

DISTRICT GOAL 2009/10 SCHOOL YEAR

Goal #1: Examining Science Sequencing and Offerings at Metuchen High School

Work with a committee of teachers, administrators, guidance personnel and special services personnel to review the high school science course sequences to ensure all students are offered a sequence that is aligned with the new high school graduation requirements, and that best meets their academic needs. Evaluate the possibility of offering biology to all ninth graders and the possibility of broadening the choices offered to 11th and 12th grade students to begin with the 2010/11 school year.

To fulfill this goal a committee was formed including the following personnel:

Bruce Peragallo	High School Principal
Paul Pineiro	Curriculum Director
Kathleen Henn	Science Supervisor
Joann Zebrowski	Math Supervisor
Bob Capra	Director of Special Services
Sandy DeLuca	Director of Guidance
Janet Irenski	Special Services Coordinator
Yoko Kato	Science Teacher
Marty Holleran	Science Teacher
Harvey Weinstock	Science Teacher

Input from staff regarding ninth grade science offerings, and their subsequent sequences, was sought during committee and departmental meetings. Research was done to determine what other districts offer, including two site visits to similarly sized "I" district high schools. Three proposals for different course sequences were presented to the committee, which selected the proposal outlined below.

Proposal:

- Eliminate current Earth Science course (SY 2010-11)
- Eliminate current General Science course (SY 2010-11)
- Create a new Biological Science course as the first course in a three year sequence for our most challenged students. It is recommended that the class size for this course be held to 12 students or less to best meet the needs of these students. (SY 2010-11)
- Create a new Environmental Science course as the second course in a three year sequence for our most challenged students. (SY 2011-12)
- Develop a proposal for a third course in this three year sequence by June 2010. This course would be introduced in SY 2012-2013.
- Revise the current Environmental Science course to become the final course for a three or four year Modern sequence. (SY 2011-12 or 2012-13)
- In the future investigate the possibility of offering an additional elective choice as the final course in a three or four year Modern sequence.

Possible Sequences:

Bio Sci → Env Sci A → TBD* or Bio Sci → TBD* → Env Sci A

M Bio → M Chem → M Phys → M Elective**
→ M Elective**
→ Env Sci A → TBD
→ M Chem → TBD* or M Phys or M Elective** (not Env Sci)

H Bio → H Chem → H Phys → AP Bio
→ AP Chem
→ Adv. Studies

*TBD – To Be Determined

** M Elective – Modern level elective – enhanced Environmental Science and possibly an additional elective in place of one or two sections of Environmental Science.

Advantages of recommended changes:

- All students will begin the high school science sequence by taking Biology with their age level peers.
- Increased flexibility for students to change level, both during a course and at the end of a course.
- Eliminates one very small course.
- Establishes Biological Sciences as small ICS sections able to meet the needs of our most challenged students.
- Encourages placement of capable students into the Modern sequence.

Implementation:

As changes are implemented it will be necessary to pass through a transition period. During the first year, an unusually large number of students will be taking a biology course, creating a “bubble”. What follows is an estimate of how many students will be taking biology and how many sections will be needed to accommodate them.

Year 1: 2010-2011 School Year

Biological Science ICS	2 sections	12 students each	24 students
Modern Biology (2-3 ICS)	6 sections	22 students each	132 students
Honors Biology	2 sections	24 students each	48 students
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	10 sections		204 students

There are 149 current 8th graders, 4 General Science students, and 48 Earth Science students, totaling 201 students. There is sufficient teaching staff for 10 sections. Should scheduling make it necessary, it is possible to add one zero period section.

In year two it is anticipated that the number of biology sections will reduce to nine. Because student course selections can be very variable, it is difficult to predict course selections several years out. It may be necessary to make use of teacher(s) sixth prep during the transition period.