CCS Mathematics Action Plan for 2009-2010

The overarching goal of the Charlotte Central School Mathematics Program is to provide all students with a robust math program that meets the current National Council of Teachers of Mathematics (NCTM) Standards and Focal Points in order to improve students' performance on state and local assessments. The math program will incorporate recommendations from the most current research such as those from the National Mathematics Advisory Panel.

Goal 1: To increase to 90% the percentage of students who score *proficient* or *proficient with distinction* on the state NECAP test level of proficiency (levels 4 and 3).

Goal 2: To increase each grade-level's average on the CSSU End-of-Year tests by 3%.

NECAP	Total Proficient & above	Proficient with Distinction Level 4	Proficient Level 3	Partially Proficient Level 2	Substantially below proficient Level 1		End-of-Year Test	K	1	2	3	4	5	6	7	8
2005	86%	37%	49%	11%	2%											
2006	87%	42%	45%	8%	4%		**2007**	89%	86%	88%	82%	84%	85%	85%	82%	n/a
2007	89%	52%	37%	6%	5%		**2008**	94%	87%	81%	87%	92%	77%	n/a*	n/a*	n/a*
2008	88%	51%	37%	7%	5%		**2009**	87%	87%	82%	86%	86%	83%	90%	89%	81%
														Number & Operations	89%	n/a	n/a
														Functions & Algebra	89%**	n/a	81%
														Geometry & Measurements	92%**	n/a	n/a
														Probability & Statistics	91%**	89%**	n/a
														Algebra Aptitude Test (7th grade only)	n/a	76%	n/a

* tests were under revision ** not all classes took this strand test

Explanation of EOY scores for Grades 6 – 8 using the Connected Math Program. Grades 6 - 8 did not take EOY tests in 2008 as the tests were deemed too long and in need of revision. The tests were broken up into four strands. In 2009, CCS teachers were asked to administer at least one strand test of their choice. Beginning this year, teachers will administer all four individual strand tests throughout the year, as it appropriately aligns with their completion of each strand.

Algebra. Twenty-one out of fifty students are in the '09-10 CCS Algebra class.

Strategy/Action Steps	Person(s) Responsible	Measurement
Identify, provide, and adjust ongoing support on a semester basis. Analyze End-of-year (EOY) assessments, NECAP data, unit tests, and teacher observations to identify students needing additional supports.	• Math Coordinator/Math Interventionists • Math Teachers • Special Educators	End-of-year (EOY) assessments, NECAP data, and unit tests. Track the percentage of students who move up a level in the Necap test.
Teachers who are responsible for math instruction will participate in professional development activities related to mathematics such as VMI Phase II, college courses, workshops, and conferences. Within a three-year period, math teachers are encouraged to complete three licensure credits.	• Math Coordinator • Math Teachers • Special Educators	Track the number of teachers who are participating or completing professional development related to mathematics.
Teachers will collaborate on a regular basis in order to share successful strategies, to problem-solve individual student cases, and to develop consistent practices for delivery of instruction.	• Math Teachers • Math Coordinator	Track instances of collaboration and development of consistent practices.
Math RTI will be investigated.	• Math Coordinator, Math Teachers	Weekly progress monitoring.
Teachers will investigate Math programs.	• Grade 1- 5 Math Teachers	Teacher survey and forum, test scores.
Coordinate and plan enrichment experiences ideally related to strand content for students.	• Math Teachers • Enrichment Coordinator • MathCounts Coach	Percentage of students achieving NECAP level 4.
Begin developing a plan to assess and increase proficiency in fluency with fractions and particular aspects of geometry and measurement as specified in the Report of the National Mathematics Advisory Panel.	• Math Coordinator • Math Teachers	Alignment chart of GE's and curriculum to NMAP Benchmarks.

Goal 3: By the end of each year, 90% of all students will meet the CCS-specified benchmark for recall of math facts at the appropriate grade level, except where a math IEP plan specifies different goals. All students will make progress during the year.

Description of proficiency of automaticity of math facts as delineated by the Vermont Mathematics Grade Expectation	**When this proficiency will be assessed** (expected date of proficiency* is in **bold**)	**Percentage of students meeting the CCS-specified Benchmark (electronic, oral, or written assessments)**
adds and subtracts whole-number facts through ten	**Grade 1**: fall, mid-year, **end-of-year** Grade 2: fall	To be reported after benchmarks are established, per grade level.
adds and subtracts whole-numbers facts through twenty	**Grade 2**: fall, mid-year, **end-of-year** Grade 3 - 8: fall, mid-year, end-of-year	To be reported after benchmarks are established, per grade level.
multiplies whole numbers through twelve with accuracy.	**Grade 4**: fall, mid-year, **end-of-year** Grade 5 - 8: fall, mid-year, end-of-year	To be reported after benchmarks are established, per grade level.
divides whole numbers through twelve with accuracy	**Grade 5**: fall, mid-year, **end-of-year** Grade 6 - 8: fall, mid-year, end-of-year	To be reported after benchmarks are established, per grade level.

* as delineated by the Vermont Mathematics Grade Expectations

Vermont Mathematics Grade Expectations (GE) Reference

The number after "M" indicates the grade level, e.g., M1:6 is the **M**ath Grade Expectation for the end of grade **1**. The GE for recall of facts is GE #**6** for all grades; hence the ":6".

M1:6 Mentally adds and subtracts whole-number facts through ten with accuracy.

M2:6 Mentally adds and subtracts whole-numbers facts through twenty with accuracy.

M3:6 Mentally adds and subtracts whole-numbers facts through twenty with accuracy.

M4:6 Mentally adds and subtracts whole numbers through twenty and multiplies whole numbers through twelve with accuracy.

M5:6 Mentally multiplies and divides whole numbers through twelve with accuracy

M6:6 Mentally multiplies and divides whole numbers through twelve with accuracy.

Strategy/Action Steps	Person(s) Responsible	Measurement
Develop uniform electronic, oral, and written assessments of automatic recall of facts as delineated by the Vermont Mathematics Grade Expectations (GE's) and additional CCS expectations.	• Math Coordinator • Math Teachers • Special Educators	Track student performance three times a year.
Provide direct instruction for students who do not achieve CCS proficiency standards.	• Math Interventionists • Math Teachers • Special Educators	Electronic, oral, and written assessments.
Share strategies that support students' ability to develop and retain automatic recall of math facts.	• Math Coordinator/Math Interventionists • Math Teachers • Special Educators	Matrix of computation resources.
Teachers will investigate materials related to computation. Select and/or recommend a finite number of supplemental materials that will be used consistently to promote automaticity of math facts.	• Math Teachers • Math Coordinator	Availability of resources for all teachers.
Teachers will participate in professional development activities that promote understanding of the connection between mathematical operations (addition, subtraction, multiplication, division) and the sequential nature of acquisition.	• Math Coordinator • Math Teachers • Special Educators	Student improvement in additive and multiplicative reasoning.