

Secondary Science Curriculum Adoption Committee Meeting

Thursday, January 26th, 2023
SUSD Oak Campus

Call to Order



Welcome and Thank you!

Roll Call - Introductions

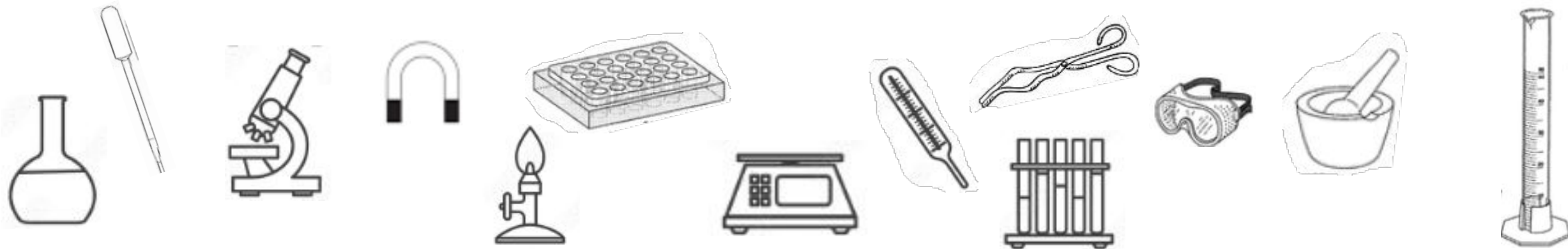
Name

Role (teacher, parent, administrator, etc.)

School/Learning Community

I am most like a _____ because _____. *OR*

My favorite piece of science equipment is _____, because _____.



THE Committee

Middle School Group

Christen Anderson - Teacher
Keri Cavanaugh - Teacher
Tammy Clow-Kennedy - Counselor
Chris Hain - Teacher
Stacy Hency - Teacher
Amanda Holley - Teacher
Jena Krahll - Teacher
Lori Kelly - ELD Coach
Janeva Mammina - Teacher
D'Anne McDaniel - Teacher
Jodi Meyers - Parent
Kelsea Reimer - Teacher
Holli Scharf - Administrator
Dr. Thomas Weaver - SPED Department

Life Science Group

Angie Berk - Teacher
Elizabeth Bond - Teacher
Sean Collier - Teacher
Betsy Fisher-Pai - Parent
Danielle Hawkins - Teacher
Julie Koshy - Teacher
Paula Sabato - Teacher
Luke Strohmeyer - Teacher

Chemistry Group

Rissel Langbecker - Parent
Anne Milligan - Teacher
Dr. Bradley Wagstaff - Teacher
Laura Weeshoff - Community Member

Physics Group

Patricia Bordonaro - Teacher
Jill Dunican - Parent
Hannah McKolay - Teacher
Philip Root - Community Member

Committee Support

Dr. Kim Dodds Keran - Director of Teaching and Learning

- Committee Co-Chair

Johanna Kaiser - Science Academic Coach

- Committee Co-Chair

Dede Johnston - Instructional Materials Coordinator

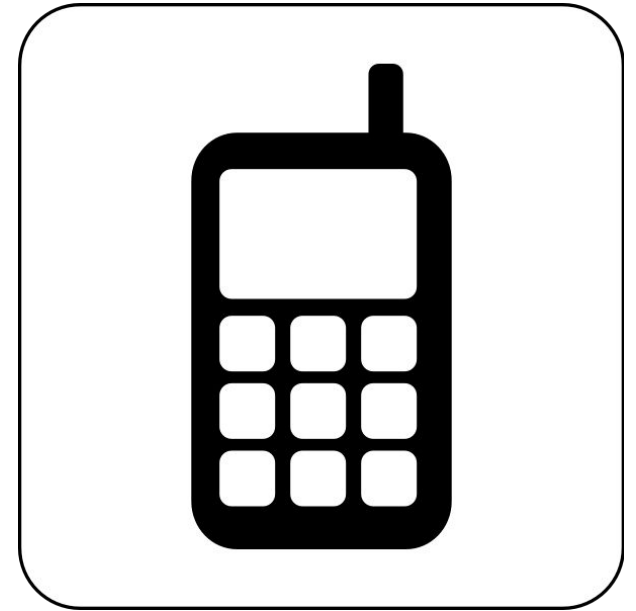
Tyler Carey - Former Instructional Materials Coordinator

Agenda

Agenda for Thursday, January 24, 2023

1. **Welcome and Introductions**
2. **Open Meeting Law, Public Records, and Conflict of Interest**
3. **Committee Goals, Norms, and Expectations**
4. **Committee Timeline**
5. **Overview of Arizona Science Standards**
6. **Criteria for Vendor Letters**
7. **Arizona Department of Education Resources**
8. **Future Meetings**

Housekeeping



Open Meeting Laws, Public Records, and Conflict of Interest

Jennifer MacLennan - Gust Rosenfeld P.L.C.



SUNSHINE LAWS

Open Meeting Law
Public Records Law
Conflict of Interest

Jennifer MacLennan

Gust Rosenfeld

Public Records

Board Governance

Open Meeting Law

Election Law (Overrides and Bond
Elections)

Student Discipline and Employment
Hearings

Attorney-Client Privilege

Conflict of Interest Laws

Who is subject to OML (Besides a quorum of the Board)?

- All standing , special, or advisory committees or subcommittees of, or appointed by the Board.
- “Advisory Committee”
 - Officially established by motion or order of the public body or by the presiding officer.
 - Appointed to make a recommendation concerning a decision to be made or considered by the public body.

Does not include a committee established by the Superintendent.

Curriculum Committees

- Committees that choose curriculum are specifically required under state law to comply with the Open Meeting Law.
- Relevant statutes are ARS 15-721 and ARS 15-722
- Resulted from a decision out of 1975 AZ Supreme Court decision from Washington Elementary in which the court found that curriculum committees were not subject

OML

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OML Basics

- All meetings of a quorum of the committee must be:
 - Posted twenty-four hours prior
 - With an agenda
 - With minutes or a tape of the meeting
- A quorum of the committee cannot have a discussion regarding items that may be presented to the committee outside of an open published meeting

OML Basics

- Majority of the committee is a quorum
- Vacancies count in determining what your quorum is.
- Cannot communicate with a quorum by email or other technological means
- Do not reply all to emails sent

Public Records

- The general policy of this State with respect to public inspection of governmental records is set forth in A.R.S. § 39-121: "Public records and other matters in the custody of any officer shall be open to inspection by any person at all times during office hours."

Personal Documents

- Although most documents in a public officer's possession are public records, documents that relate solely to personal matters and have no relation to official duties are not public records even if a public officer or agency possesses them or uses public funds to create them.
- Emails one specific example

Confidentiality Concerns/Best Interests

- Although there is a presumption in favor of access to public records, this presumption may be outweighed by legitimate government considerations of privacy and the best interests of the State.
- Scottsdale USD v. KPNX- teacher's dates of birth example

Public Documents

- Assumption that documents prepared for the curriculum committee are public documents:
 - Agendas
 - Minutes
 - Emails
 - Documents distributed

Conflicts of Interest - Basic Rule

Summary: Any public officer or employee of a public agency who has, or whose relative has, a *substantial interest* in any decision of that agency, shall

- “make known that interest in the official records of such public agency”
- “refrain from voting upon or otherwise participating in any manner as an officer or employee in” the decision.
- A.R.S. § 38-503

Disclosing Conflicts

- If anyone on the committee has concerns about their connections to a potential vendor, please raise those with the committee head
- Unable to accept gifts from potential vendors other than minimal items and meals

What's a substantial interest?

- Substantial interest" means any pecuniary or proprietary interest in a matter before the Board, either direct or indirect, other than a remote interest. A.R.S. §38-502
- "Pecuniary means money and proprietary means ownership." *Shepherd v. Platt*, 177 Ariz. 63, 65, 865 P.2d 107, 109 (App. 1993)





Scottsdale *Unified* School District
Engaging all students in world-class, future-focused learning.

Teaching and Learning
Secondary Science Curriculum Adoption Committee
8900 East Jackrabbit Road
Scottsdale, AZ 85250

Telephone: 480-484-9009
Web site: www.susd.org

Dear Committee Member:

You have been selected to participate in the evaluation of the above referenced Invitation for Bid/Request for Proposal. Your selection was based upon your technical qualifications in this area and your ability to develop an objective/subjective analysis of each bid/proposal.

It is essential that the integrity of this process be maintained to ensure that each bidder/officer is given fair and equal consideration. Your familiarity with particular brands, types of products, material, or firms may tend to influence your evaluation; however, you are required in this specific instance to be particularly objective and guard against any tendency that might skew your evaluation in favor of a personal preference.

You are required to report to the Committee Chair, Dr. Kimberly Dohda Kerns, any actual or potential conflict of interest as defined in A.R.S. 38-503.

An additional consideration is the legal mandate to maintain strict security and confidentiality regarding the content of any bid/proposal, as well as the proceedings of the Evaluation Committee meetings during the evaluation process. Now that this process has started, it is essential that any contact with the officer by through, and by, the Chairman of the Evaluation Committee.

In addition, the Evaluation Committee Member shall not communicate, except during formal Committee meetings, with any officer or potential sub contractor to that officer prior to award nor shall that Member discuss bid/proposals or their evaluation with anyone other than the Chairperson and Evaluation Committee Members. This statement is mandatory.

To emphasize the importance of the above considerations, you are asked to sign the following statement:

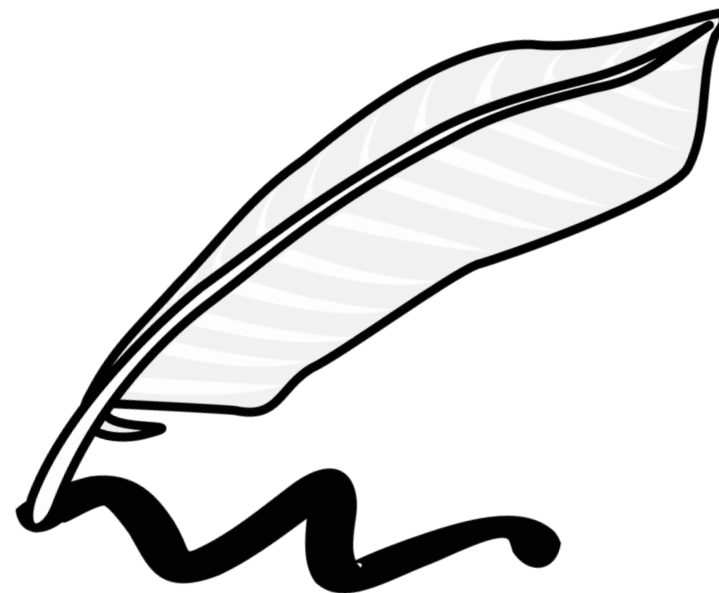
I have read and understood the above and agree to be bound by the rules and procedures represented. I know of no conflict of interest on my part nor have I committed any inducements or accepted any gratuity or favors that would compromise my impartiality. I will maintain all deliberations of the Evaluation Committee in strict confidence during this process. My recommendations shall be based upon objective/subjective review of the bid(s)/proposal(s) and the appropriate award criteria from the bid/proposal in accordance with the School District Procurement code.

Printed Name

Signature

Position

Use of Form Recommended by Attorney General's Office
Source: State Procurement Office
D-56 (10/2000)



Committee Goals, Norms and Expectations

SUSD Strategic Plan

GOAL 1: **ACADEMIC EXCELLENCE**

Challenge and inspire students to reach high levels of achievement so they thrive as confident, dynamic, future-ready learners equipped to pursue their passions and ambitions. Commitments:

1.1: Provide learning opportunities that ensure all students graduate prepared for relevant and viable postsecondary higher learning and careers.

1.2: Cultivate critical and creative thinking by integrating problem-based learning opportunities throughout the curriculum.

GOAL 5: **OPTIMIZED RESOURCES**

Generate and utilize resources to maximize educational opportunities in order to ensure organizational health.

5.3 *Ensure equitable distribution of resources to meet the needs of our students.*

Committee Purpose and Objective

Purpose

The purpose of the Secondary Science Curriculum Adoption Committee is to review, evaluate, and recommend quality and appropriate textbooks and instructional resources for approval by the district Governing Board.

Objective

The committee will:

- Learn about current best practices in three-dimensional science instruction including (but not limited to):
 - explaining phenomena and/or designing solutions to problems,
 - using science and engineering practices to actively engage students in science learning,
 - integrating disciplinary core ideas and crosscutting concepts to drive student learning,
 - science sensemaking,
 - three-dimensional performance assessments.
- Learn about Arizona Science Standards and Arizona science education requirements.
- Develop rubric criteria to be used to evaluate science textbooks and resources.
- Review and evaluate science textbooks and instructional resources.
- Recommend textbooks and instructional resources to the Governing Board for formal approval and adoption.

Courses Included in this Adoption Process

Middle School Units

- 6th Grade: Science Practices and Methods, Earth and Space Science
- 7th Grade: Earth and Space Science, Life Science
- 8th Grade: Earth and Space Science, Life Science

High School Life Science

- Biology (Biology I, Biology I Honors, Pre-AP Biology, Pre-AP Biology Honors)
- Exercise Science

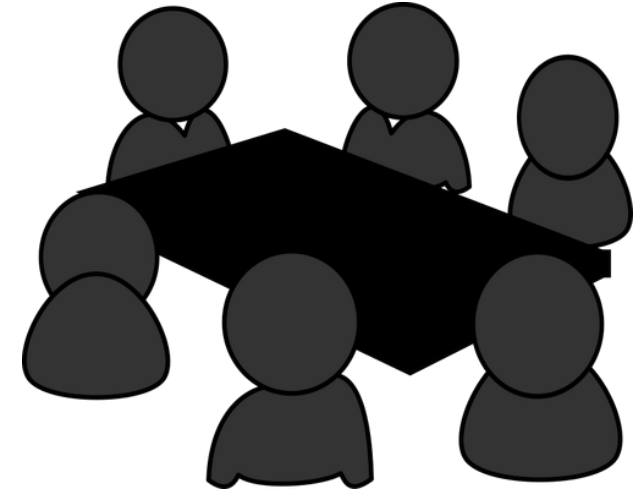
High School Physical Science - Chemistry

- Chemistry (Chemistry I, Chemistry I Honors, Pre-AP Chemistry, Pre-AP Chemistry Honors)

High School Physical Science - Physics

- Physics (Physics I, Physics I Honors, Physics First, Physics First Honors)
- AP Physics 1
- AP Physics 2

Committee Norms



Establishing norms:

- **Encourages behaviors that allow groups to work together successfully.**
- **Allows groups to dialogue, engage productively in conflict, discuss and decide, invent and problem solve.**
- **Make it safe to examine one's practice and talk about difficult to discuss topics.**

Key Question:

How must we conduct ourselves to allow us to work together most successfully to accomplish our goals?

Norms

Be fully present.

Listen to understand and ask questions for clarification.

Take care of your needs.

Be open to new ideas.

Invite and welcome the contributions of every member.

Support the group's recommendation after consensus is reached.

Be mindful of how often and how long you speak.

Questions and challenges are welcomed. Question and challenge the idea, not the person.

Clarifying Decision-Making Process

Defining Consensus

Defours et al - Definition of Consensus:

All points of view have been heard.

The will of the group is evident even to those who most oppose it.

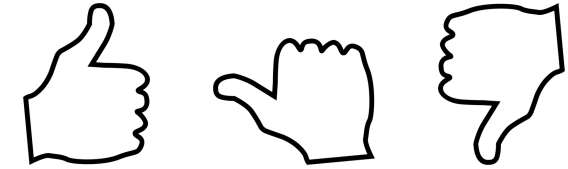
If all members of a committee/group must agree - or if every member of a committee can veto taking action - groups will be subjected to constant inaction... a state of perpetual status quo.

Without a shared understanding of consensus, persons determine their own standards.

Consensus decision making is a group decision making process that seeks consent of all participants where everyone's opinions are heard and understood. It is an acceptable resolution; one that can be supported, even if it is not the "first choice" or "favorite" of each individual.

Clarifying Decision-Making Process

Defining Consensus



Consensus is...

- Consenting to a proposal because **group members choose to cooperate** with the direction of the **group rather than insist on their personal preference.**
- ***“Is this proposal something you can live with?”*** While group members may be willing to go along with a proposal, **they do not actually need to favor it above another choice.**
- To ***“consent”***. This means that even if group members disagree, **there is still overall consent to move forward** in order to settle the issue.

Words Create Worlds

Away from Deficit-Framing Language → Towards Asset-Based Language

Deficit-Framing Language	Asset-Based Language
needs driven	strengths driven
problems focused	opportunity focused
externally focused	internally focused
What is missing that we must go find?	What is present that we can build on?
Examples of using asset-based language	
Kids and teachers can't remember all the different websites and passwords to log into online curriculum resources.	Teachers and students are most successful when online curriculum can be accessed through Single Sign-On and the SUSD Clever portal.
My students can't read this level of text.	Students in my class have varied reading levels. Some would benefit from access to resources such as text to speech and interactive texts to help them read and understand passages.
There is not enough prep time for teachers to make presentations and assessments from scratch.	Teachers will have more time to prepare lessons and activities if provided with presentations and resources created by the curriculum to use as a foundation.

Words Create Worlds

STEM Teaching Tool: Constructive Conversation Resource Cards



Constructive Conversation Resource Cards

Create

Evaluate and Compare

Clarify

Prompts

- Can you elaborate on...? OR Can you clarify the part about...?
- What do you mean by...?
- Say more about...
- How is _____ important?
- I understand the part about _____, but I want to know _____.
- Can you be more specific?
- Is what I said clear? OR Does that make sense?
- What do you think?

Responses

- I think it means _____.
- More specifically, it is _____, because _____.
- An analogy might be...
- It is important because...
- To paraphrase what you just said...
- It sounds like you think that...
- It all boils down to...
- A different way to say it is...

Prompts

- What is our idea?
- How can we combine these ideas?
- What do we need to do?
- What are other points of view?
- What do you think about?
- Why...? How...? I wonder...

Responses

- One idea could be...
- My hypothesis is...
- That reminds me of...
- I noticed the pattern of...
- I think it depends on...

Fortify/Support

Prompts

- Can you give an example from the materials?
- Where does it say that?
- What is an example from other readings/materials?
- What is an example from your life?
- What is the strongest support for _____? How does it support the idea?

Responses

- For example...
- In the materials/text, it says...
- Remember in the other subject we studied...
- One example from my life is...
- One case that illustrates this is...
- Some strong supporting evidence is...

Prompts

- How can we decide which is the more _____ issue?
- How does the evidence for your argument compare to mine?
- What criteria do we use to evaluate the weight of evidence?
- How do we compare "apples" of _____ to the "oranges" of _____?
- Which has the strongest evidence?
- What is your opinion? Why?
- How might we take the best from both sides?
- How is that evidence stronger than this evidence?

Responses

- I think we should use the criteria of _____ because _____.
- _____ is strong evidence because...
- A point of disagreement that I have is...
- Even though it seems valid that _____, I disagree because...
- That is a valid point, but...
- I think the negatives of _____ outweigh the positives of _____.

Break

Get up, move around and get to know your group members!

Need some conversation starters?

- *What made you smile today?*
- *What's the best gift you have ever received?*
- *What superpower do you wish you could have?*
- *What's the best thing you have ever bought off Amazon?*
- *Is a hotdog a sandwich?*

Committee Timeline

Proposed Timeline

Meeting #	Date	Time	TENTATIVE focus of meeting (subject to change)
1	Thursday, January 26	4:00 - 6:30	Committee overview, legal training, Arizona Science Standards, criteria
2	Thursday, February 2	4:00 - 6:30	Rubric overview, training, and creation
3	Thursday, February 9	4:00 - 6:30	Rubric calibration activity, begin Open Education Resources (OER) reviews
4	Thursday, February 16	4:00 - 6:30	OER reviews continued
5	Thursday, March 2	4:00 - 6:30	Vendor material reviews
6	Thursday, March 9	4:00 - 6:30	Vendor material reviews
7	Thursday, March 23	4:00 - 6:30	Vendor material reviews (if necessary)
8	Thursday, March 30	4:00 - 6:30	Vendor material reviews (if necessary)

★ **Vendor letters go out week of January 30th.**

★ **Vendor materials arrive by February 27th.**

Materials available for public viewing and feedback.

Proposed Timeline (*subject to change)

Meeting #	Date	Time	TENTATIVE focus of meeting (subject to change)
9	Vendor Presentations		
9a	Monday, April 10	12:00 - 5:00	Vendor presentations - Middle School
9b	Tuesday, April 11	12:00 - 5:00	Vendor presentations - Life Science
9c	Wednesday, April 12	12:00 - 5:00	Vendor presentations - Chemistry
9d	Thursday, April 13	12:00 - 5:00	Vendor presentations - Physics
10	Thursday, April 20	4:00 - 6:30	Final recommendations (if necessary)
11	Wednesday, April 26	4:00 - 6:00	Governing Board Presentation Practice and Review (optional)
Tuesday, May 2, 2023 - Tentative Governing Board Meeting and Presentation - 1st read			
Tuesday, May 16, 2023 - Tentative Governing Board Meeting - 2nd read, vote			

Arizona Science Standards

Standards vs. Curriculum vs. Instruction

Standards - What students need to know, understand, and be able to do by the end of each grade (end of high school). The WHAT

Curriculum - Resources adopted by districts to be used in the classroom to teaching the standards. The HOW (part 1)

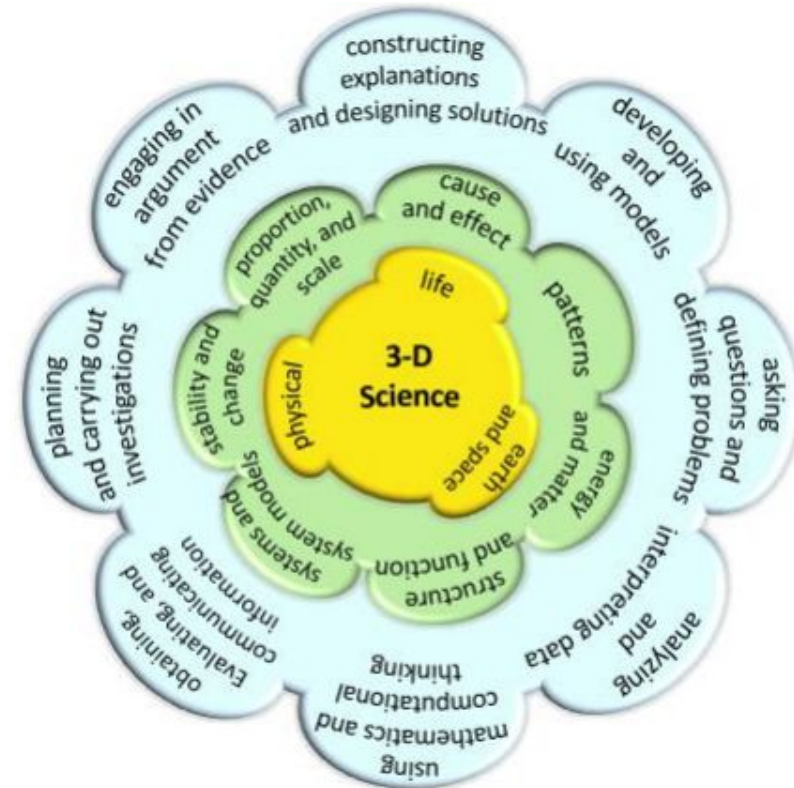
Instruction - The methods used by teachers to teach their specific students. The HOW (part 2)

3 Dimensions of Teaching and Learning Science

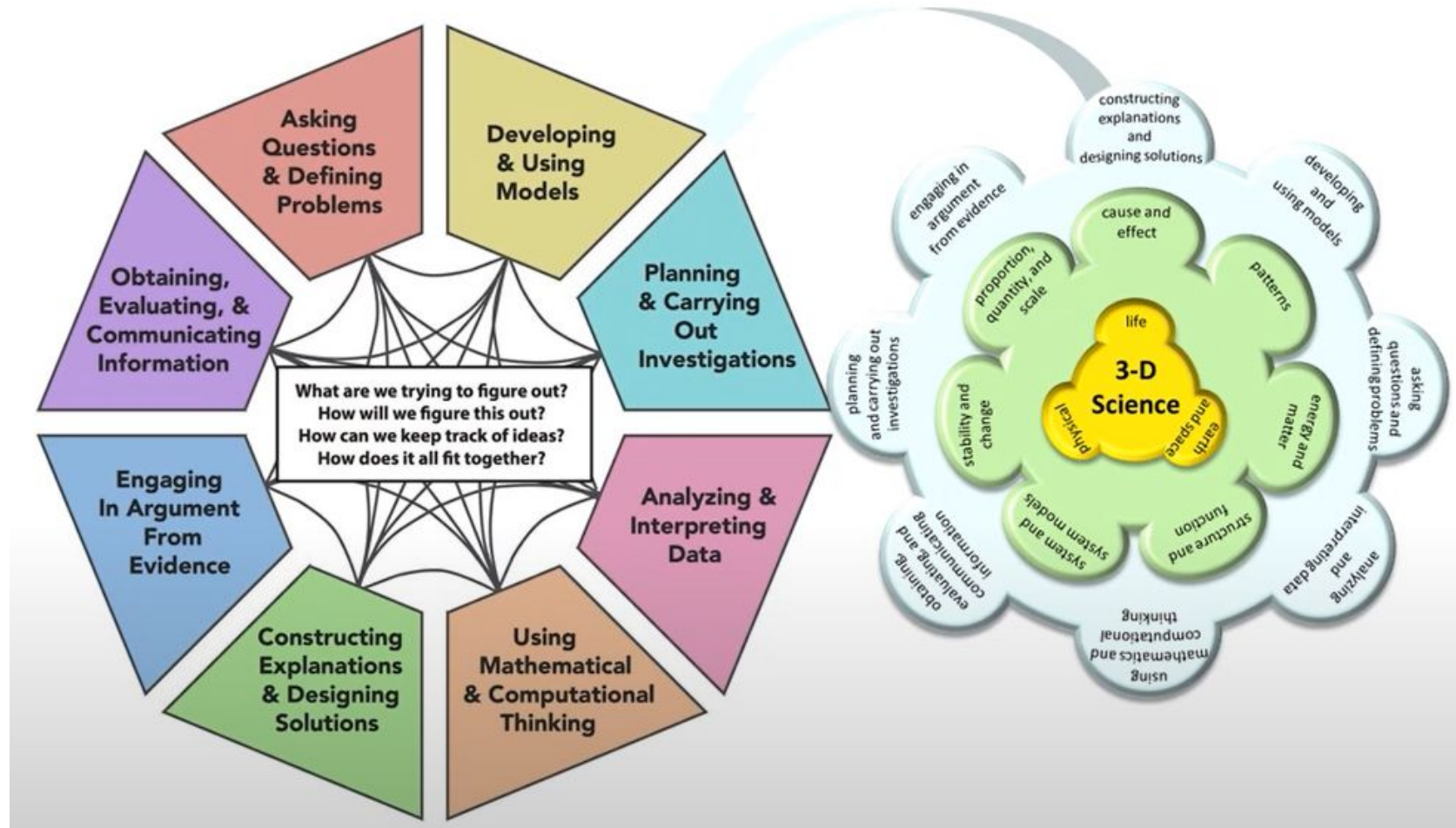
Science and Engineering Practices

Crosscutting Concepts

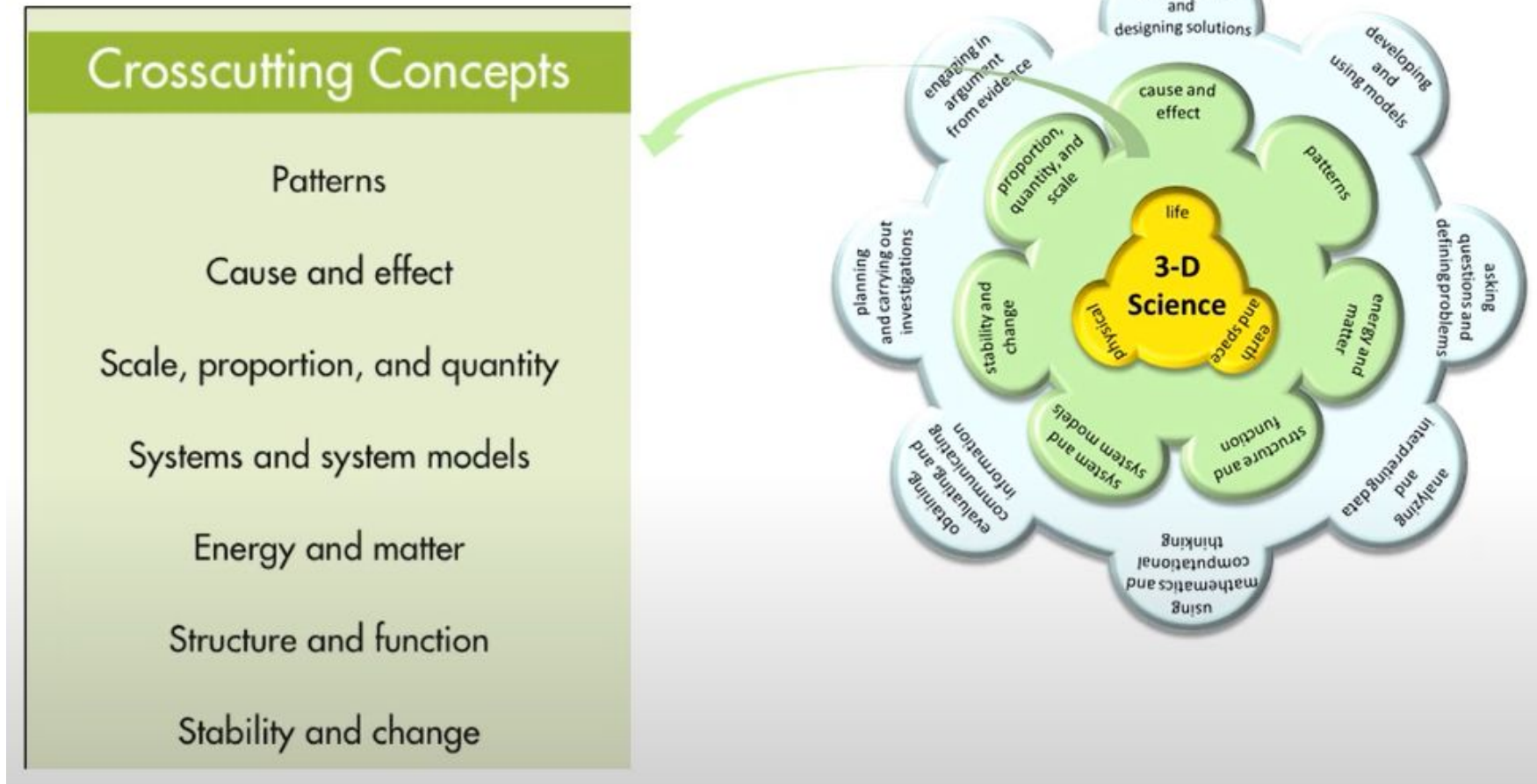
Disciplinary Core Ideas



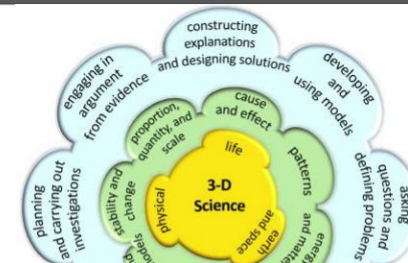
Science and Engineering Practices



Crosscutting Concepts



Core Ideas



Core Ideas for Knowing Science

Physical Science

- P1: All matter in the Universe is made of very small particles.
- P2: Objects can affect other objects at a distance.
- P3: Changing the movement of an object requires a net force to be acting on it.
- P4: The total amount of energy in a closed system is always the same but can be transferred from one energy store to another during an event.

Earth and Space Science

- E1: The composition of the Earth and its atmosphere and the natural and human processes occurring within them shape the Earth's surface and its climate.
- E2: The Earth and our solar system are a very small part of one of many galaxies within the Universe.

Life Science

- L1: Organisms are organized on a cellular basis and have a finite life span.
- L2: Organisms require a supply of energy and materials for which they often depend on, or compete with, other organisms.
- L3: Genetic information is passed down from one generation of organisms to another.
- L4: The unity and diversity of organisms, living and extinct, is the result of evolution.

***Adapted from *Working with Big Ideas in Science Education*²**

Core Ideas for Using Science

- U1: Scientists explain phenomena using evidence obtained from observations and or scientific investigations. Evidence may lead to developing models and or theories to make sense of phenomena. As new evidence is discovered, models and theories can be revised.
- U2: The knowledge produced by science is used in engineering and technologies to solve problems and/or create products.
- U3: Applications of science often have both positive and negative ethical, social, economic, and/or political implications.

Distribution of Core Ideas of Knowing Science Across All Grade Levels

Knowing Science	Knowing Science	K	1	2	3	4	5	6	7	8	HS
P1 Physical Science	All matter in the Universe is made of very small particles.										
P2: Physical Science	Objects can affect other objects at a distance.										
P3: Physical Science	Changing the movement of an object requires a net force to be acting on it.										
P4: Physical Science	The total amount of energy in a closed system is always the same but can be transferred from one energy store to another during an event.										

Knowing Science	Knowing Science	K	1	2	3	4	5	6	7	8	HS
E1 Earth & Space Science	The composition of the Earth and its atmosphere and the natural and human processes occurring within them shape the Earth's surface and its climate.										
E2: Earth & Space Science	The Earth and our solar system are a very small part of one of many galaxies within the Universe.										

Knowing Science	Knowing Science	K	1	2	3	4	5	6	7	8	HS
L1 Life Science	Organisms are organized on a cellular basis and have a finite life span.										
L2: Life Science	Organisms require a supply of energy and materials for which they often depend on, or compete with, other organisms.										
L3: Life Science	Genetic information is passed down from one generation of organisms to another.										
L4: Life Science	The unity and diversity of organisms, living and extinct, is the result of evolution.										

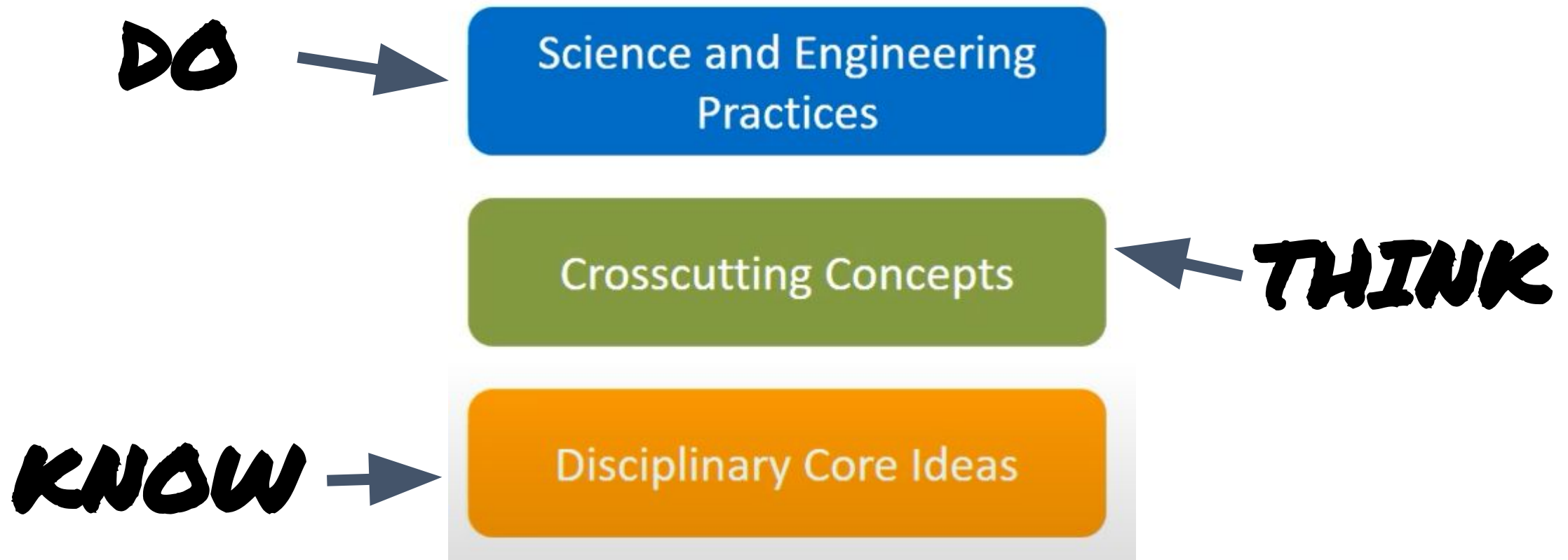
3-Dimensional Teaching and Learning One-Pager

3-Dimensions of Teaching and Learning Science

Science and Engineering Practices	Crosscutting Concepts
- ask questions and define problems - develop and use models - plan and carry out investigations - analyze and interpret data - use mathematics and computational thinking - construct explanations and design solutions - engage in argument from evidence - obtain, evaluate, and communicate information	- patterns - cause and effect - structure and function - systems and system models - stability and change - scale, proportion, and quantity - energy and matter
Core Ideas	
Core Ideas for Knowing Science	Core Ideas for Using Science
<u>Physical Science</u> P1: All matter in the Universe is made of very small particles. P2: Objects can affect other objects at a distance. P3: Changing the movement of an object requires a net force to be acting on it. P4: The total amount of energy in a closed system is always the same but can be transferred from one energy store to another during an event. <u>Earth and Space Science</u> E1: The composition of the Earth and its atmosphere and the natural and human processes occurring within them shape the Earth's surface and its climate. E2: The Earth and our solar system are a very small part of one of many galaxies within the Universe. <u>Life Science</u> L1: Organisms are organized on a cellular basis and have a finite life span. L2: Organisms require a supply of energy and materials for which they often depend on, or compete with, other organisms. L3: Genetic information is passed down from one generation of organisms to another. L4: The unity and diversity of organisms, living and extinct, is the result of evolution.	U1: Scientists explain phenomena using evidence obtained from observations and or scientific investigations. Evidence may lead to developing models and or theories to make sense of phenomena. As new evidence is discovered, models and theories can be revised. U2: The knowledge produced by science is used in engineering and technologies to solve problems and/or create products. U3: Applications of science often have both positive and negative ethical, social, economic, and/or political implications.

Arizona Science Standards, Arizona Department of Education [LINK](#)

3 Dimensions of Teaching and Learning Science



Phenomena

What students
OBSERVE about
the natural or
manmade world

What students
DO to make
sense of
phenomena

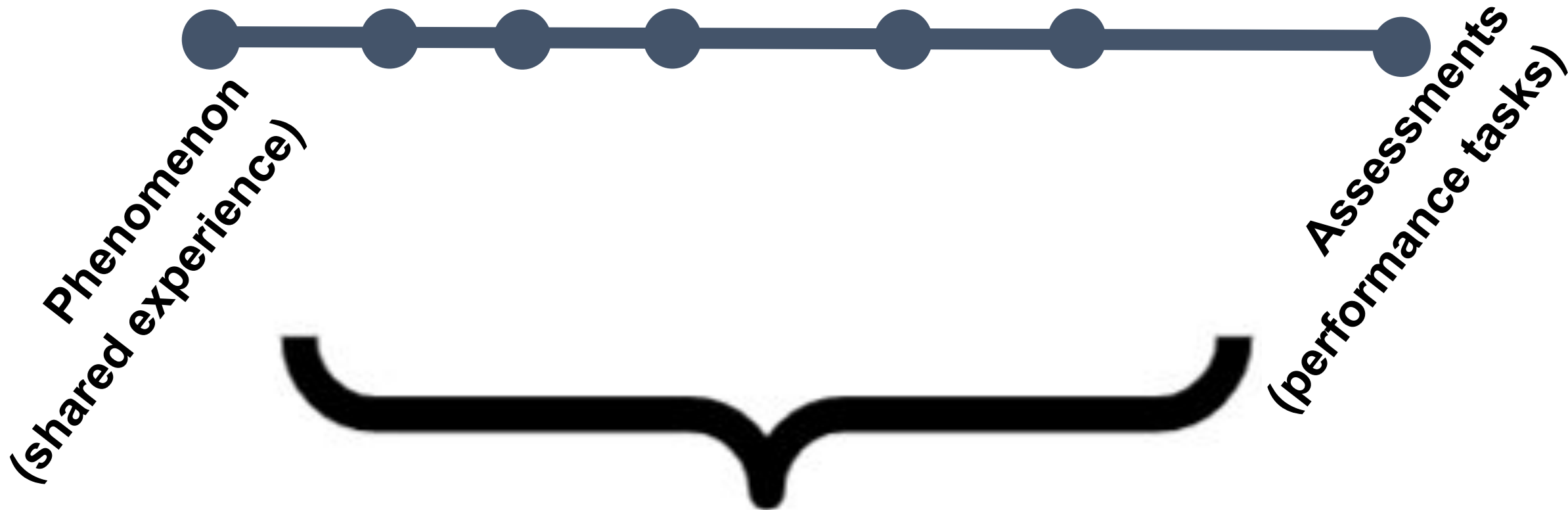
Science and Engineering Practices

What students
KNOW...the
scientific
concepts
explaining the
phenomena

Disciplinary Core Ideas

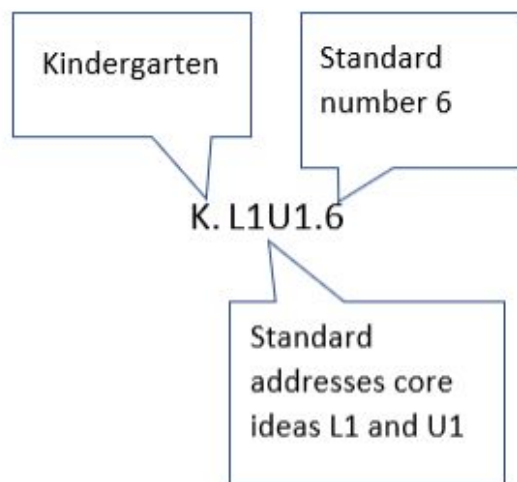
Crosscutting Concepts

How students
THINK about
phenomena in
'big picture'
ideas that cross
all science
domains...the
bridge to other
disciplines

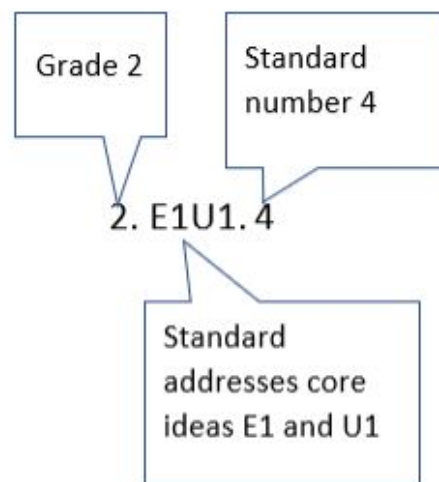


Sensemaking: 3-Dimensional Teaching and Learning for students to make sense of phenomenon

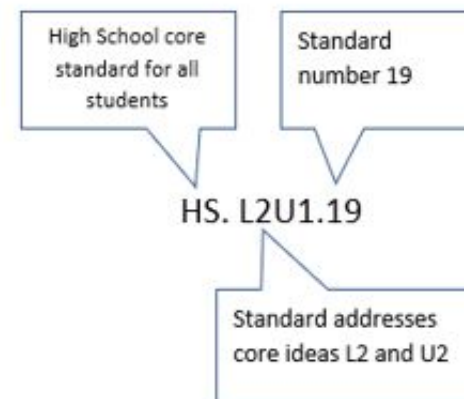
Decoding the Standards



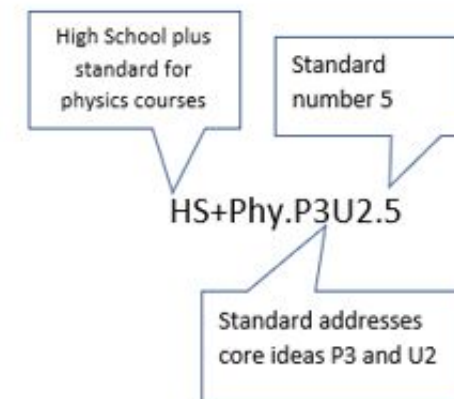
K. L1U1.6 Obtain, evaluate, and communicate information about how organisms use different body parts for survival.



2.E1U1.4 Observe and investigate how wind and water change the shape of the land resulting in a variety of landforms.



HS. L2U1.19 Develop and use models that show how changes in the transfer of matter and energy within an ecosystem and interactions between species may affect organisms and their environment.



HS+Phy.P3U2.5 Design, evaluate, and refine a device that minimizes or maximizes the force on a macroscopic object during a collision.

Earth and Space – E2: The Earth and our solar system are a very small part of one of many galaxies within the Universe. Earth and the Solar System. Essential standards are standards that will be assessed on the state exam and are intended for ALL students to have learned by the end of 3 credits of high school science courses.

Essential HS.E2U1.16

Construct an explanation of how gravitational forces impact the evolution of planetary motion, structure, surfaces, atmospheres, moons, and rings.

Earth and space Plus (+) Standards HS+E are supporting standards designed to be used with the essential standards for students taking a high school earth and space (E) course.

Plus HS+E.E2U1.13

Analyze and interpret data showing how gravitational forces are influenced by mass, and the distance between objects.

Plus HS+E.E2U1.14

Use mathematics and computational thinking to explain the movement of planets and objects in the solar system.

Crosscutting Concepts & Background Information for Educators

Crosscutting Concepts:

Patterns; Cause and Effect; Scale, Proportion and Quantity; Systems and System Models; Energy and Matter; Structure and Function; Stability and Change⁴

Background Information:

The solar system consists of the sun and a collection of objects of varying sizes and conditions—including planets and their moons—that are held in orbit around the sun by its gravitational pull on them. This system appears to have formed from a disk of dust and gas, drawn together by gravity. Earth and the moon, sun, and planets have predictable patterns of movement. These patterns, which are explainable by gravitational forces and conservation laws, in turn explain many large-scale phenomena observed on Earth. Planetary motions around the sun can be predicted using Kepler’s three empirical laws, which can be explained based on Newton’s theory of gravity. Gravity holds Earth in orbit around the sun, and it holds the moon in orbit around Earth. ⁴ (p. 175) Kepler’s laws describe common features of the motions of orbiting objects, including their elliptical paths around the sun. Orbits may change due to the gravitational effects from, or collisions with, other objects in the solar system. Cyclical changes in the shape of Earth’s orbit around the sun, together with changes in the orientation of the planet’s axis of rotation, both occurring over tens to hundreds of thousands of years, have altered the intensity and distribution of sunlight falling on Earth. These phenomena cause cycles of ice ages and other gradual climate changes. ⁴ (p. 176)

2004 AZ Standards vs. 2018 AZ Standards

2004 Adopted Standard	2018 Adopted Standard
6.3.PO1 Explain that sunlight is the major source of energy for most ecosystems.	6.L2U1.14 Construct a model that shows the cycling of matter and flow of energy in ecosystems. Crosscutting Concepts: Patterns; Scale, Proportion and Quantity; Systems and System Models; Energy and Matter;
No further clarification provided	Background information provided in the standards document and further clarification provided in Elements document.

Making sense of a phenomenon



I observe...

I wonder...

Student Experience

- Make observations
- Ask questions
- Conduct an investigation
- Develop a model
- Communicate the results of an investigation
- Engage in argument from evidence
- Obtain information from multiple sources
- Construct an explanation

Pause and Reflect

Alone Zone

Reflect on the information presented.

 <i>Excited</i>	 <i>Surprised</i>	 <i>Confused</i>

Vendor Letter - Criteria

Vendor Letter - Criteria



Scottsdale *Unified* School District
Engaging all students in world-class, future-focused learning

SECONDARY SCIENCE CURRICULUM ADOPTION COMMITTEE

SUSD's VISION: Engaging all students in world-class, future-focused learning.

SUSD's MISSION: We inspire, motivate, and empower all to think critically, act collaboratively, and embrace diversity for a life of intellectual exploration, community engagement, and personal growth.

DRAFT Criteria for determining the quality of instructional materials include:

Accuracy and Alignment:

- Aligned to Arizona Science Standards (must provide an explicit AzSS alignment document).
- Aligned to course and exam content of AP courses (if applicable).
- Uses scientifically accurate and grade appropriate scientific information, phenomena, and representations to support students' three-dimensional learning.
- Curriculum is research-based with supporting evidence.
- Designed so students make sense of phenomena and/or design solutions to problems by engaging students in 3-dimensional learning (Science and Engineering Practices, Crosscutting Concepts, and Core Ideas).
- When appropriate, links are made to AZ Science Standards in all the domains (life science, physical science, and Earth and space science). Core ideas from different disciplines are used together to explain phenomena.
- Curriculum is at least 20% laboratory/investigation-based (devoted to providing an opportunity for students to manipulate equipment, materials, or specimens to develop skills in observation and analysis, and to discover, demonstrate, illustrate, or test scientific principles or concepts).
- Appropriate lessons, investigations, and assessments that prepare students for high stakes assessments, performance-based tasks, and advanced coursework.

Engagement and the Ability to Meet Student Needs

- Engages students in authentic and meaningful scenarios that reflect the practice of science and engineering as experienced in the real world.
- Provides guidance and resources for teachers to differentiate instruction and assessment (both support and extensions).
- Questions and learning tasks encourage the development and application of critical and creative thinking.
- Problem-based learning and simulations relevant to the lives of students.
- Differentiation in each unit (content, process, product for readiness, language ability, learning style, etc.).
- Resources spark student interest and include interdisciplinary, real world connections.

Ease of Use and Support

- Layout and organization of curriculum materials contribute to ease of use.
- Resources are available in multiple formats for both students and teachers (hard-copy, digital, etc.). Digital resources can be accessed by teachers and students through SUSD's learning management systems (Clever, Google Classroom, Synergy, etc.).
- Curriculum is designed to link student engagement and knowledge across lessons and units and is arranged in a logical sequence.
- Curriculum provides supports to teachers that buttress student academic honesty.
- Scoring guidelines and rubrics are provided for assessments.
- Professional development is provided to support implementation of curriculum.

ADE Resources

Arizona Department of Education Resources

[Arizona Science Standards](#) webpage

Recorded Webinars and Videos (16 available)

- [Science Standards Overview Video](#)
- [Phenomenon-Based 3-Dimensional Instruction Video](#)
- [SEPs, CCCs, and Core Ideas: Putting the 3-Dimensions Together Video](#)

[ADE Guidance for Evaluating High Quality Instructional Science Materials Resource Page](#) and [Video](#)

And so much more!



Future Meetings

Next Meeting

Thursday, February 2, 2023 from 4:00 - 6:30
at SUSD Oak Learning Campus 7501 E Oak St, Scottsdale, AZ 85257

Please bring a laptop to the next meeting
and every meeting thereafter.



Meeting adjourned!

