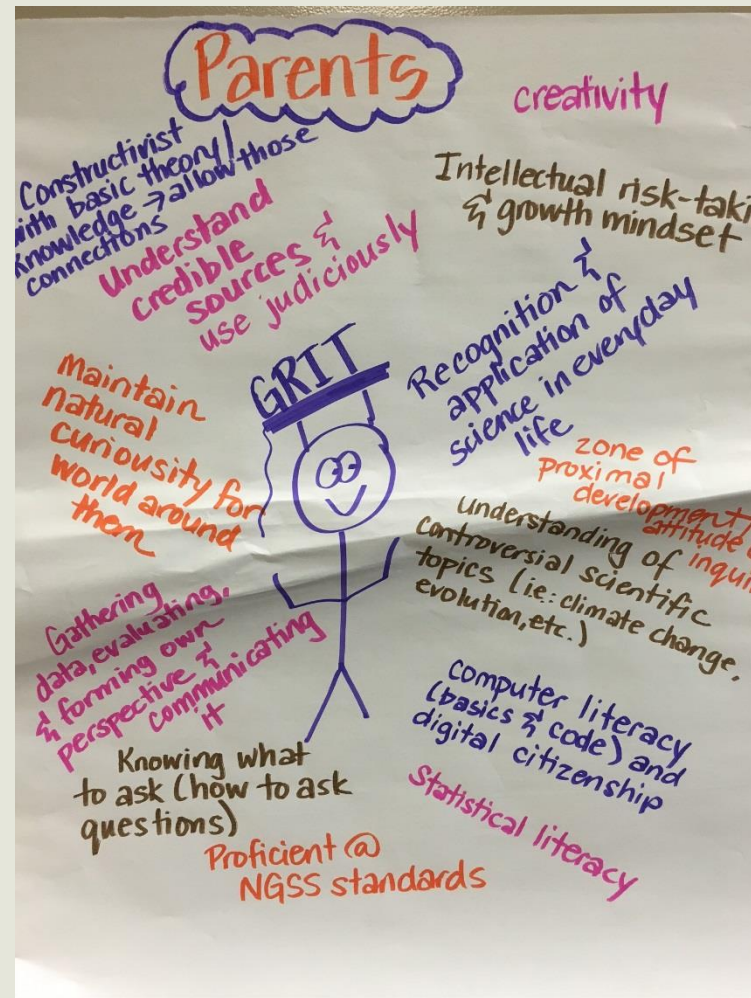
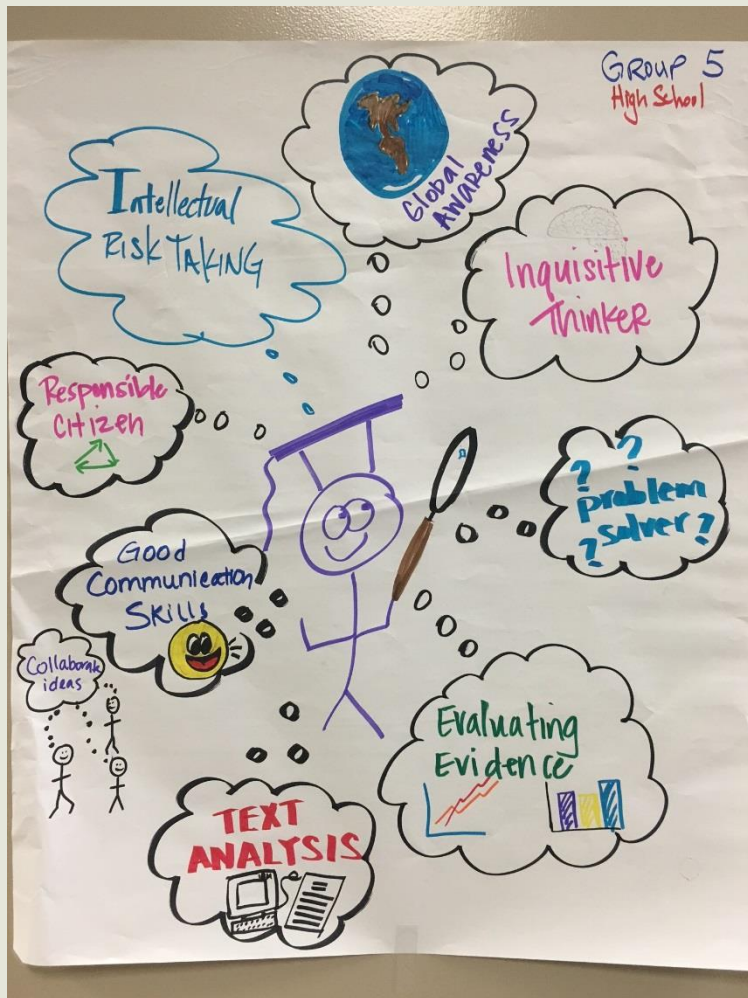


# Day 2 (January 13, 2016)





# Day 2 January 13, 2016

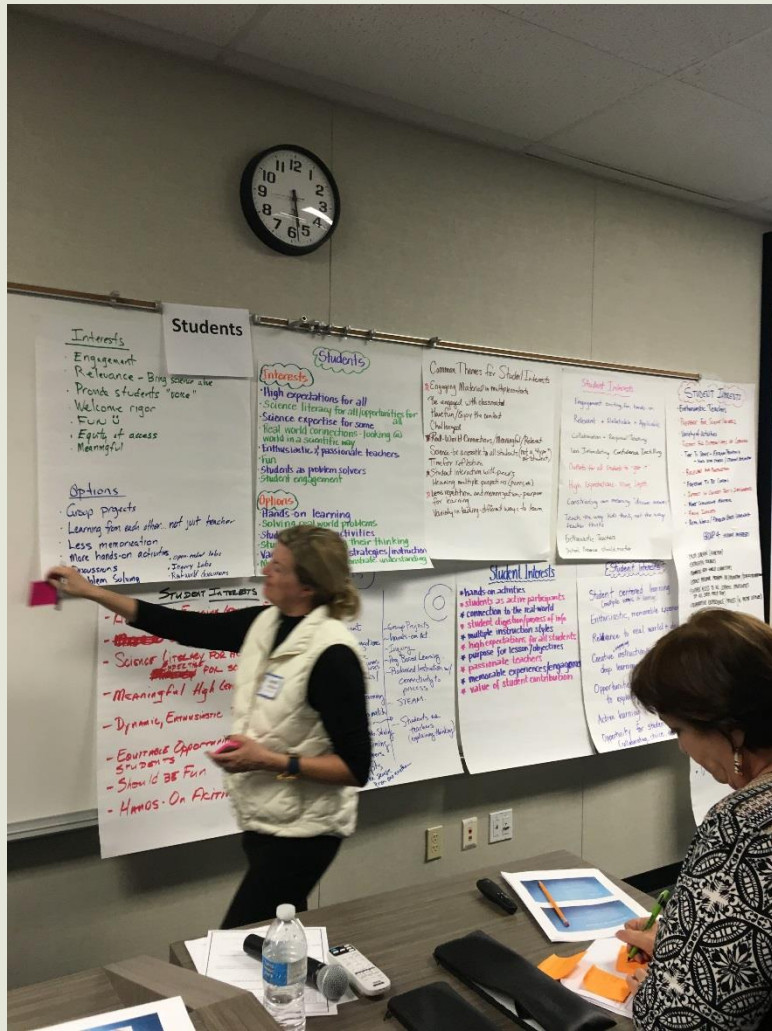




# Day 2 (January 13, 2016)

## Generate Interests as Stakeholder Groups

## Generate Options to meet the Interests

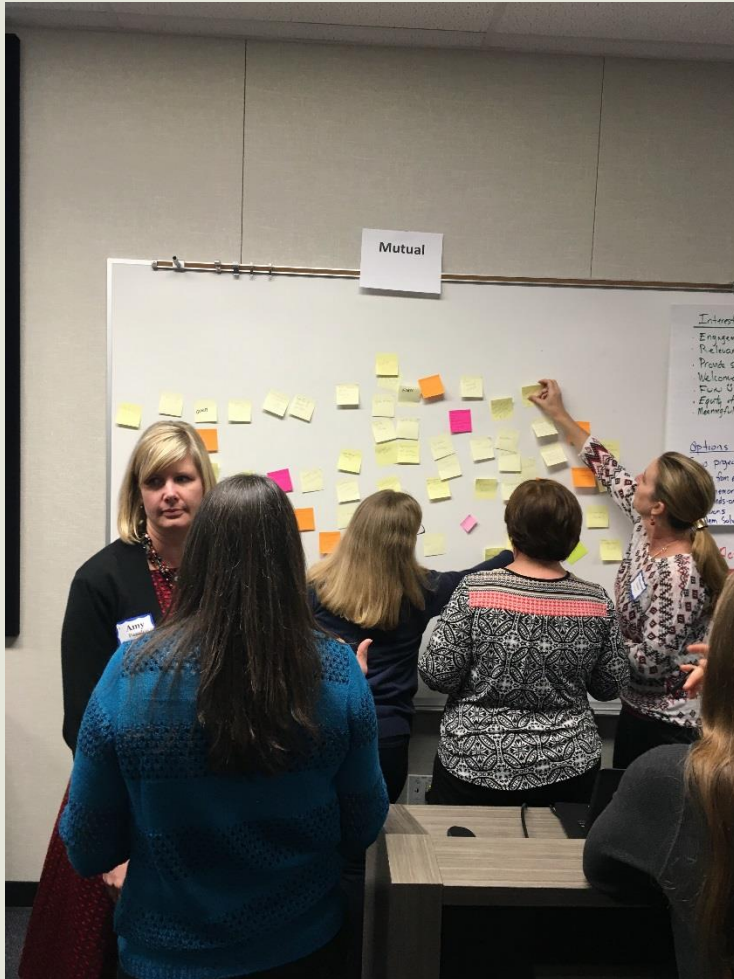


# Student Voice





# Day 3 (February 18, 2016)



**Identified the Mutual Interests  
of the entire committee**

**Identified the highly supported  
Options**

**Development Committee  
Formed**

# Day 4 Development Committee (March 10, 2016)

College and Career Readiness

Clear Communication for ALL stakeholders

Equity of access and consistency of experiences

Engaging Science Experiences with real world application

Instructional needs of ALL students met appropriately

Manageable and strategic transition to NGSS

Teacher and administrator efficacy, readiness and preparedness

# Day 4 Development Committee (March 10, 2016)



Highly Supported Options - Themes

Transition, Evaluation, and  
Communication

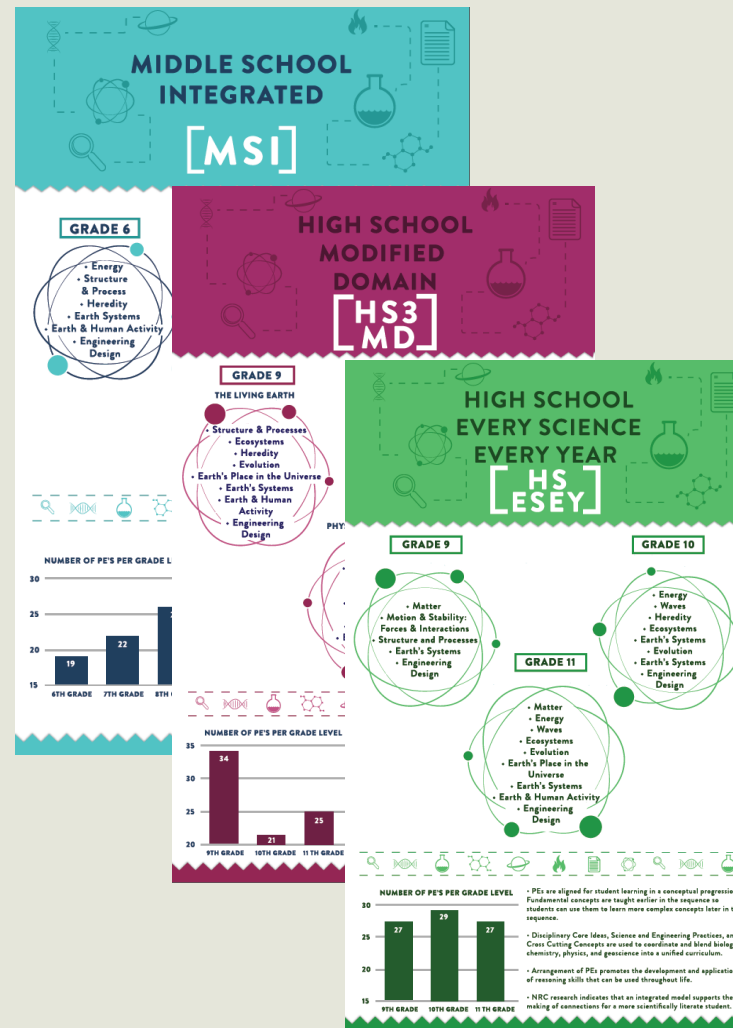
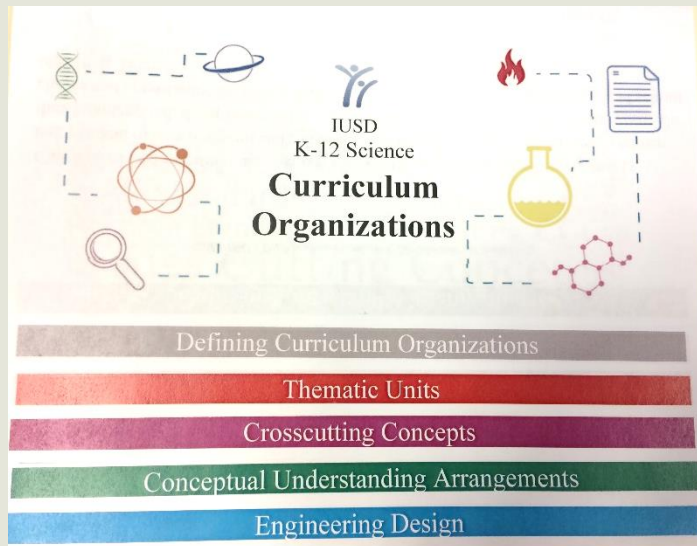
Professional Development and Support

Course Sequence and Instructional  
Materials

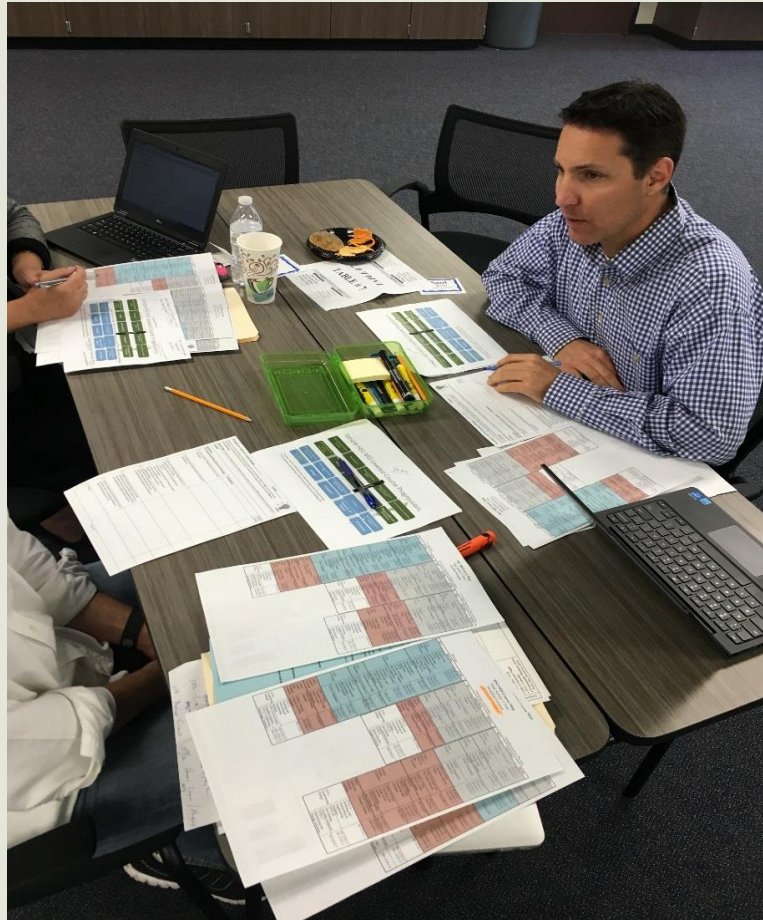
Instruction and Assessment



# Day 5 (April 12, 2016)



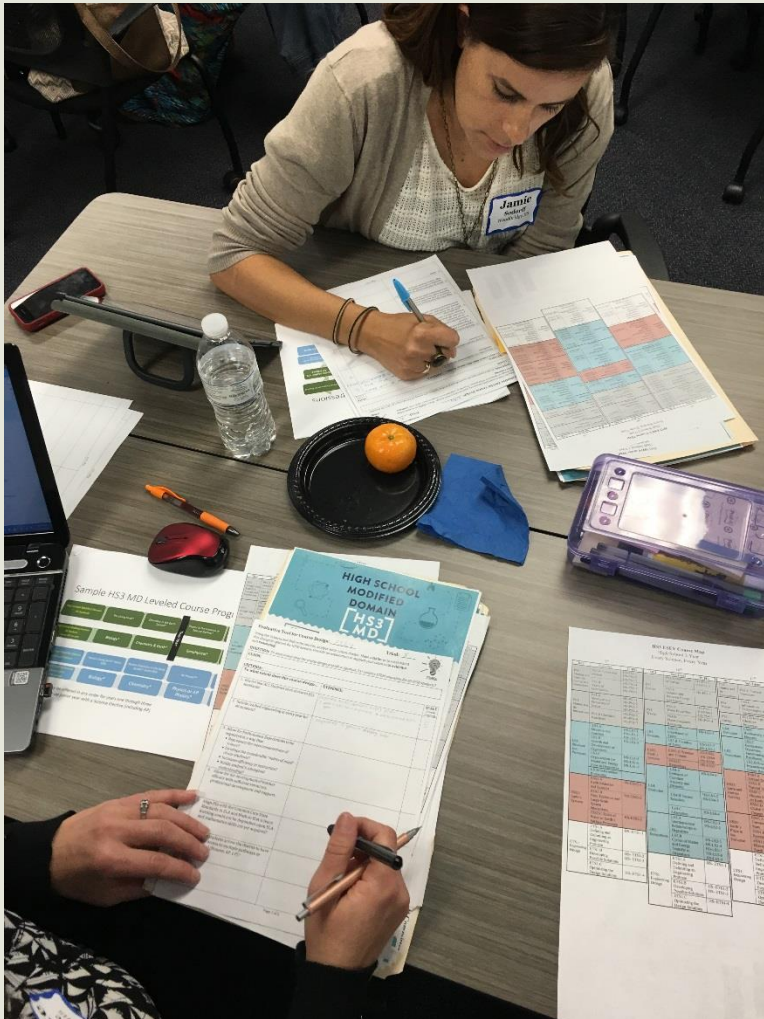
# Day 6 (April 19, 2016)



## Evaluation Begins...




# Day 7 (May 11, 2016)



## Reviewed sample course progressions



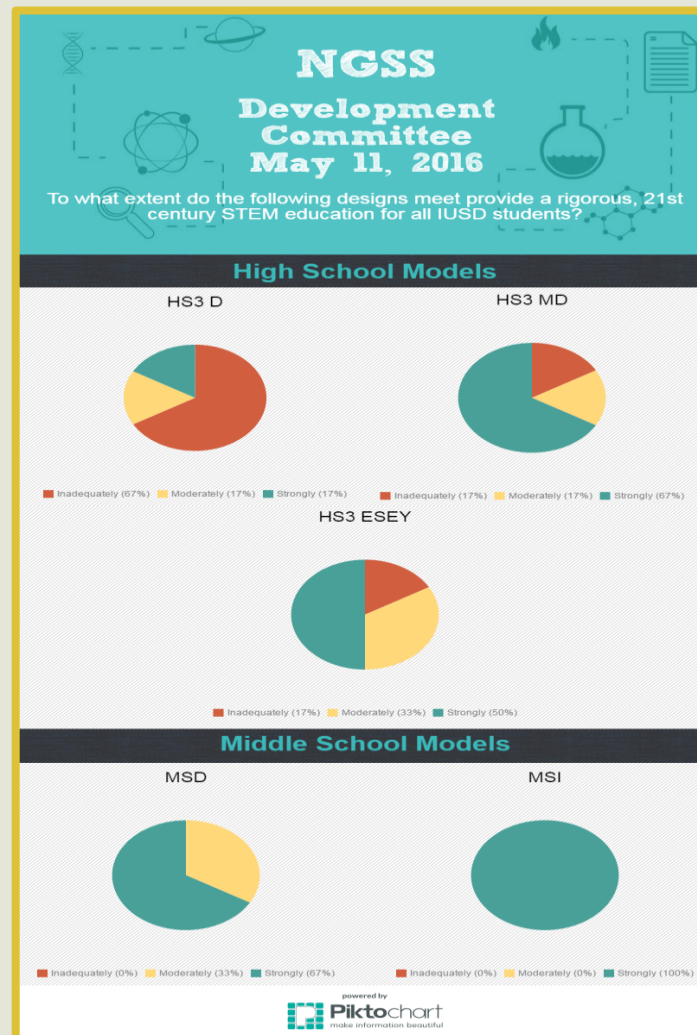
# Day 7 (May 11, 2016)

<b>Evaluative Tool for Course Design:</b> _____		<b>Triad:</b> _____	
Using the Criteria and Online Resources, analyze each course design. Make a <b>claim</b> as to what extent this design is optimal for IUSD science. Provide an explanation to support your claim with <b>evidence</b> and <b>reasoning</b> .			
<b>QUESTION:</b> <i>To what extent does the course design provide a rigorous, 21<sup>st</sup> century STEM education for all IUSD students?</i>			
<b>CLAIM:</b> _____			
<b>CRITERIA:</b>			
<b>To what extent does this course design...</b>	<b>EVIDENCE:</b>	<b>SCALE</b> 1=weak 5=strong	
1. Ensure that ALL Students have access to ALL standards?			
2. Include/embed engineering in every year for all students?			
3. Allow for Performance Expectations to be organized in a way that: <ul style="list-style-type: none"><li>• Represents the <i>interconnectedness</i> of</li></ul>			

Analyzed  
Course Designs  
based on research

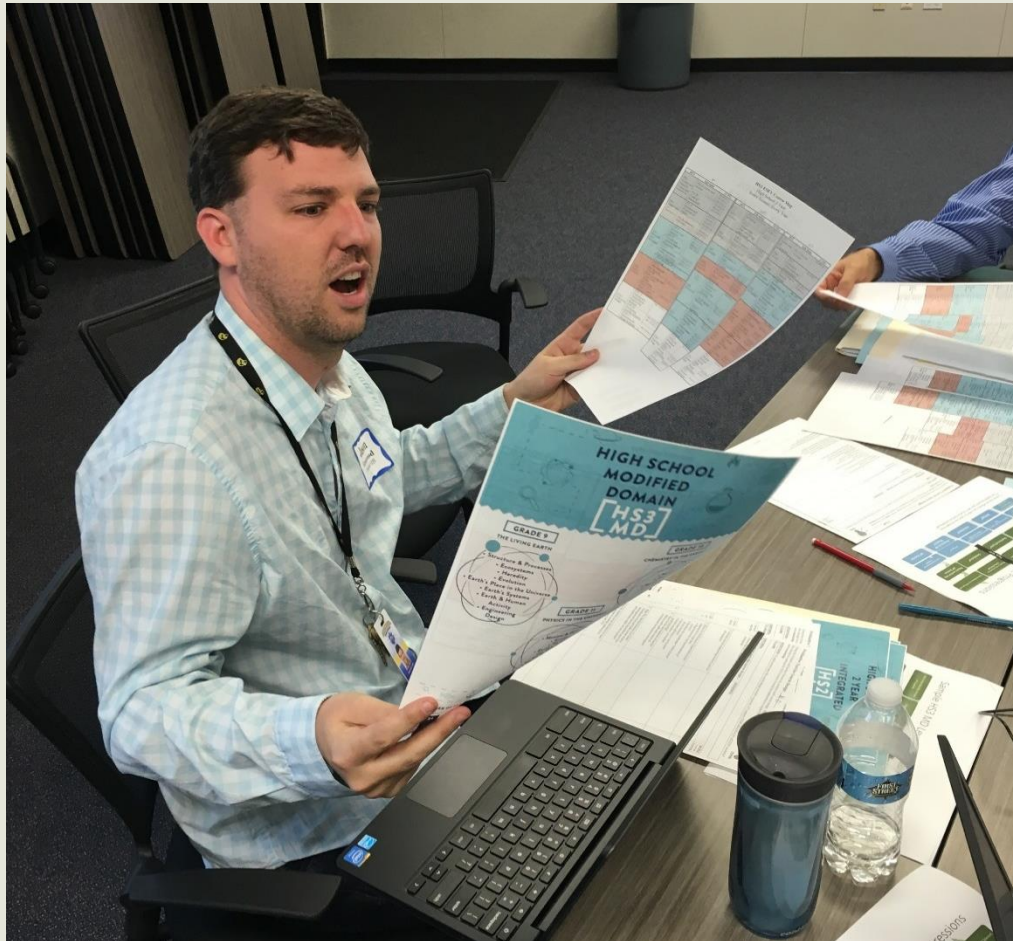
<https://sites.google.com/a/iusd.org/ngss-resources/>

# Day 7 Results on Course Designs





# Day 8 Implementation Committee (May 25, 2016)




**Build understanding of  
each instructionally  
viable course design**



# Day 8 Implementation Committee (May 25, 2016)

Table #: \_\_\_\_\_

 **Course Design: \_\_\_\_\_**  
**NGSS Course Design Flowchart**  
**Mutual Interests**

Does this course design provide...

College and career readiness for ALL students?	<input type="checkbox"/> YES <input type="checkbox"/> NO	Can it be modified to meet this interest?	How?
Clear communication for ALL stakeholders?	<input type="checkbox"/> YES <input type="checkbox"/> NO	Can it be modified to meet this interest?	How?
Equity of access and consistency of experience for ALL students?	<input type="checkbox"/> YES <input type="checkbox"/> NO	Can it be modified to meet this interest?	How?

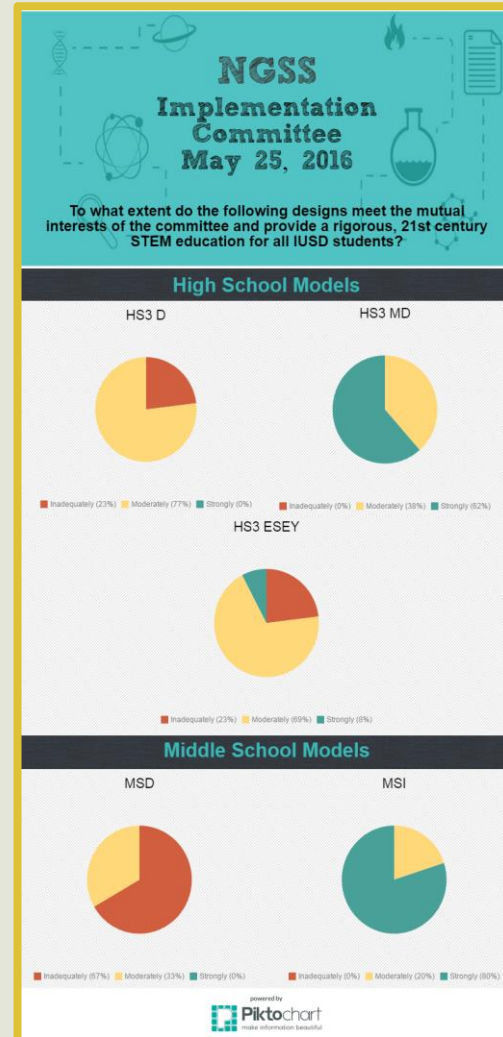
**Evaluate whether each course design meets all of our mutual interests**

## Day 8 Implementation Committee (May 25, 2016)

**To what extent does each course design meet the mutual interests and provide a rigorous 21<sup>st</sup> Century STEM Education for all IUSD students?**

[tinyurl.com/NGSSMay25](http://tinyurl.com/NGSSMay25)

# Day 8 Implementation Committee (May 25, 2016)





## Day 8 Consider the Question...

**If 4 high schools choose one course design,  
and 1 high school chooses a different course  
design, will that meet each our Mutual  
Interests?**

# Day 9 Development Committee (May 31, 2016)



Analyze data from May 25<sup>th</sup>  
Implementation Committee -  
agreements

Final decision on middle school  
and high school course designs

Begin to plan implementation and  
next steps

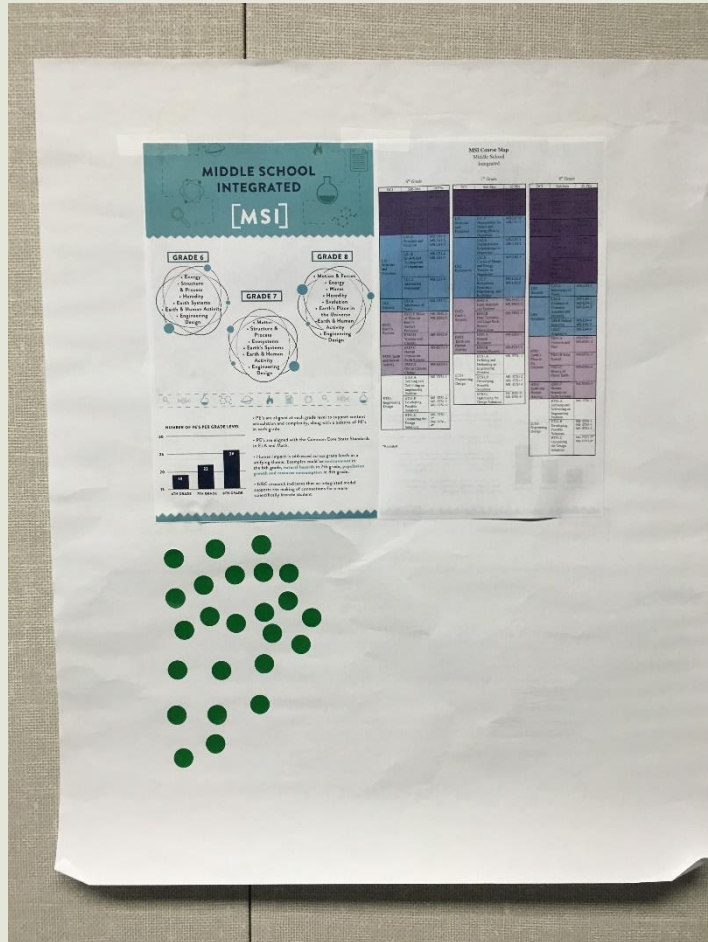


## Day 9 Development Committee (May 31, 2016)

If high school sites select different course designs, what agreements could be put in place to ensure that these mutual interests are met?



# Day 9 Development Committee (May 31, 2016)



**It's Unanimous!**

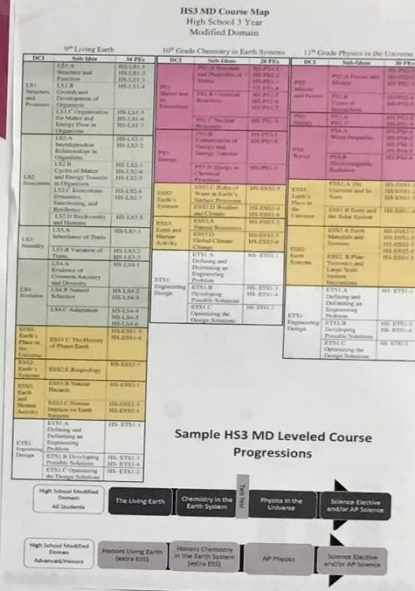
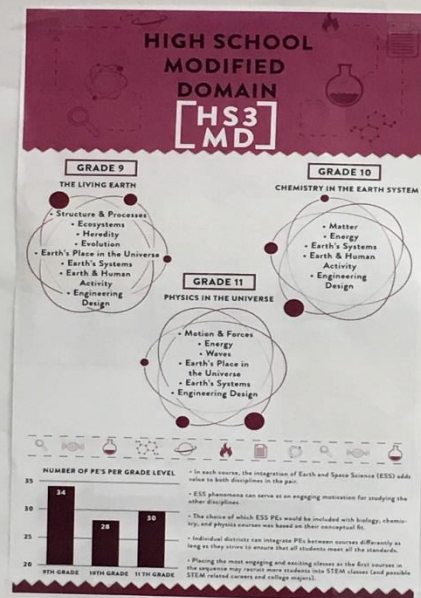
**Middle School  
Integrated Model**



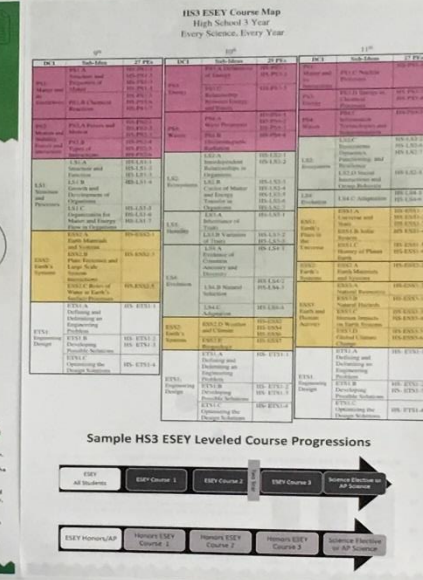
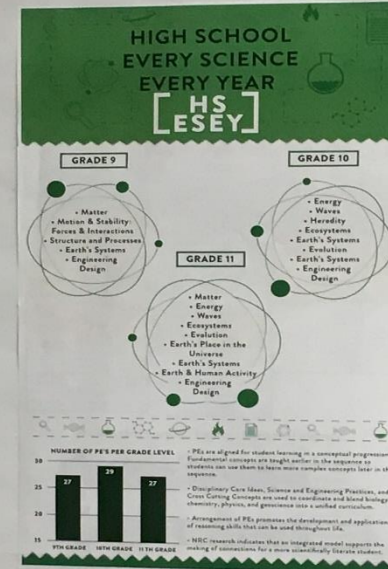
# Day 9 Development Committee (May 31, 2016)



# Day 9 Development Committee (May 31, 2016)



Irvine H.S.  
Woodbridge HS  
University HS  
CREngine HS, but can change



Northwood HS





WHAT'S  
NEXT?