



Curriculum Council

Notes

11.1.17

Review October Notes

Summary of SEPs- practices, instructional shifts

- Identify the CCCs in phenomena
- Reviewed CCCs and their progressions from elementary to high school
- Using the Performance Expectations to plan and conduct a lesson
- Learning to read the patterns and see the progressions within

Cross-Cutting Concepts

Claim, evidence, reasoning pertaining to CCCs

7 concepts- bookmark cheat sheet!

Identify concepts at stations (visuals)

Station #	CCC	Notes
	Patterns	
	Cause and effect	

Which display aligned with which CCCs- source: CA Academy of Science

2: Patterns

7: Cause and Effect (Rube Goldberg machine)

6: Scale and proportion, and quantity

1: Systems and system models

3: Energy and matter

5: Structure and function

4: Stability and change

- No tight alignment with *all* CCCs. Applicable to multiple models.
- Look at patterns, causality (cause and effect; structure and function) and systems (systems and system models; scale, proportion and quantity; energy and matter; stability and change)

Vertical Alignment

Sorted by grade span- organize them into vertical progression based on grade span

Summarize CCC and how it moves from grade span to grade span

Verbiage handout

Concepts, Structure and Functions, etc.

Difficult to to differentiate between middle and high school, can have a rationale for either way at times

Moving from concrete to abstract in language, example tasks; the packet helps to detail differences.

Importance of focusing on progressions, provides an understanding of building the base to progress to high school level. Much of the language is related to Universal Theme language. Connections from CCC to SEP, including mathematical practices! Lots of overlap and relationships.



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Moving from content to teaching strategies and skills and back to content. Patterns from space to fossils, to waves. Progression of concept embedded into content and content and concepts become more complex but students need the foundation from K-2 grade span. $E=mc^2$ example, a model of observation translated into math equation.

Can use CCCs and Universal Themes at a surface level but spiral into in-depth understanding.

Performance Expectations- Where's Waldo?

1-PS4-3 planning and conducting an investigation to determine the effect of placing objects mde with different materials in the path of a beam of light

Science and Engineering Practices	DCI	CCC
Plan and conduct an investigation	Placing objects . . .	

Unpacking each SEP, DCI, CCC

The framework unpacks each dimension for you

Identify the thread of physical science moving through the three dimensions.

Review unpacked standards and their relationship to other content areas

Framework Reading

Example standards by DCI (Physical Science)

Each grade level has 4 instructional segments

What are the overarching CCCs for your grade level?

How are the PEs bundled into Instructional Segments

How are the 3-dimensions incorporated into the lessons?

Sub Committee Report Out

MTSS/Differentiation-

The MTSS committee is currently working on three projects: differentiating the GES independent study across 2nd-6th grade, identifying Tier-II interventions for general education classrooms in ELA and math, and offering professional development for new to 3d -6th grade teacher on differentiation.

ELD and Wonders- reviewing how Wonders supports ELs and all students. Priority components, developing a survey.

Assessment- building a comprehensive assessment system from screening to formative to interim to summative assessments.

NGSS- to attend the roll out in November. Sub committee will develop training materials for introduction in April during district afternoon.



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MOXI Exhibits

Seeing exhibits as different cross cutting concepts

Depending on the CCC and exhibit, some concepts are harder to see

Patterns and Cause and Effect more apparent than other concepts

As change lens tend to see other concepts as well

Would be nice to look through a grade level lens, even nicer to have an expert that helps to explain, Notice, publication, audio, QR code

Explore what they are exploring, students create the learning for themselves and teachers follow up

Good for teachers to have information regarding the exhibits, teachers preload some content (not all), return and follow up with one or two concepts.

MOXI is hoping to connect the NGSS standards to exhibits with a teacher PD component

Seesaw post to document interaction with exhibits

Question on interesting exhibit but not connecting it to science

Might be nice to have questions to guide exploration

Does that change the interaction? It is better used tied to teacher resource?

Make it more meaningful for students

Make it more meaningful for teachers

Example of art museum that comes out to your classroom first that guides students (front loading)

Teacher experience brings a context to the exhibit when they have greater understanding.

Need help to determine which CCC, DCI, SEPs tie to exhibits, front loading for teachers and volunteers if

End loading with experiments, extensions

Items for next agenda- 2/28

Exploring Publishers' Products- FOSS, TCI, Engineering is Elementary, Discovery Education Techbook

Google Apps Science Journal

Science Specialists model- the good, the bad, and the ugly

Timeline

February 2018

April 2018- Introductory rollout during district afternoon

June 2018- Miracle week continuation

August 2018- More NGSS roll-out for all staff

Fall 2018- CA approves publisher products for NGSS

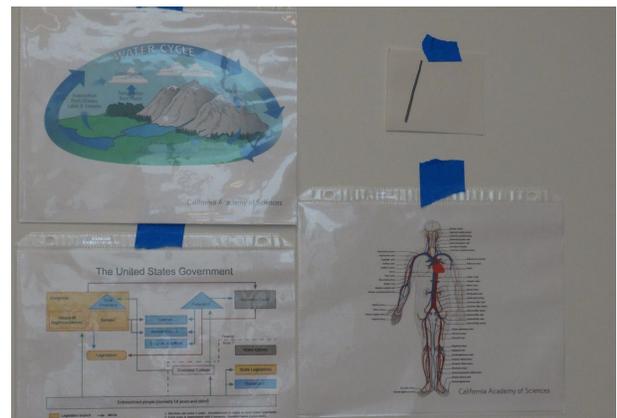
January Curriculum Council day? - training for those piloting

January 2019- April 2019- quasi piloting

May 2019- Determine publisher to adopt

June 2019- Board approval

August 2019- Training in new publisher materials for NGSS





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Energy and Matter

California Academy of Sciences

Trophic levels in an ecosystem

California Academy of Sciences

3

$$E=mc^2$$

California Academy of Sciences

7

Predator and Prey Population Size Over Time

California Academy of Sciences

5

The Academy's Sustainable Design

- 100% of construction materials were recycled
- 50,000 tons of sand from local sandstone quarries recycled to reuse restoration projects in San Francisco
- 90% of all steel from recycled sources
- 100% of water on recycled used by product
- 100% slag in concrete
- 100% of lumber harvested from sustainable forest lands
- 100% of insulation comes from recycled blue jeans
- 100% of office space will have natural light and ventilation
- 100,000 water-saving gallons, 215,000 kilowatt-hours

Scale, Proportion

↳ quantity

- * Compare
- * Standard units

↓

* observable patterns in real world (phenomena)

↳ using units to measure different quantities