



**Idaho State Department of Education Negotiated Rulemaking**

**Public Comment Sign in Sheet**

Professional Standards Commission

**DATE:** April 21, 2016

**LOCATION:** Idaho Falls

Full Name	Signature	City	Stakeholder Group (circle one or more)					
Suketu Gandhi	<i>Suketu Gandhi</i>	Idaho Falls	Admin	Counselor	<u>Parent</u>	Student	Teacher	Other
			Admin	Counselor	Parent	Student	Teacher	Other
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			Admin	Counselor	Parent	Student	Teacher	Other

**Please print clearly.**

Date: April 21, 2016

Name: **Suketu Gandhi**

Signature: 

City: **Idaho Falls**

State: **Idaho**

Stakeholder Group: **Parent**

Reference: **IDAPA 08.02.02.022 ENDORSEMENTS A – D**

**07. Chemistry (6-12).** Twenty (20) semester credit hours in the area of Chemistry, to include course work in each of the following areas: inorganic and organic chemistry.

These requirements are vague, and the missing specifications are as follows: General Chemistry (1 year) and laboratory, which covers 8 Semester hours. One semester of organic chemistry course and corresponding laboratory, which covers 4 hours; one semester of inorganic chemistry, and laboratory, which covers 4 Semester hours. The missing courses are standard 3 semester of General Physics (Mechanics, Electricity & Magnetism, and Optics/Waves & Modern Physics), upper division Quantum mechanics (from chemistry is one semester), or Quantum mechanics (from Physics consists of two semesters) and thermodynamics/statistical mechanics (from chemistry).

Teachers need to know quantum mechanics to teach atomic orbital theory, wave mechanics, which provide the foundation to build periodic table. They need course in thermodynamics to teach energetics of chemical reactions. (Topic on molecular orbital theory is integral part of AP Chemistry. This topic is covered in standard physical chemistry or quantum mechanics from chemistry course)

In evaluation of teacher's qualification, please pay attention to the equivalent courses from other departments. This is very important for those seeking teaching profession through transitioning from another profession (such as variety of engineering field, or closely aligned science such as geology, atmospheric science, physics, or material science).

Date: April 21, 2016

Name: Suketu Gandhi

Signature: Suketu Gandhi

City: Idaho Falls

State: Idaho

Stakeholder Group: Parent

Reference: **IDAPA 08.02.02.024 ENDORSEMENTS M – Z**

**06. Physics (6-12).** Twenty (20) semester credit hours in the area of Physics.

The above requirements are very vague. 12 Semester hours will be taken by calculus based General Physics (Mechanics, Electricity & Magnetism and Optics/Waves and Modern Physics). Mechanics, Electricity & Magnetism and Optics/Waves are standard part of full year physics at the high school level. There is a need to take 4 semester hours of mechanics (1<sup>st</sup> Semester). However, for electricity & magnetism, full year of upper division course is needed. The full year covers upto Maxwell's equation. Maxwell's equations are needed to understand waves, which is covered in full year physics, or AP Physics 2. Full semester of Optics is needed to teach optics & waves. These needed courses exceed the 20 semester hours of required physics.

Additional courses are needed so that teachers can integrate different topics, and teach students from 1<sup>st</sup> principles. Furthermore, these courses will set teachers to teach AP Physics C.

**09. Physical Science (6-12).** Twenty (20) semester credit hours in the area of physical science to include a minimum of eight (8) semester credit hours in each of the following: Chemistry and Physics.

The above requirements are very vague. For Chemistry, have one year of General Chemistry/Laboratory, 3 semesters of General Physics (Mechanics, Electricity & Magnetism and Optics & Waves/Modern Physics), one semester of organic chemistry, one semester of inorganic chemistry, one semester of quantum mechanics (from either physics or chemistry), and one semester of thermodynamics/statistical mechanics (2<sup>nd</sup> semester of physical chemistry).

In Physics, the additional courses would be from upper division 1<sup>st</sup> semester of mechanics, full year of Electricity & Magnetism, and one semester of optics/waves.

Quantum Mechanics is needed in chemistry for building periodic table, and atomic structure of atoms. If the teachers are prepared for AP Chemistry, then they should take full semester of quantum mechanics from chemistry. In chemistry, they will learn about molecular orbital theory. Modern physics will be needed to teach radioactivity.

Date: April 21, 2016

Name: Suketu Gandhi

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City: Idaho Falls

State: Idaho

Stakeholder Group: Parent

Reference: IDAPA 08.02.02.024 ENDORSEMENTS M – Z

**02. Mathematics - Basic (6-12):** Identify specific courses. Do not want teachers to use lower level courses to satisfy the requirement. Computer programming should be specified. Students may self teach or learn computer programming language outside of college. This has to be demonstrated through experience, or formal course or passing out through demonstration of exercises. The last statement is important for those who have self-taught.

What computer languages are acceptable? FORTRAN 77 or FORTRAN 90, C or C++, Assembly among many others. Computer languages have evolved significantly. What is the goal? Is it to for scientific programming?

**03. Mathematics (6-12):** The mathematics should be learned at the level of 1<sup>st</sup> three calculus courses. This must be done through multi-variable integrals (which is the standard 3<sup>rd</sup> course in calculus. Only those courses taken from Department of Mathematics need to be recognized or accepted. One missing course must be in linear & matrix Algebra. This topic should be taught in secondary school mathematics. Linear and matrix Algebra are extensively used in learning STEM curriculum in college/universities. However, a course in Linear & Matrix Algebra is high school level, not a college level course.

Additional topics should be learned by math teachers: 1) Mathematics behind Special Theory of Relativity (which is Herman Minkowski's 1910 article). This is essentially doing geometry with purely imaginary angles, instead of real angles. Another topic is Monte-Carlo method to solve area problems. These two topics deserves to be taught in high school, but it is possible when qualified teachers are aware of this, and be in position to impart knowledge on this. When taught correctly, they are high school level course.

For AP Calculus teachers, they should have additional courses: Real analysis, and differential equations. These topics are taught in AP Calculus BC, and all the teachers should be in position to teach AP Calculus course. Real analysis course teaches about derivation and the mathematical proofs. Specifically, the so-called " $\delta$ - $\epsilon$ " proof is taught in real-analysis course. This knowledge is essential for derivation of various relationships in calculus.

Suketu Gandhi

Comments: **IDAPA 08.02.02.018. STANDARD ELEMENTARY CERTIFICATE**

Date: April 21, 2016

Name: **Suketu Gandhi**

Signature: 

City: **Idaho Falls**

State: **Idaho**

Stakeholder Group: **Parent**

Reference: **IDAPA 08.02.02.018. STANDARD ELEMENTARY CERTIFICATE**

A Standard Elementary Certificate makes an individual eligible to teach grades Kindergarten (K) through eight (8), and may be issued to any person who has a bachelor's degree from an accredited college or university and who meets the following requirements:

**Major problems:**

Teachers must take mathematics course(s) from Department of Mathematics, which would be taught by mathematics professors. When taking mathematics course, even for the elementary school teachers, the students gain deeper knowledge, and would be in position to provide complex and grade appropriate challenging problems. The complex problems would be needed to identify and that integrate previously learned multiple topics.

Furthermore, they must also know how to teach mathematics by graphical approach (Singapore Math teaching methods for grades 1-6). Having proficiency in using bargraphs to solve complex problems is essential. This is not part of teacher's curriculum, and it must be required for teacher's training in mathematics. When teachers know this approach, they can effectively impart the knowledge. As a result, students learn mathematics with deep knowledge, and gain mathematical maturity at their grade.

The future teachers of grades KG-3 should have completed standard mathematics course upto the level of Algebra-2 (i.e., Algebra-1, Geometry and Algebra-2) in high school, Junior/Community College of in college. They will use Algebra to teach higher level mathematics in these grades. Mathematics courses relearned in college should encompass these high school level course topics. They must lake these courses taught by professor of mathematics (Mathematics Department), but not professors of mathematics education (from College of Education or the Education Department).

For grades 4-6, they should complete the mathematics course upto pre-Calculus (Trigonometry, Analytic Geometry, Combinatorial). They need to know these topics to teach probability & statistics, pre-Algebra, Geometry. They need to derive equations. Potential teachers must take teaching of mathematics courses from mathematics department, but not from Education Department.

Suketu Gandhi

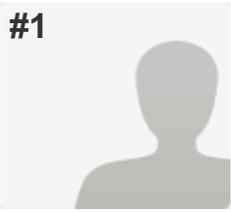
Comments: **IDAPA 08.02.02.018. STANDARD ELEMENTARY CERTIFICATE**

For Grade 7-8, there is a major problem. The demand is placed on teachers. Advanced students in grade 7 take Algebra-1, and Geometry in grade 8. The qualifications of teachers should be much higher than for grade 6. The teaching in grade 6 is pre-Algebra. If teachers are better qualified in grade 7, they are in position to teach mathematics at a deeper level. The same comments apply to grade 8 teachers.

Professor of Mathematics know their topics, and they teach rigorously. Math professors teach derivation of mathematical relationship through logic. They identify inherent assumptions and seek the accuracy. When they learn mathematics from professors of mathematics, they learn the topic at deeper level, and position the students to solve complex problems. This is not possible when potential teachers take the math course from the education department.

When learning mathematics from Professor of *Mathematics Education*, they do not know rigor, or logic. The impact would be that teachers would teach procedures, and not be in position to give complex and challenging problems to the elementary grade students.

#1



**COMPLETE**

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**Last Modified:** Sunday, Apr 24, 2016 10:05:53 AM  
**Time Spent:** 00:02:59  
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**PAGE 1: Negotiated Rulemaking**

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**Q1: Please provide your information:**

First and Last Name	Jill Kuraitis
City/Town	Boise
State/Province	ID

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**Q2: Please indicate the stakeholder group to which you belong:** Parent

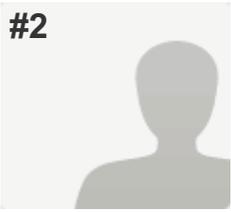
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**Q3: Please provide comment in the space provided below. Be specific as possible to the rule language when writing your comments.**

To consider a curriculum not based on science and facts, but rather someone's faith, is insanity. Public schools are there to provide accurate, verifiable information based on the research of world-class scientists. Belief has nothing to do with the education of Idaho children. Those things can be taught at home, but school must be fully scholarly, academic, and based in logic and reason.

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#2



**COMPLETE**

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**Last Modified:** Sunday, Apr 24, 2016 10:29:07 AM  
**Time Spent:** 00:07:35  
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**PAGE 1: Negotiated Rulemaking**

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**Q1: Please provide your information:**

First and Last Name	Patrick Phillips
City/Town	Grangeville
State/Province	Idaho

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**Q2: Please indicate the stakeholder group to which you belong:** Teacher

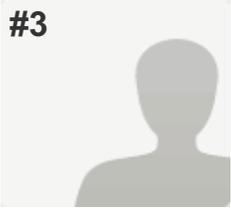
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**Q3: Please provide comment in the space provided below. Be specific as possible to the rule language when writing your comments.**

We need to see science standards free of political and religious connotations. Standards that represent the best science used in ACTUAL scientific research. Standards that question the validity of say, evolution, should not be included UNLESS it is frequently questioned by those who rely on it for their research. This is the way the elimination of politicized/weak understanding of the natural world can be accomplished. Anything else is politicizing the standards.

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#3



**COMPLETE**

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**IP Address:** [REDACTED]

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**PAGE 1: Negotiated Rulemaking**

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**Q1: Please provide your information:**

First and Last Name	April Hoy
City/Town	Boise
State/Province	Idaho

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**Q2: Please indicate the stakeholder group to which you belong:** Other

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**Q3: Please provide comment in the space provided below. Be specific as possible to the rule language when writing your comments.**

We need science standards based on science, not political bias. Evolution is the most important, central theory of biology, and climate change could be the most important scientific issue voters will have to consider. We can't sacrifice serious coverage of these issues to avoid upsetting people.

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#4



**COMPLETE**

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**IP Address:** [REDACTED]

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**PAGE 1: Negotiated Rulemaking**

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**Q1: Please provide your information:**

First and Last Name	John Hammer
City/Town	Boise
State/Province	ID

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**Q2: Please indicate the stakeholder group to which you belong:** Parent

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**Q3: Please provide comment in the space provided below. Be specific as possible to the rule language when writing your comments.**

Having current, accurate education is of utmost importance and should not be hindered by religion or politics. Idaho is very far behind in education and it's important that we take these steps to improve it. Specifically the Idaho State Science Standards need to be updated and the proposed new standards meet a lot of those requirements and modern understanding of the science within our world.

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#5



**COMPLETE**

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**PAGE 1: Negotiated Rulemaking**

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**Q1: Please provide your information:**

First and Last Name	Luke Williams
City/Town	Idaho Falls
State/Province	ID

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**Q2: Please indicate the stakeholder group to which you belong:** Other

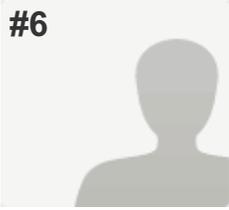
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**Q3: Please provide comment in the space provided below. Be specific as possible to the rule language when writing your comments.**

Accept standards for science that include an old Earth, evolution, and climate change. Please keep church and state separate as our founding fathers intended. Religious texts should not be portrayed as fact in a state run educational setting.

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#6



**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
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**PAGE 1: Negotiated Rulemaking**

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**Q1: Please provide your information:**

First and Last Name	Kamdin Gutierrez
City/Town	Burley
State/Province	ID

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**Q2: Please indicate the stakeholder group to which you belong:** Parent

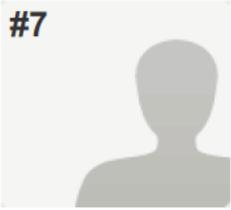
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**Q3: Please provide comment in the space provided below. Be specific as possible to the rule language when writing your comments.**

To whom it may concern,  
I would like to feel my children are getting a quality education when I send them to school. As it sits I am extremely dissapointed in our legislation pretending to care. Our science standards are a joke at best and dangerous to progress at worst. We already let parents sacrifice their children's minds and very lives through ignorance and pretend it's a right of faith. My children have the right to be educated and have a chance at success. Our deliberate refutation of 1st world education standards is tantamount to mental child abuse. We are withholding the tools to help our youth excel. I see no way in which a ball and chain is helpful to our children's success. Please support education and bring Idaho through the 20th century and into the 21st .

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#7



**COMPLETE**

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Last Modified: Sunday, Apr 24, 2016 1:24:07 PM  
Time Spent: 00:09:22  
IP Address: [REDACTED]

PAGE 1: Negotiated Rulemaking

**Q1: Please provide your information:**

First and Last Name	Paul Wingert
City/Town	Boise
State/Province	ID

**Q2: Please indicate the stakeholder group to which you belong:** Parent

**Q3: Please provide comment in the space provided below. Be specific as possible to the rule language when writing your comments.**

The idea of promoting corporate, political interests and religious beliefs over scientific evidence in our public education system is ridiculous and does nothing but act as an anchor to promote economic growth and prosperity. The elected officials in our state (ID) are pushing their personal beliefs and won't be happy until we become a 3rd world church/state as we see in the deep south.