



Welcome!

Region 4 Science

Leadership Network

September 16, 2015

Coffee Talk

Is there a topic you would like to discuss with your colleagues?

Use a sticky note to share your question or topic.



Region 4 Science Solutions

Anne Douglas – Director of Science Solutions

Elementary Science

- Edrice Bell
- Dianna Garland
- Hanna Roach

Middle School Science

- Jeanette
Shepherd
- Dodie Resendez

High School Science

- Elisa Lewis
- Mariana
Maldonado
- Jennifer Wellman

Lynn Bachellor

If you would like to honor Lynn, the family would appreciate donations to the Aldine Education Foundation in memory of Lynn Bachellor.

aldineeducationfoundation.org



**Would You
Rather?**

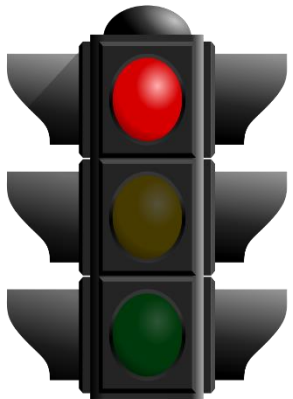
Would You Rather?

Never be able to drive
on the freeway again



OR

Never again
make a green light?



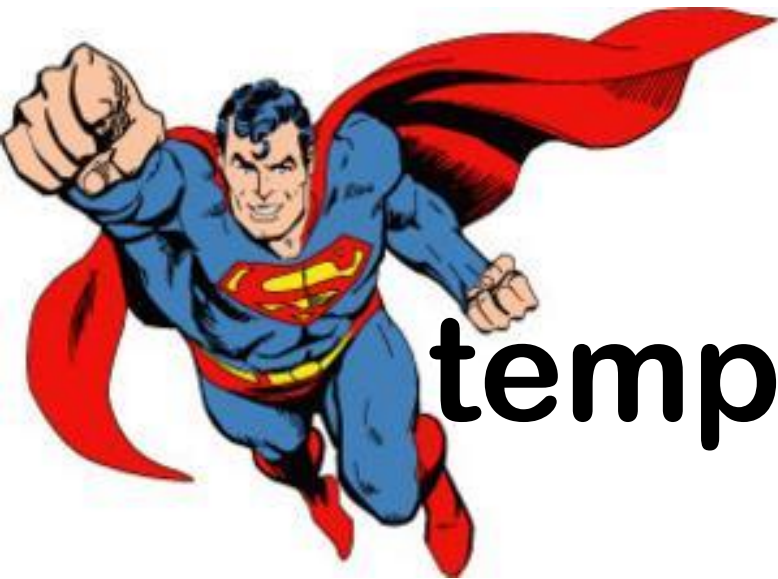
Would You Rather?

Be temporarily invisible



OR

temporarily invincible?



Would You Rather?

Be given the luxury car of your choice and be pulled over and questioned once a week



OR



drive a 1979 Datsun B210 and be immune to all traffic violations?

Would You Rather?

Share the entire interior of your home
with a 1,500 pound dairy cow



OR



2 free roaming sea gulls?

Data Dig

2015 Data Index System Results for Region 4

- What trends do you see, or what stands out?
- How does this data compare with your campus/district data?
- What have you done/are you doing to address areas of concern?
- What support do you need to help address areas of concern?

Region 4 Data Index System Results

Index 1 - Student Performance Table (Related to Standard)

	All	Af. Am.	Hisp.	White	Asian	SpEd	Eco.Dis.	ELL(current)
All Subjects	77%	69%	73%	89%	93%	40%	70%	54%
Reading	77%	69%	72%	90%	92%	40%	69%	55%
Mathematics	81%	72%	78%	91%	97%	43%	76%	56%
Writing	72%	64%	67%	84%	92%	27%	63%	52%
Science	79%	70%	75%	91%	94%	45%	72%	52%
Social Studies	79%	72%	74%	90%	94%	44%	71%	42%

Region 4 Data Index System Results

Index 1 - Student Performance Table (Group Related to All Students)

	All	Af. Am.	Hisp.	White	Asian	SpEd	Eco.Dis.	ELL
All Subjects	77%	69%	73%	89%	93%	40%	70%	54%
Reading	77%	69%	72%	90%	92%	40%	69%	55%
Mathematics	81%	72%	78%	91%	97%	43%	76%	56%
Writing	72%	64%	67%	84%	92%	27%	63%	52%
Science	79%	70%	75%	91%	94%	45%	72%	52%
Social Studies	79%	72%	74%	90%	94%	44%	71%	42%

Region 4 Data Index System Results

	All	Af. Am.	Hisp.	White	Asian	SpEd	Eco.Dis.	ELL
All Subjects	77%	-8%	-4%	12%	16%	-37%	-7%	-23%
Reading	77%	-8%	-5%	13%	15%	-37%	-8%	-22%
Mathematics	81%	-9%	-3%	10%	16%	-38%	-5%	-25%
Writing	72%	-8%	-5%	12%	20%	-45%	-9%	-20%
Science	79%	-9%	-4%	12%	15%	-34%	-7%	-27%
Social Studies	79%	-7%	-5%	11%	15%	-35%	-8%	-37%

Digging Deeper

Study the 2015 released items assigned to your group. For each item, discuss the following:

1. What is involved in answering the question? (content/skills)
2. What barriers may exist for students answering the question?
3. What do the data tell you?
4. What are the implications for instruction?

Record your ideas at the bottom of each page. Post your group's completed items on the back wall.

Region 4 Offerings

Supply and Demand

Workshops**Attendees**

Science Academies for Grades K-4, Part 2	106	3 sessions (no fee)
Accessing the General Curriculum through Best Practices	30	4 sessions
Multi-tiered Systems of Support (MTSS)	36	2 sessions
Building Academic Vocabulary in Secondary Science	13	
Building Academic Vocabulary in Elementary Science	43	3 sessions
Digging Into the Science TEKS: Using Depth of Knowledge (DOK) for Student Success in Science	46	
STAAR Review To Go: Creating Portable Science Activities	29	
Guiding STAAR Series: Biology	137	series of 5 different workshops

Contracted Services Provided	Days Provided
Literacy in the Secondary Science Classroom: Grades 6-12	2
Supporting ELLs in Science	3
STAAR Review To Go: Creating Portable Science Activities	3
Middle School Science Concepts and Strategies	3
Guiding STAAR Series: Biology	3
Reviving Instruction Using Interactive Notebooks	4
Effective Vocabulary Strategies for the Secondary Science Classroom	4
Biology Concepts and Strategies	6
Supporting STAAR Achievement in Science	6
Building Academic Vocabulary in Elementary Science	10
Digging Into the Science TEKS: Using Depth of Knowledge (DOK)	12
Differentiated Coaching in High School Science	30
Technical Assistance in Technology Integration	60
Science Curriculum, Instruction, and Assessment Support	63

You're having a PARTY!



Using chart paper markers, draw a dinner plate - sized circle surrounded by a larger circle on a sheet of chart paper.



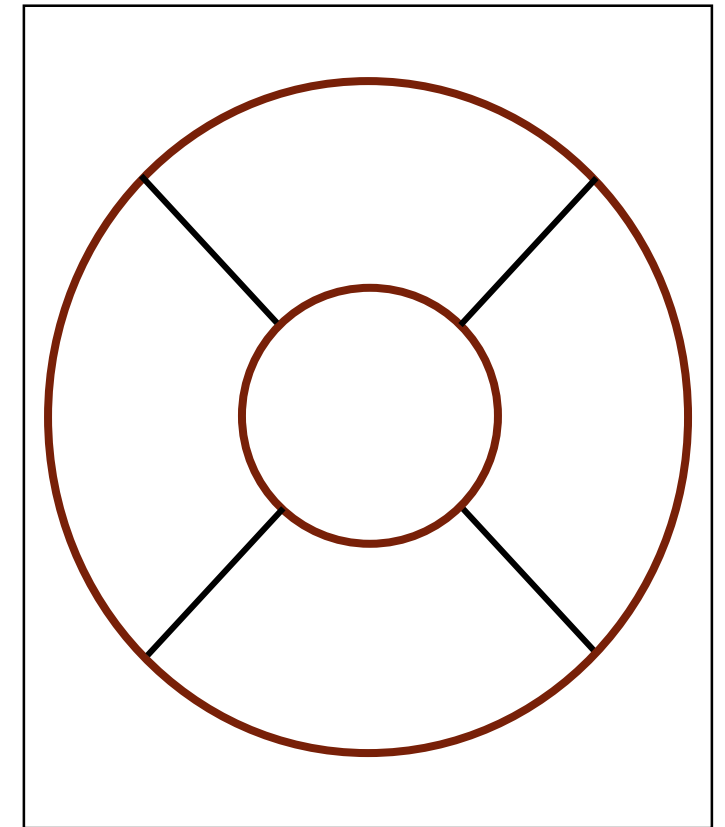
Divide the circle by the number of people at your table.



In your section, individually plan the menu for a dinner party at your house this weekend (25-30 guests).



When your team has finished, have one person raise their hand for next steps.



Meeting the Needs of Diverse Learners

Special Education
English Language Learners

Science Snacks

Diverse Learners

- T.E.A.M.S. that Win: Effective Practices for Meeting the Needs of Diverse Learners in Science: [Elementary Science](#) (3-day series; January, February, and April) [1167665](#)
- T.E.A.M.S. that Win: Effective Practices for Meeting the Needs of Diverse Learners in Science: [Secondary Science](#) (3-day series; November, January, and February) [1167608](#)
- **Access to the General Education + Behavior + Content = Awesome**

Science Snacks

English Language Learners

- Sheltered Instruction in Science for Elementary (2-day series; October and December)
- Sheltered Instruction in Science for Secondary (2-day series; October and December)

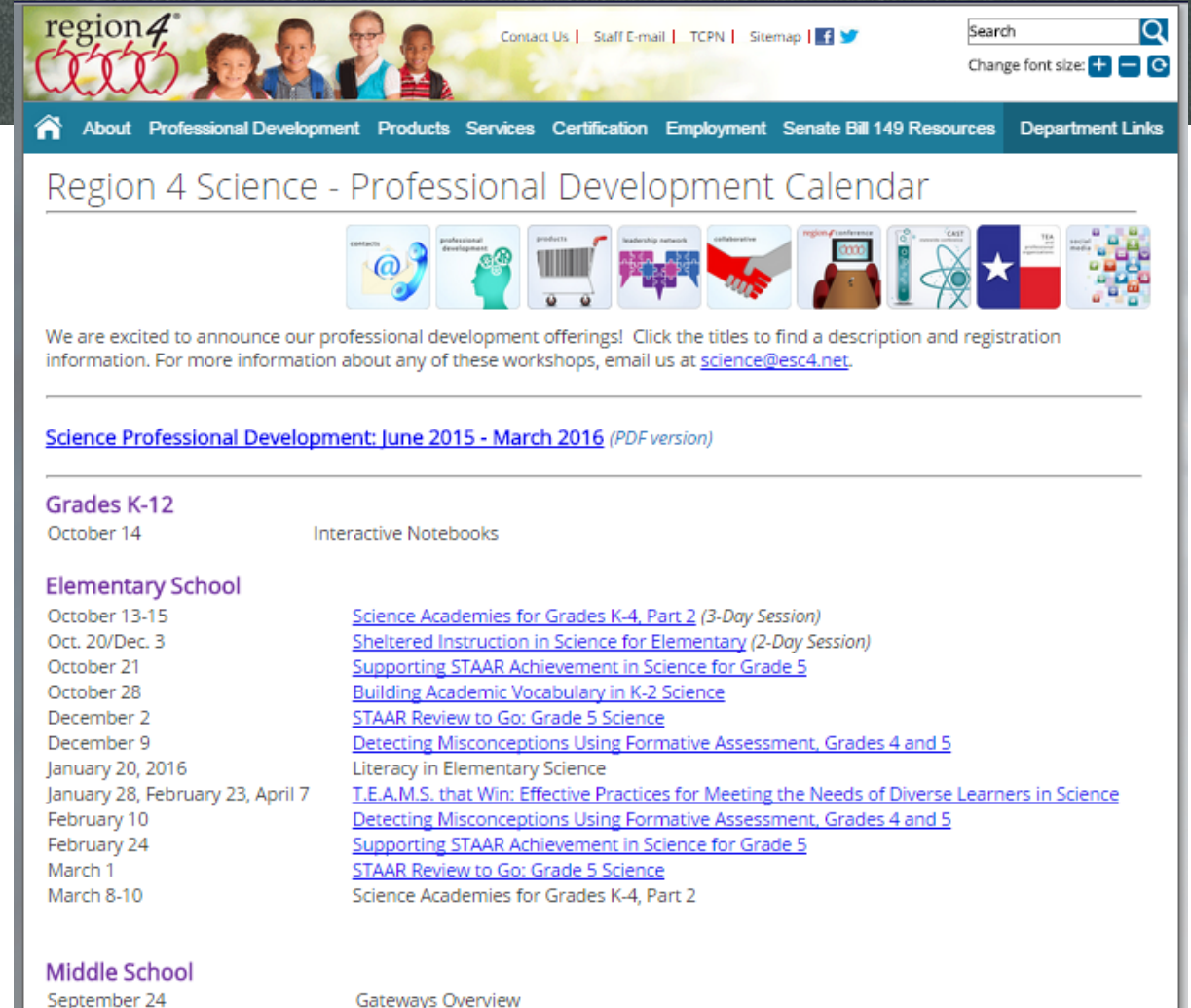
R4 Products and Services

- Warm Up to Science
 - 4-8, Chemistry
- Coming Soon
 - Interactive Notebooking
 - Literacy



R4 Professional Development

bit.ly/R4SciPD



The screenshot shows the website for Region 4 Science Professional Development. At the top, there is a navigation bar with links for 'About', 'Professional Development', 'Products', 'Services', 'Certification', 'Employment', 'Senate Bill 149 Resources', and 'Department Links'. A search bar and font size controls are also present. Below the navigation bar, the main heading is 'Region 4 Science - Professional Development Calendar'. A row of icons represents various services: contacts, professional development, products, leadership network, collaborative, region conference, CAST, STAAR, and social media. The main content area features a link to a PDF version of the calendar: 'Science Professional Development: June 2015 - March 2016 (PDF version)'. The calendar is organized into three sections: 'Grades K-12', 'Elementary School', and 'Middle School'. Each section lists dates and corresponding workshop titles with links to descriptions.

Grades K-12

October 14	Interactive Notebooks
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Elementary School

October 13-15	Science Academies for Grades K-4, Part 2 (3-Day Session)
Oct. 20/Dec. 3	Sheltered Instruction in Science for Elementary (2-Day Session)
October 21	Supporting STAAR Achievement in Science for Grade 5
October 28	Building Academic Vocabulary in K-2 Science
December 2	STAAR Review to Go: Grade 5 Science
December 9	Detecting Misconceptions Using Formative Assessment, Grades 4 and 5
January 20, 2016	Literacy in Elementary Science
January 28, February 23, April 7	T.E.A.M.S. that Win: Effective Practices for Meeting the Needs of Diverse Learners in Science
February 10	Detecting Misconceptions Using Formative Assessment, Grades 4 and 5
February 24	Supporting STAAR Achievement in Science for Grade 5
March 1	STAAR Review to Go: Grade 5 Science
March 8-10	Science Academies for Grades K-4, Part 2

Middle School

September 24	Gateways Overview
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Region 4 Conferences

Science Conference: Saturday, February 6, 2015

- **ESL/Bilingual Conference: Friday, September 25, 2015**
- **CTE Conference: Wednesday, November 4, 2015**
- **Digital Learning Conference: January 13, 2016**



- November 12-14 in Fort Worth
- Registration is open
- Early Bird registration ends October 15th

TEA/Project Share

- 5-8 Science Academies
- www.projectsharetexas.org

Science Academies for Grades 5-8

Part 2
2015-2016

Criteria to Consider for Strand Focus

- Alignment to Science Academies for Grades K-4
- Vertical alignment in grades 5-8 (storyline)
- Data: Greatest impact on student achievement
- New resources
- Literacy & Math Support

Force, Motion, and Energy Content

- Grade 5: **Design an investigation**, shifting from cookbook to inquiry
- Grade 6: **Measure and graph speed** (distance and time, changes in motion, unbalanced forces); **calculate speed**
- Grade 7: **Understand relationship among force, motion and energy**, contrasting situations where **work** is done
- Grade 8: **Demonstrate and calculate how unbalanced forces change speed or direction** (speed, velocity and acceleration)

Grade 5

5.6 Force, motion, and energy. The student knows that energy occurs in many forms and can be observed in cycles, patterns, and systems. The student is expected to:

- **(D) design an experiment that tests the effect of force on an object**
(Supporting)

Grade 6

6.8 Force, motion, and energy. The student knows force and motion are related to potential and kinetic energy. The student is expected to:

- **(B) identify and describe the changes in position, direction, and speed**
of an object when acted upon by unbalanced forces
- **(C) calculate average speed using distance and time measurements**
(Supporting)
- **(D) measure and graph changes in motion** *(Supporting)*

Grade 7

7.7 Force, motion, and energy. The student knows that there is a relationship among force, motion, and energy. The student is expected to:

- (A) contrast situations where **work** is done with different amounts of force to situations where no work is done such as moving a box with a ramp and without a ramp, or standing still (*Supporting*)

Grade 8

8.6 Force, motion, and energy. The student knows that there is a relationship between force, motion, and energy. The student is expected to:

- **(A) demonstrate and calculate how unbalanced forces change the speed or direction** of an object's motion (*Readiness*)
- (B) differentiate between **speed, velocity, and acceleration** (*Supporting*)

5-8 Academies Part 2

Training of Trainers:

May 3-5, 2016 at Region 4 ESC

Community Partners

- Chevron and the National Academy of Engineering
- [LinkEngineering.org](https://www.linkengineering.org) – Online community of educators interested in providing meaningful engineering experiences to PreK-12 students of all abilities
- Website provides resources and professional communities for
 - PreK-12 educators
 - Preservice teacher education and professional development
 - School, district, and state administrators

Join

LINKENGINEERING



Expert



Mentor



Contributor

Making Science Accessible for the Visually Impaired

Sheryl Sokoloski

Region 4 Special Education Solutions

bit.ly/R4SciVI

Coffee Talk

Is there a topic you would like to discuss with your colleagues?

Use a sticky note to share your question or topic.



Future meetings

Save the dates:

January 13, 2016

April 13, 2016

Thank you for your time and input.

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Love Kids.
Love Science.



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