

Welcome to the Hamilton County District In-service:

Learning and Growing Together

January 6, 2015

Get to Know Your Table Group

- Ice Breaker



The Periodic Table of Elements

1 H HYDROGEN 1																	2 He HELIUM 4													
3 Li LITHIUM 7	4 Be BERYLLIUM 9															5 B BORON 11	6 C CARBON 12	7 N NITROGEN 14	8 O OXYGEN 16	9 F FLUORINE 19	10 Ne NEON 20									
11 Na SODIUM 23	12 Mg MAGNESIUM 24															13 Al ALUMINUM 27	14 Si SILICON 28	15 P PHOSPHORUS 31	16 S SULFUR 32	17 Cl CHLORINE 35	18 Ar ARGON 40									
19 K POTASSIUM 39	20 Ca CALCIUM 40	21 Sc SCANDIUM 45	22 Ti TITANIUM 48	23 V VANADIUM 51	24 Cr CHROMIUM 52	25 Mn MANGANESE 55	26 Fe IRON 56	27 Co COBALT 59	28 Ni NICKEL 59	29 Cu COPPER 64	30 Zn ZINC 65	31 Ga GALLIUM 70	32 Ge GERMANIUM 73	33 As ARSENIC 75	34 Se SELENIUM 79	35 Br BROMINE 80	36 Kr KRYPTON 84													
37 Rb RUBIDIUM 85	38 Sr STRONTIUM 88	39 Y YTTRIUM 89	40 Zr ZIRCONIUM 91	41 Nb NIOBIUM 93	42 Mo MOLYBDENUM 96	43 Tc TECHNETIUM 98	44 Ru RUTHENIUM 101	45 Rh RHODIUM 103	46 Pd PALLADIUM 106	47 Ag SILVER 108	48 Cd CADMIUM 112	49 In INDIUM 115	50 Sn TIN 119	51 Sb ANTIMONY 122	52 Te TELLURIUM 128	53 I IODINE 127	54 Xe XENON 131													
55 Cs CESIUM 133	56 Ba BARIUM 137															72 Hf HAFNIUM 178	73 Ta TANTALUM 181	74 W TUNGSTEN 184	75 Re RHENIUM 186	76 Os OSMIUM 190	77 Ir IRIDIUM 192	78 Pt PLATINUM 195	79 Au GOLD 197	80 Hg MERCURY 201	81 Tl THALLIUM 204	82 Pb LEAD 207	83 Bi BISMUTH 209	84 Po POLONIUM 209	85 At ASTATINE 210	86 Rn RADON 222
87 Fr FRANCIUM 223	88 Ra RADIUM 226															104 Rf RUTHERFORDIUM 263	105 Db DUBNIUM 268	106 Sg SEABORGIUM 271	107 Bh BOHRNIUM 270	108 Hs HASSIUM 270	109 Mt MEITNERIUM 278	110 Ds DARMSTADIUM 281	111 Rg ROENTGENIUM 281	112 Cn COPERNICIUM 285	113 Uut UNUNTRIUM 286	114 Fl FLEROVIUM 289	115 Uup UNUNPENTIUM 289	116 Lv LIVERMORIUM 293	117 Uus UNUNSEPTIUM 294	118 Uuo UNUNOCTIUM 294

6

C

CARBON

12

Atomic Number = Number of Protons = Number of Electrons

Chemical Symbol

Chemical Name

Atomic Weight = Number of Protons + Number of Neutrons*

NON-METALS

METALS

6 ← Atomic Number = Number of Protons = Number of Electrons

C ← Chemical Symbol

CARBON ← Chemical Name

12 ← Atomic Weight = Number of Protons + Number of Neutrons*

NON-METALS

METALS

KEY

- = Solid at room temperature
- = Liquid at room temperature
- = Gas at room temperature
- = Radioactive
- = Artificially Made

57 La LANTHANUM 139	58 Ce CERIUM 140	59 Pr PRASEODYMIUM 141	60 Nd NEODYMIUM 144	61 Pm PROMETHIUM 145	62 Sm SAMARIUM 150	63 Eu EUROPIUM 152	64 Gd GADOLINIUM 157	65 Tb TERBIUM 159	66 Dy DYSPROSIUM 163	67 Ho HOLMIUM 165	68 Er ERBIUM 167	69 Tm THULIUM 169	70 Yb YTTERBIUM 173	71 Lu LUTETIUM 175
89 Ac ACTINIUM 227	90 Th THORIUM 232	91 Pa PROTACTINIUM 231	92 U URANIUM 238	93 Np NEPTUNIUM 237	94 Pu PLUTONIUM 244	95 Am AMERICIUM 243	96 Cm CURIUM 247	97 Bk BERKELIUM 247	98 Cf CALIFORNIUM 251	99 Es EINSTEINIUM 252	100 Fm FERMIUM 257	101 Md MENDELEVIUM 258	102 No NOBELIUM 259	103 Lr LAWRENCIUM 262

* The atomic weights listed on this Table of Elements have been rounded to the nearest whole number. As a result, this chart actually displays the mass number of a specific isotope for each element. An element's complete, unrounded atomic weight can be found on the It's Elemental web site: <http://education.jlab.org/itselemental/index.html>

Hamilton County's Core Beliefs:

1. Believe in the power of students and teachers to grow their intelligence.

Intelligence can be grown through effort and continued learning.

2. Focus your work on the important things! Don't get caught by the distractors. Focus on high-impact instructional practices. These must become the regular culture and vision of our school/district.



Purpose and Vision

Create an atmosphere of openness, collegiality and true professionalism through:

- **Shared Norms and Common Language**
- **Promoting Growth through Collaboration and Continued Learning**
- **Engaging Students through Research-based Best Practices**
- **Encourage Reflective Practice**



Structure of the Day

8:30-11:30

Vertical Learning Cohorts

- Brief Review from August
- Engaging in Science Together as a Learner and Teacher
- The Growth Mindset

11:30-1:00

Lunch

1:00-3:00

Grade/Course Level Learning Cohorts

- Apply the TAGS
- Plan for Anticipating and Monitoring Student Learning
- Curriculum/Pacing Discussions/Work

3:00-3:15

Summary/Closure



Secondary Science District Norms

- Keep student learning at the center of all decisions
- Be respectful of other's time — Begin and end on time
- Monitor air time and share your voice
- Be solutions oriented – For the good of the group, look for the possible
- Risk productive struggle
- Actively participate and bring requested materials
- Share a sense of responsibility for student learning
- Be professional at all times
- Be the learner you want in your class



Important Moments Sheet and Evaluations



Vertical Learning Cohort Goals:

- **Review the Roles of the HOI/HOP, Informational Texts, Accountable Talk, and the TAGS**
- **Engage in some science together – first as learners and then as teachers.**
- **Introduce Public Records and the 5 Productive Talk Moves**
- **Positively Impact Student Learning by Supporting the Development of a Growth Mindset**

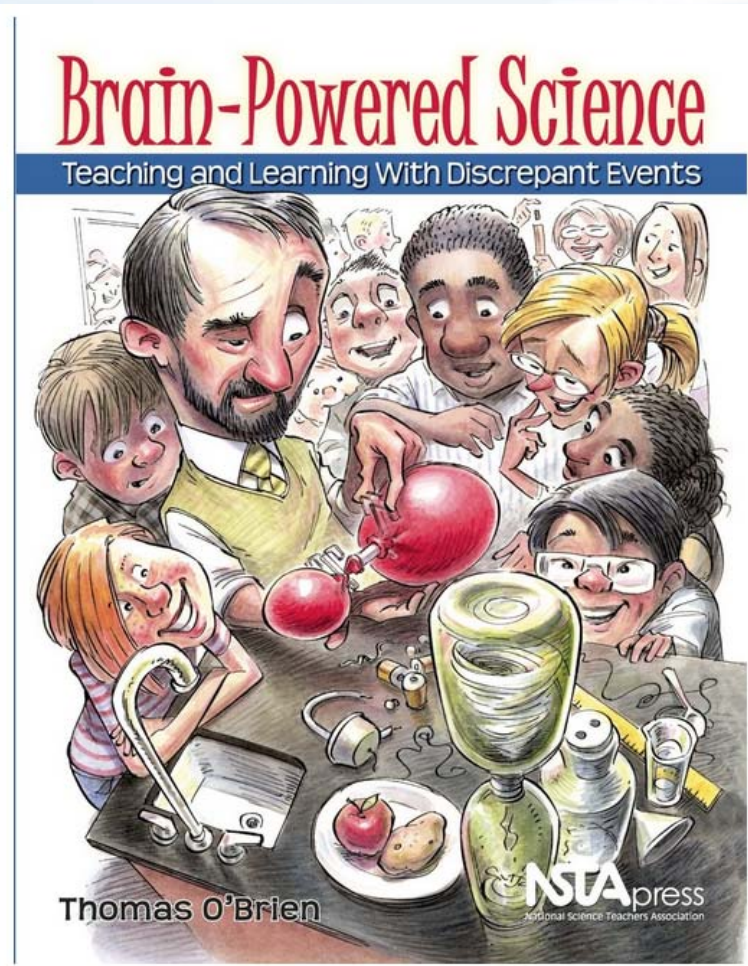


A Quick Review:

- Habits of Interaction and Practice are the expected norms of the classroom and behaviors of Hamilton County students.
- Informational Texts are to be carefully selected to provide context, elaborations and support to the learning of scientific concepts. They are not to replace the exploratory and inquiry-based nature of learning science.
- Accountable Talk is a high leverage strategy that improves engagement, supports learning, and provides formative assessment. We will be learning about a protocol to support Accountable Talk: the 5 Talk Moves.
- The Task Analysis Guide for Science (TAGS) will be used as a common district tool. Emphasis is not about “Tagging” a task correctly, but more about the conversations of what we are asking students to do and learn.



Engaging in Science as a Learner



Engaging in Science as a Teacher

What did the task have
you doing?



Engaging in Science as a Teacher

What Habits were evident in the lesson? Where?
Be specific.



Engaging in Science as a Teacher

What instructional practices/
strategies were used in the lesson?
Where? Be specific.



Break



Creating a Growth Mindset in Your Students

- What key ideas from the article really resonated with you?
- What questions does this article raise?
- What implications does this have for your work?



Mindsets: What do they look and sound like in a Science Classroom?

		Teachers	
		Growth Mindset	Fixed Mindset
Students	Growth Mindset		
	Fixed Mindset		



Embracing Failure

Life = Risk



Morning Reflection and Evaluations

www.hcdescience.weebly.com

