

Executive Summary

Curriculum Update Report 2010-2011

The purpose of the report is to update the School Committee regarding Weston's curriculum initiatives during the 2010-2011 school year as well as the fall implementation of some new initiatives planned last year.

Program Reviews:

- History and Social Studies: Completed.
 - The 2008-2009 Program Review recommendations have been completed with a timeline in place to complete the two remaining goals.
- K-12 Wellness Department: Underway.
 - The Wellness Department Review was implemented under the new model.
 - The Wellness Review has conducted the External Review and will receive both the External Report and the Response to the External Report during the 2011-2012 school year.

Curriculum Highlights and Five Year Plan:

- K-5 Elementary
 - Standards, Learning Goals and Benchmarks:
 - Complete and implementing
 - Common Core included
 - Progress Monitoring in Math and ELA
 - Training complete and underway
 - Updated Math curriculum materials being added K-5
- Middle School:
 - Curriculum Updates for schedule changes:
 - Science, Social Studies, ELA
 - Foreign Language updates to Spanish
 - iPad Pilot underway 7th grade
- High School:
 - NEASC curriculum work
 - Art course changes
 - Foreign Language changes

To: Cheryl Maloney
From: Amber Bock
RE: Curriculum Update Report
Date: November 2, 2011

Introduction:

During the 2010-2011 school year, Weston implemented its second year of the Superintendent's Five Year Plan, which included many curriculum initiatives. Throughout the year, curriculum leadership teams worked to deliver instructional changes and to develop several new curriculum projects that will be implemented in the 2011-2012 school year.

Program Reviews:

The assessment and implementation of Program Review recommendations are essential to maintaining rigorous curriculum in the Weston Public Schools. This past year Weston implemented a revised program review process that was approved by School Committee. Currently the History & Social Studies review is ready for closure and the K-12 Wellness review is underway using the new process.

History and Social Studies Department Review: In 2008-2009, the History and Social Studies Department received a Program Review. There were two final recommendations to complete; the first was the streamlining of content in the 7th grade, and the second was the realignment of content across grades 3-5.

Middle School Action Item on Recommendation:

This summer the 7th grade team worked with Jim Murphy, Department Head, to streamline course content to make it more manageable for both teachers and students. Instead of moving content to the 6th grade, which had originally been considered, the team worked to eliminate content that overlapped with the 9th grade. By eliminating these areas of repetition the 7th grade teachers are better able to adjust the pace of instruction, and achieve more depth in content study. (This recommendation had been tabled until the completion of scheduling changes at the Middle School.)

Elementary Action Item on Recommendation:

Content alignment in grades 3-5 will be drafted in concept by the Fall of 2012 with implementation and final approval delayed until the hiring of a new Science/Social Studies Specialist. Anticipated changes will be implemented as each grade is finalized.

K-12 Wellness Department Review: During the 2010-2011 school year the Wellness Department completed the self-study phase of the review process. The Department completed external visits, researched current practice, assessed the Weston Standards, and conducted a survey of parents and students, as part of the revised Program Review process. The School Committee approved a "charge" for a visiting team and the External Review is currently being conducted. This winter both the External Review and the Department's response to the review will be completed.

Curriculum Highlights and Five Year Plan Initiatives:

Curriculum development and instructional changes are continually under way in Weston. Guided by the roadmap of the Superintendent's Five Year Plan, in conjunction with exploring new innovations, curriculum leaders across the system implement planned initiatives and explored new innovations.

K-5 Elementary:

- After two years of review and revision, Weston's K-5 Standards, Learning Goals and Benchmarks have been fully updated inclusive of the state framework updates of Common Core. All classroom teachers received a professional development day and have been provided a fully updated curriculum binder. Across the span of the upcoming school year, faculty will be reviewing the Common Core curricular changes at each grade level in anticipation of MCAS changes for the 2013 testing year.
- "Progress Monitoring" assessment practices were stranded through K-5 in Math and ELA. These updates to assessments were an outcome of the writing of grade level learning goals for each of the Weston Standards. New tools include the following changes:
 - TCT: or Teacher's College Tool for literacy assessment. Classroom teachers collect benchmark data on students at three intervals across the span of the year to monitor literacy comprehension, level, and fluency.
 - iReady and KR online for math assessment: Classroom teachers collect benchmark data on students in grades K-1 using the online Kathy Richardson assessment. Teachers of grades 2-5 are collecting three data intervals using "iReady", an online tool that is aligned to the Common Core, and provides a full range of data sorts on student progress toward Weston learning goals.
 - Science Process Rubric: Teachers benchmark annual progress toward attainment of science process skills and authentic use of content in the context of classroom discussion.
- Math curriculum material updates: New curriculum materials have been provided to support teachers adding more depth and rigor to K-5 math instruction. Extending into 2011-2012, grades will be adding materials that support the implementation of teaching toward the Common Core and meeting the needs of more advanced mathematics students. Investigations, ThinkMath, and a range of enrichment tools are being shared through professional development provided by our Math Specialist.

Middle School:

Last year the School Committee accepted proposed scheduling changes at the Middle School. During the past year Department Heads worked with the Middle School content teams to develop the anticipated curriculum changes in Science, Social Studies and English.

- Social Studies: In 6th grade, the additional time for Social Studies, has provided for a level of instructional continuity that is already noticeable this fall. Teachers will elaborate on the geography and world cultures aspects of the course. For the first time, the course can give real attention to specific areas of the world, rather

than teaching basic geographical skills and moving on to governments. This change will give the students much more focused area studies and specific knowledge of the world and its cultures.

- Science: In 6th grade Science, the additional time will be used to introduce relevant concepts in Technology/Engineering Science (see below). This curricular area is one of the four covered on the 8th grade Science MCAS exam (the others being Physical Science, Life Science, and Earth Science). The Department wants to provide for more continuity of instruction beyond the Design Technology electives that not all students take. Additional refinements will take place after this year's piloted implementation of ideas.

Grade 6 Curriculum Modifications Proposed

Unit	Technology/Eng Connections	Math/Literature Connections
What is Science?	Pendulum lab- Connect to Galileo, pendulum clocks, Huygens, Longitude by Dava Sobel- GPS- Connect to mapping; James Burke Connections Verge and Foliot ; build a clock; Lego data collection system.	Starry Messenger by Peter Sis Decimal numbers; John Harrison- The Man Who Made Time Travel Kathryn Lasky
Measurement/Metrics; weight, mass, volume	Develop own units of measurement for length, mass, etc.; design and build measurement instrumentation- how to make a barometer ;	
Elements ,Compounds, and Mixtures	Materials Science/Eng-Properties of materials; build a structure with different materials PBS Making Stuff materials and history	
Mapping The Earth (with Grade 6 social studies)	GPS, Google Earth	Polar coordinates; Librarian who Measured the Earth Kathryn Lasky
Weather/Heat Transfer in the Earth's System	Weather instruments; Internet storm tracking	Google SketchUp
EnvSci- Energy and Living Things	Temperature measurement, oxygen, pH, humidity	

Science 6-8: The Science Department has planned for other substantial updates to its curriculum. They began work last summer on implementing a fully integrated science curriculum in grades 6-8. These changes will be implemented over the upcoming year, with further refinement over the next year as well. The goals for student outcomes are:

- i. the development of deep understanding and curiosity about the world.
- ii. the ability to make connections among concepts studied.
- iii. thinking scientifically.

Integrating the curriculum, or “spiraling” as it is often called, can achieve these outcomes better than our stand-alone science curricula in 6th, 7th, and 8th grades because it will help students develop cognitive skills around a spiraled core of topics in grades six through eight. The core spiraled topics identified are:

1. Forces/Energy: E/M spectrum from the sun, why are plants green, energy transformations in living systems.
2. Building blocks of matter: atoms, molecules, chemical bonding, compounds, chemical reactions.
3. Organizational framework of life: cells (structure & function).
4. Properties of matter: density, appropriate building materials.
5. Evolution: Earth’s history and evolution of Earth and organisms.
6. The environment: abiotic and biotic changes, environmental issues (pollution, etc.).
7. The scientific method of asking and answering questions.
8. Design of instrumentation and use of technology in science.

- English: The 6th grade English team worked throughout the last academic year to develop a new curriculum model to fit with the change in class time from a full-time Reading and a full-time English course, to a full time Language Arts course supported by a three-time-per-week “Reading Writing Connections” course.

Both courses are grounded in the state and district learning standards, with an overall philosophy binding the two courses. The ELA course undertakes the teaching of core texts and related writing skills (analysis of literature as well as creative writing relevant to the texts) while the “Connections” course covers the reading of shorter works – short stories, poetry, non-fiction articles and the like to help build students’ core skills. In addition, vocabulary and grammar training would be taught first in the Connections course and reinforced in the ELA course. During the upcoming year, a PLC for the 6-12 Department will provide opportunities for further refinement in the context of the new English Department universal writing rubric to improve student organization of writing.

- Foreign Language: Middle and High School Spanish teachers met over the summer to work on smoothing the transition between the two Spanish programs so that all students come prepared with minimal gaps in coverage. Strategies for students new to WPS were also designed, as well as a policy for incoming freshmen who are recommended for Intermediate II Spanish (i.e. skipping a level).
- iPad Pilot and Technology goals: Curriculum at the MS is being re-envisioned to capture the positive potentials of iPads and other technology tools. The data and experiences of these projects will be shared in the end of year Technology report.

High School:

- NEASC: Over the past two years the High School faculty has reflected on curriculum as a part of NEASC preparation. Having completed the self-study on curriculum standards, assessment, and course continuity, the Department Heads

are now moving forward to implement updated rubrics and newly revised course learning goals. Over the next year the leadership team will work on creating a common format for department learning goals, and reviewing the Common Core changes, all with the goal of teaching effectively toward the Weston Standards.

- **Art:** The addition of Design Animation is being implemented. Students are enjoying the challenge of creating stop action animations from found or handmade objects, editing, and adding sound effects. For the first half of the course, students are working in small groups, collaborating on decision making and working through the dynamics of shared ownership of a concept. After building skills and discovering a variety of animation techniques, students will work on their own animation for an extended time. Creative problem solving is infused into each project and is clearly visible in the students' work.
- **Art II-IV and Clay II-IV** have been combined into shared courses. While it can be challenging for the teacher to differentiate instruction for so many levels there are benefits for students. Students in the lowest section are being inspired by the work and energy of the more experienced sections and they can anticipate the content and work of the next level of the course. In some situations, the most advanced students are providing guidance and instruction to younger students. This is especially evident in Clay II-IV. As this is only our second year working with these combined courses in Art II-IV, we have little more than anecdotal data, but numbers may suggest improved retention of students, especially in Art II-IV.
- **Foreign Language:** The Foreign Language Department is working hard to create authentic language and culture learning opportunities for all students. Heading into 2011, a service trip to Peru, trips to Spain, France, and China, as well as a long-term exchange to Luoyang, China are among current project proposals. This is in line with both the district's five year plan to offer such global opportunities to our students, and the High School's 21st century skill set which places particular value and emphasis on widening student exposure to other cultures, languages, and ways of thinking and living. As such, these sorts of experiences are regarded as crucial elements of the curriculum.
- **Foreign Language:** The department has initiated a blended learning experience in its Latin III/IV and French AP/Honors classes. These classes blend a mix of teacher led instruction, student-teacher instruction, and on-line learning and will provide some preliminary data on such learning experiences.

Conclusion:

As we move into year three of implementing the Superintendent's Five Year Plan, a range of curriculum goals are reaching implementation and a second tier of projects are underway. The K-12 Leadership Team is invested in the successful implementation of our shared goals, and is already beginning the process of visioning future goals for the next Five Year Plan.