TO: Elementary/Middle/High School Principals, Assistants

FROM: Richard Therrien

RE: Science Supply Recommendations

SCIENCE MATERIALS RECOMMENDATION LIST K-12

Many schools have asked for some guidelines in planning for materials purchases for the upcoming school year. Much depends on the timing and implementation of science at each school.

It is NOT recommended to buy science textbooks at this time for grades K-5. Kit based programs provide students with the experiences needed to develop conceptual understanding. The STC and FOSS/DSM kits have writing, reading, and assessment components that integrate well with our literacy standards. The teacher guides and training videos and websites that are included are a rich resource. There are non fiction readers and magazines included in the newest versions.

The literacy department has been working as well, and can make recommendation for further nonfiction reading, from a variety of sources, including Newbridge Discovery readers, to align with the units.

We are still currently using STC and other Science Kits, 2-3 per year, provided by the district, not quite aligned with the state frameworks yet. The newest version kits include writing, math, literacy as well, and have conceptual storylines as well as research proven lessons for improved student achievement. We also will be adding NewHaven specific guidelines and assessments to each kit the SRC sends out.

I have previously sent out a rotation list and told schools they may REQUEST a certain order.

A good resource for the upper elementary grades to supplement district provided kits are the Science Daybooks, that contain basic concepts, vocabulary and hands on activities, as well as the ScienceSaurus student handbooks found from GreatSource.

However if you may choose to buy your own kits to keep, and wish to align closer with the state frameworks, I have included some detailed recommendations for supplies, kits, texts for K-8.

Here is a tentative list, with links to web ordering, based on our curriculum and pacing guide, as well as input from the CT SDE. **Science Budget Recommendations:**

Science curriculum and standards will not change for 15–16, and students will still be responsible for CMT science (grade 5/8) and CAPT (high school). Detailed guidelines for elementary science kits, middle school texts, high school labs, and recommended supplies for each level can be found at www.newhavenscience.org/scimaterials.htm, or ask richard.therrien.

For schools planning their budgets for 2015-16.

-K-5 grades will continue to be furnished 3 hands on science kits a year from the Science Resource Center. Purchasing textbooks is NOT recommended. There are recommendations for supplemental measuring supplies that should align with current science and math curriculum.

-For grades 6-8, schools need to budget consumable supplies for an average of \$6-\$9 per student to fit curricular needs. This also should include some repair funds for balances and microscopes (about \$250 per class set). Purchasing new textbooks or equipment is not recommended at this time until we transition to new state standards starting in 16-17.

For high schools, schools need to budget for required lab supplies for required courses (PhyChem, Biology, Chemistry, Physics), guidelines are for \$10-\$15 per student. This also should include some repair funds for balances and microscopes (about \$250 per class set). Please think carefully about requesting approval for new/different science electives, as these often have high costs in new science equipment and textbooks that may impact needed supply funds for other required courses. Again, purchasing new textbooks is not recommended at this time until we transition to new state standards starting in 16-17.

Thank you.

Science Kits for 2015

Many schools are starting to plan for the next school year... especially in terms of magnet themes. This note is to try and help in your planning, but at this point much of our science program is dependent on funding sources and so I can't give you a definite plan.

As you know the district has tried to provide kits for the required hands on instruction in science. Each kit is about 12-16 50 minute lessons and we will try to fit in three units a year. Doing 3 kits a year gives students about 40 to 75 hours of experiment based science.

Of course, the kits come with non fiction literature, writing prompts, math skills, and assessments. We've also sent out other smaller activities (CASAP/NAEP, embedded tasks) that fit in.

Out of the required state standards, usually one unit is not kit based but rather experiential and reading/writing based.

Incorporating literacy and math (measurement/graphing) skills would supplement the science to provide students with 100-150 hours a year of science as recommended by state guidelines.

We have curriculum, units, activities, standards, for ALL these units, and continue to revise as needed. (www.newhavenscience.org)

So it looks like:

K: FOSSWood or DSMProperties, Trees (school has), STCWeather (also covers seasons unit0

1: STCOrganisms, STCCompare/Measure, DSM Sun/Shadows,

(Motion no kit)

2: DSMSoils, STCSolids/Liquids, STCButterflies(spring or fall), (Nutrition

no kit yet)

3: STCRocks, STCChemTests, STCPlantGrowth (spring or fall),

(Recycling no kit)

4: STCMotion/Design, STCLand/Water, STCElectric Circuits, (Ecosystems/Habitats no kit) There are also suggested supplemental books.

5: Set order: Sound, GEMSColorAnalyzers, GEMSMagnifiers, (Senses no kit), GEMSEarth/Moon/Stars, (ALL DONE BEFORE CMT!) There are also suggested supplemental books.

6: STCEcosystems Kit (from SRC), DSMSimple Machines Kit or FOSS Levers kit bought for Title I schools, 2010, Weather: FOSS WeatherWater bought for Title I schools 2010, Watersheds Kit (from SRC), plus NeoSci Weather, FoodChains, WaterPollution bought for Title I schools 2008. Some schools choose to semi departmentalize science in sixth grade and may also use the supplemental textbooks

7: some kits for Title I schools bought 2010.... daily textbook/labs/materials.... Set order: Matter, Chemistry, Cells, Genetics, Reproduction, Human Body (DSM Kit), Microbes, Food (FDA Food Safety Kit, STC Food Chemistry)

8: some kits for Title I schools bought 2010.. daily textbook/labs/materials.... Set order: Forces/Bridges, Motion (STC MotionEnergy), Sun/Earth/Moon (GEMS ReasonSeasons), Landforms, EarthMovements (DSM Earth/PlateTectonics), RockCycle, Natural Disaster

So you can request a specific order... of course I can't send everyone Butterflies in the Spring!. We have 65 classes per grade, but only 10-40 of many of the kits.

And we don't have enough of many of the kits, so I can't know for sure now.

We tend to ask classes to share if needed, or we short change schools that aren't historically using or returning them.

I hope that we will be able to finalize our funding before the year starts and we will get more flexibility. Right now our plan is FALL: Sep 1 to Nov 15, WINTER Dec 17-Feb 28, SPRING April 2 - June 9 In the meantime...

you can REQUEST a specific order and let me know how it fits into your theme, and I will work with our partner towns, the magnet office, and our workers to try and settle a rotation before the end of the year.

Thanks!

Sales Rep for Carolina (New Haven should get a substantial discount IF we go through the sales rep!)

Katie Arace, Carolina Biological Supply Company, 114 Horizon Lane, Glastonbury, CT. 06033

Tel: 800-227-1150 x3502, Local: 860-657-3405, Fax: 860-657-3609, Email: katie.arace@carolina.com

This document has links to ordering info for each kit

Grade K

STC Kit GH-97-1201 Weather \$515 (most provided by district)

FOSS Kit Wood \$763 (most provided by district) OR DSM III Kit Properties \$377

FOSS Kit Trees \$529 (most provided by district)

Grade One

Math connection: GH-97-1301 Comparing and Measuring \$500 (most provided by district)

Delta Kit DSMIII Sunshine and Shadows \$388 (most provided by district)

Delta Kit DSMIII Force and Motion \$399

STC Kit GH-97-1101 Organisms \$634 (most provided by district)

Grade Two

STC Kit GH-97-1401 Solids and Liquids \$645(most provided by district)

STC Kit GH-97-1601 Soils \$479.95 or Delta Kit DSM III SoilScience \$367 (most provided by district)

Nutrition (no kit yet), supplemental/free materials

STC Kit GH-97-1501 Butterflies \$276 (most provided by district)

Grade Three

STC Kit GH-97-2001 Rocks and Minerals \$1150 or in house rock kits (most provided by district)

STC Kit GH-97-2101 Chemical Tests \$780 (most provided by district)

Recycling (no kit yet) supplemental/free materials

STC Kit GH-97-1901 Plants \$630 (most provided by district)

Grade Four

STC Kit GH-97-2601 Electric Circuits (most provided by district)\$765

STC Kit GH-97-3001 Motion and Design (most provided by district) \$950

Ecosystems (no kit yet)

STC Kit GH-97-2301 Land and Water \$920 Class Set(most provided by district)

Science Resource Daybook For Grade 4 with Science Saurus W4-051556 \$24.75

Grade Five

UNH Sound Kit (most provided by district) or <u>STC Kit GH-97-2201 Sound \$765 for Class Set</u>
LIGHT KIT: Two GEMS Kits (most provided by district) <u>GEMS 11-4301 Color Analyzers \$105</u> AND
GEMS 11-4801 More Than Magnifiers \$159

GEMS 11-4001 Earth/Moon Kit \$275 (most provided by district)

Science Resource Daybook For Grade 5 with Science Saurus W4-051559 \$24.75

Tentative recommendation for 6/7/8 science, New Haven Pubic Schools as of 5/2009

Note that buying the three modules per grade should work out to \$45 per student.

Here is the list.

Each teacher should have set for students, 1 teacher edition, 1 teaching resources per module.

Classroom set of materials/supplies if possible. The kits are designed to accompany the text.

Each teacher should also have: a set of the program wide resources (link to newest Prentice Hall catalog)..., which should include Adapted Reading Study Workbooks, Adapted Tests as well as technology resources... Spanish editions and workbooks are also available. These can probably be assumed to be comped with a large purchase. You MUST use science supervisor's name when ordering and local sales rep to receive complimentary teacher materials.

Local Sales Rep

E-Mail Address: John.Landers@pearsoned.com

Voice Mail: (800) 435-3499 Ext.1469 Phone:(860) 349-0383 FAX: 860) 349-9566

ALL 6-8 Students should have access to

The Nature of Science and Technology

0132011603 The Nature of Science and Technology Student Edition \$15.97

0132011778 Teacher's Edition \$32.47

0132035618 Teacher Resource Pack \$99.97

0131901451 Consumable Material Kit \$39.97

0131901621 non Consumable Material Kit \$129.97

Grade Six (if self contained, see book recommendations and Frey Kits as well)

-Delta Science Module Simple Machines Class Set (most provided by district) \$367 or FOSS Levers Kit bought in January 2010 for Title I schools, Spring 2008 Title I Schools NeoSciPulleysMachinesKit -STC Kit GH-97-2801 Ecosystems \$800 Class Set (most provided by district), Spring 2008 Title I Schools NeoSciFoodWebKit

-Water Resources Kit (Urban Resources/Open Spaces Unit) (most Watersheds Kits provided by district), Spring 2008 Title I Schools UrbanWaterTestKit, NeoSciExploringGroundwater, NeoSciInvestigatingWaterPollutionKit -Weather: Foss Weather/Water Kit bought in January 2010 for Title I schools, Spring 2008 Title I Schools NeoSciExploringWeatherKit

ScienceSaurus Grade 6-8 Student Handbook W4-052916 \$17.25

Some Schools are choosing to also adopt a departmentalized approach for sixth grade, which aligns with the following Prentice Hall Modules:

For Specialized Grade Six Programs and ADDITION to Kits sent by district (Ecosystems, Watersheds, Simple Machines)

6th grade Environmental Science

0133651045 Student Edition 14.97

0133651223 Teacher Edition 32.47

0132035499 Teaching Resources 99.97

013190132x Consumable Materials 199.97

0131901508 Non Consumable Materials 299.97

Plus STC Ecosystems Kit rotated among schools

Spring 2008 Title I Schools NeoSciFoodWebKit

6th grade Weather and Climate

0133651096 Student Edition 14.97

0133668495 Teacher Edition 32.47

0132035537 Teaching Resources 99.97

0131901370 Consumable Materials 119.97

0131901540 Non Consumable Materials 199.97

Plus FOSS Weather/Water Kit bought in January 2010 for Title I schools

Spring 2008 Title I Schools NeoSciExploringWeatherKit

6th Grade Earth's Waters

0133651088 Student Edition 14.97

0133668487 Teacher Edition 32.47

0132035529 Teaching Resources 99.97

0131901362 Consumable Materials

259.97

0131901532 Non Consumable Materials 549.97

Plus FOSS Weather/Water Kit bought in January 2010 for Title I schools

URI Watersheds Kit rotated among schools

Spring 2008 Title I Schools UrbanWaterTestKit, NeoSciExploringGroundwater, NeoSciInvestigatingWaterPollutionKit

SIMPLE MACHINES:

SHARE EIGHTH GRADE MATERIALS ON FORCE, DSM Kit on Simple Machines for some schools.

Motion, Forces, and Energy

0-13-3651134 Student Edition 17.97

0133668533 Teacher Edition 32.47

0131902865 Teaching Resources 99.97

0131901427 Consumable Materials 69.97

0131901591 Non Consumable Materials 299.97**OR STC Kit 97-4601 Energy, Motion, Machines Class Set \$270 was bought to

SHARE with grade 8 in January 2010 for Title I schools

Spring 2008 Title I Schools NeoSciPulleysMachinesKit

The following kit was bought in January 2010 for Title I schools: Grade 6 FOSS Levers Kit, Science Notebook, Parent Folio

DEPARTMENTALIZED SEVENTH/EIGHTH GRADE ALSO SEE

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NeoSciHowScientistsDoScienceKit
7th grade Chemical Building Blocks
0133651118 Student Edition 18.97
0133668517 Teacher Edition 34.47
0132035561 Teaching Resources 99.97
0131901397 Consumable Materials
                                      179.97
0131901567 Non Consumable Materials 279.97** OR Carolina STC Kit GH-97-4406 Properties of Matter $2895 Class Set,
Spring 2008 Title I Schools: NeoSciElement Kit, GeneralChemModelKit
7th grade Cells and Heredity
0133651029 Student Edition 17.97
0133651207 Teacher Edition 32.47
0132035464 Teaching Resources 99.97
0131901393 Consumable Materials
                                     148.47
0131901486 Non Consumable Materials 327.47 ** OR Carolina STC Kit GH 97-4806 Organisms from Macro to Micro $3195
Class Set,
Spring 2008 Title I Schools NeoSciExploringCellProcesses Kit
7th grade Human Biology
0133651037 Student Edition 17.97
0133651215 Teacher Edition 32.47
0132035472 Teaching Resources 99.97
0131901311 Consumable Materials
                                      199.97
0131901494 Non Consumable Materials 449.97 ** OR Carolina STC Kit GH-97-4006 Human Body Systems $2495 for class set
The following kits were bought in January 2010 for Title I schools: Grade 7 DSM You and Your Body Kit
(Optional) 7<sup>th</sup> Grade From Bacteria to Plants
0133651002 Student Edition 17.97
0133651185 Teacher Edition 32.47
0132035448 Teacher Resources 99.97
0131901281 Consumable Materials 229.97
013190146X Non Consumable Materials 189.97
Carolina STC Food Chemistry Kit (Spring 2011)
Spring 2008 Title I Schools NeoSciMicrobe Hunt Kit, NeoSciMicrobe Refill
8th grade Motion, Forces, and Energy
0-13-3651134 Student Edition 17.97
0133668533 Teacher Edition 32.47
0131902865 Teaching Resources 99.97
0131901427 Consumable Materials
                                      69.97
0131901591 Non Consumable Materials 299.97**OR
STC Kit 97-4601 Energy, Motion, Machines Class Set $270 (was bought in 2010 for Title I schools)
Spring 2008 Title I Schools KNex Bridge Kit, BalsaWoodBridgeBuildingKit, NeoSciInvestigatingForceMotionKit,
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8th Grade Astronomy (solar system only)
0-13-365110X Student Edition 17.97
01333668509 Teacher Edition 32.47
0132035545 Teaching Resources 99.97
0131901389 Consumable Materials
                                     134.97
0131901559 Non Consumable Materials 299.97** Or Carolina STC Kit GH-97-5006 Earth In Space $3895 Class Set
The following kits were bought in January 2010 for Title I schools:
Grade 8 GEMS Reasons for Seasons, Delta Science Orbiter Planetarium
Spring 2008 Title I Schools EarthMoonKit
8th Grade Inside Earth
0-13-3651053 Student Edition 17.97
0133668460 Teacher Edition 32.47
0132035502 Teaching Resources 99.97
0131901346 Consumable Materials
                                      139.97
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0131901516 Non Consumable Materials 299.97** OR Carolina STC GH-97-4206 Catastrophic Events \$3895

The following kits were bought in January 2010 for Title I schools: Grade 8 DSM Earth Processes Spring 2008 Title I Schools PlateTectonicsKit, NeoSciEarthShakesLabKit

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(Optional) 8th Grade Earth's Changing Surface

0-13-3651061 Student Edition 17.97

0-13-3668479 Teacher's Edition 32.47

0-13-2035510 Teaching Resources 99.97

0-13-1901354 Consumable Materials 169.97

0-13-1901524 Non-Consumable Materials 149.47

Spring 2008 Title I Schools NeSciChemWeatheringRocksKit, SimulatingRockCycleKit

(Optional) EVENT BASED SCIENCE MODULES can be used in many units, including quarter four eighth grade

9780131666368 Earthquake! Student Edition 12.47

978013166696 Earthquake! Teacher Edition with video 27.97

Materials Also Recommended for Grades Six Through Eight are smaller unit material kits per class. (ALL Schools have these

as of Jan 2008). They can be ordered from:

Frey Scientific

c/o School Specialty Science

PO Box 3000

80 Northwest Blvd

Nashua, NH 03061-3000

1-800-225-3739

and also through our online ordering with School Specialty at the 26% state discount:

1	Grade	6	15529717	Spring 2008 Title I Schools UrbanWaterTestKit 38.95	
1	Grade	6	15530411	Spring 2008 Title I Schools NeoSciHowScientistsDoScienceKit	119
1	Grade	6	15531488	Spring 2008 Title I Schools NeoSciFoodWebKit 49.95	
1	Grade	6	15567542	Spring 2008 Title I Schools NeoSciExploringGroundwarer	79 79.00
1	Grade	6	15570787	Spring 2008 Title I Schools NeoSciExploringWeatherKit	89 89.00
1	Grade	6	15572227	Spring 2008 Title I Schools NeoSciInvestigatingWaterPollutionKit	69 69.00
1	Grade	6	15573625	Spring 2008 Title I Schools NeoSciPulleysMachinesKit	119
1	Grade	7	15530411	Spring 2008 Title I Schools NeoSciHowScientistsDoScienceKit	119
1	Grade	7	15567479	Spring 2008 Title I Schools NeoSciExploringCellProcesses Kit	56 56.00
1	Grade	7	15567518	Spring 2008 Title I Schools NeoSciMicrobe Hunt Kit	59 59.00
1	Grade	7	15567521	Spring 2008 Title I Schools NeoSciMicrobe Refill	39.45
1	Grade	7	15577099	Spring 2008 Title I Schools NeoSciElement Kit 54	54.00
1	Grade	7	15583815	Spring 2008 Title I Schools GeneralChemModelKit	104
1	Grade	8	15529112	Spring 2008 Title I Schools SimulatingRockCycleKit	72 72.00
1	Grade	8	15530411	Spring 2008 Title I Schools NeoSciHowScientistsDoScienceKit	119
1	Grade	8	15530479	Spring 2008 Title I Schools NeoSciEarthShakesLabKit	69 69.00
1	Grade	8	15530568	Spring 2008 Title I Schools EarthMoonKit 24.95	24.95
1	Grade	8	15571181	Spring 2008 Title I Schools BalsaWoodBridgeBuildingKit	109
1	Grade	8	15576036	Spring 2008 Title I Schools PlateTectonicsKit 221	221.00
1	Grade	8	15576940	Spring 2008 Title I Schools NeSciChemWeatheringRocksKit	59 59.00
1	Grade	8	15577066	Spring 2008 Title I Schools NeoSciInvestigatingForceMotionKit	119

Other items that each student Grade 6-8 should have access to include:

Class set stopwatches

Hand lenses

Graduated Cylinders (200 ml)

Beakers (250 ml)

Balances (Double Pan or electronic)

Simple microscopes, slide sets

Rulers

Meter Sticks

Measuring Tape

Duct Tape!

Wood

Weights

String

HotPlates

Gloves

Goggles

Some Suggested materials for Grade 9/10 Science for in addition to normal supplies. (Guidelines indicate \$10-\$15 per student for materials per year, in addition to basic tools such as hot plates, stopwatches, beakers, metersticks, rulers, microscopes, thermometers, balances, goggles, droppers, cylinders)

Frey Scientific c/o School Specialty Science PO Box 3000 80 Northwest Blvd Nashua, NH 03061-3000 1-800-225-3739

CT State Contract Bid 05PSX0379, 27% discount

Grade	9	15525917	NeoSciPolymerKit	104
Grade	9	15526740	FreyEnergy,Heat,.ConvectionKit	115
Grade	9	15529403	RecyclablePlasticKit	168
Grade	9	15529801	NeoSci Polymers as Straws Kit	31.95
Grade	9	15530411	NeoSciHowScientistsDoScienceKit	119
Grade	9	15531514	Powerhouse Renewable Energy Kit	149
Grade	9	15564638	AlternativeEnergyKit	150
Grade	9	15573274	NeoSciMakingPlasticKit	30.95
Grade	9	15577084	NeoSciMagnet Kit	119
Grade	9	15577525	NeoSciAcidRainKit	46.95
Grade	9	15583051	NeoSciElectricity Kit	114
Grade	9	15583815	GeneralChemModelKit	104
Grade	10	15527993	UnderstandingEnzymesKit	44.95
Grade	10	15529735	IntroductionToGeneticEngineeringKit	77
Grade	10	15530411	NeoSciHowScientistsDoScienceKit	119
Grade	10	15531213	BioTechnology In the Classroom	299
Grade	10	15567503	NeoSciBioTech for YoungSciKit	109.95
Grade	10	15575142	EnzymeExperimentationKit	72
Grade	10	15583815	GeneralChemModelKit	104
Grade	10	15589857	CellStructureKit	67