

WEST HARTFORD PUBLIC SCHOOL DISTRICT
(corrected graph on page 6)

AGENDA ITEM: High School Test Score Results –
SAT and Advanced Placement (AP)

MEETING DATE: October 21, 2008

FROM: Karen List, Assistant Superintendent for Curriculum and Instruction
Chip Ward, Director of Finance and Planning

THROUGH: David P. Sklarz, Superintendent

BACKGROUND:

This report presents the results of West Hartford's High Schools on the SAT and AP exams for the 2007-08 school year.

Dr. List and Mr. Ward will be available to answer questions.

SAT Scores:

The Class of 2008's overall performance on the SAT declined last year. Combined math and critical reading (verbal) scores showed a decrease of 17 points to a total of 1064. The average score on the writing portion of the SAT decreased five points to 535. The overall participation decreased to 87% for the class of 2008, down 3 points from last year.

In West Hartford

- The mean Math score decreased 8 points to 533.
- The mean Critical Reading (Verbal) score decreased 9 points to 531.
- The mean Writing score decreased 5 points to 535.
- Participation rate decreased 3 points to an estimated 87%
- Longer term trends show growth with combined SAT results up 12 points since 1992.

AGENDA ITEM:
V.B.1

At Conard High School

- The mean Math score decreased 14 points to 515.
- The mean Critical Reading (Verbal) score decreased 10 points to 516.
- The mean Writing score decreased 6 points to 520.
- Participation rate decreased 4 points to an estimated 88%.
- Since 1995, combined scores for Conard have ranged from 1020 to 1081. The Class of 2008's scores are at the low end of that range.

At Hall High School

- The mean Math score decreased 3 points to 549.
- The mean Critical Reading (Verbal) score decreased 9 points to 545.
- The mean Writing score decreased 6 points to 548.
- The participation rate decreased 1 point to 87%.
- Since 1995, combined scores for Hall have ranged from 1090 to 1140. The Class of 2007's scores are at the low end of that range.

One of the difficulties in reporting on the SAT results is the wide swings in the scores from year to year as different groups of students take the test and as a consequence of random fluctuations in test scores. When we look at the test scores since 1992, each of Hall's and Conard's math and verbal SAT scores have changed by an average of 11 points from one year to the next. Sometimes the change is positive and the scores rise and sometimes the change is negative and the scores decline. It is important to note that the magnitude of these random swings can overwhelm the changes that result from curricular and instructional changes. The colored rectangles in the charts at the end of this memo highlight the normal range in SAT scores at both Hall and Conard.

Improvements in the performance on norm referenced standardized tests like the SAT due to curricular and instructional changes are slow and require many years of intervention. To raise SAT verbal scores, we have to expose students to more vocabulary and improved reading strategies over their entire secondary career (grades 6 to 12). To raise SAT math scores, we have to get more students to take more advanced math courses from grade 6 on. Students can not be accelerated into pre-calculus without completing two years of algebra and one of geometry. When we look at SAT test score improvements in response to curricular and instructional changes, we are really only looking for a change of 1 or 2 points a year.

The curricular and instructional improvements of 1 to 2 points a year are easily swamped by the 10 point or so random variation from year to year. That is why it is so important to look at the long term changes in the SAT scores and not the year to year variation.

The tables and charts on the following pages provide an historical perspective on the SAT performance since 1992.

SAT Score Summary – 2008 results

Conard High School

Year	Math	Critical Reading (Verbal)	Writing	Participation	Total Score	Yearly Change	Cumulative Change from 1992
1992	518	505		89%	1023		
1993	513	517		89%	1030	7	7
1994	506	509		88%	1015	-15	-8
1995	521	526		87%	1047	32	24
1996	516	521		93%	1037	-10	14
1997	540	541		92%	1081	44	58
1998	535	524		93%	1059	-22	36
1999	524	521		89%	1045	-14	22
2000	530	520		86%	1050	5	27
2001	524	513		92%	1037	-13	14
2002	521	505		83%	1026	-11	3
2003	538	540		84%	1078	52	55
2004	512	508		92%	1020	-58	-3
2005	526	529		85%	1055	35	32
2006	536	535	527	81%	1071	16	48
2007	529	526	526	92%	1055	-16	32
2008	515	516	520	88%	1031	-24	8

Hall High School

Year	Math	Critical Reading (Verbal)	Writing	Participation	Total Score	Yearly Change	Cumulative Change from 1992
1992	542	538		96%	1080		
1993	546	546		95%	1092	12	12
1994	548	546		99%	1094	2	14
1995	569	558		98%	1127	33	47
1996	554	548		98%	1102	-25	22
1997	554	558		97%	1112	10	32
1998	558	569		94%	1127	15	47
1999	561	562		95%	1123	-4	43
2000	577	566		96%	1143	20	63
2001	551	553		91%	1104	-39	24
2002	569	574		97%	1143	39	63
2003	554	557		92%	1111	-32	31
2004	569	567		88%	1136	25	56
2005	555	553		88%	1108	-28	28
2006	561	561	547	92%	1122	14	42
2007	552	554	554	88%	1106	-16	26
2008	549	545	548	87%	1094	-12	14

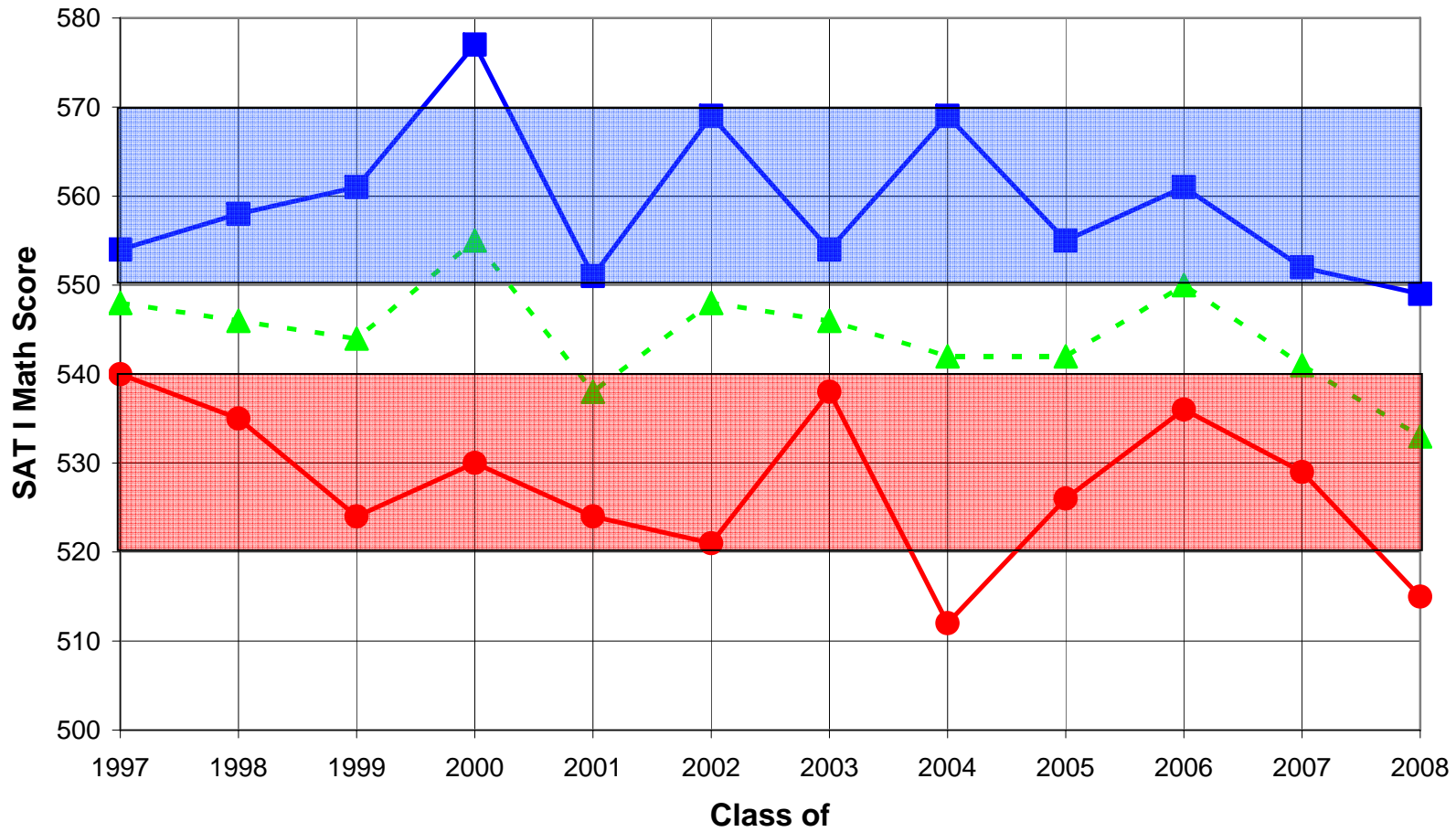
West Hartford District

Year	Math	Critical Reading (Verbal)	Writing	Participation	Total Score	Yearly Change	Cumulative Change from 1992
1992	530	522		92%	1052		
1993	530	532		92%	1062	10	10
1994	530	530		94%	1060	-2	8
1995	547	543		93%	1090	30	38
1996	535	535		95%	1070	-20	18
1997	548	551		95%	1099	29	47
1998	546	547		93%	1093	-6	41
1999	544	543		92%	1087	-6	35
2000	555	544		91%	1099	12	47
2001	538	534		91%	1072	-27	20
2002	548	543		90%	1091	19	39
2003	546	549		88%	1095	4	43
2004	542	539		90%	1081	-14	29
2005	542	542		86%	1084	3	32
2006	550	550	538	87%	1100	16	48
2007	541	540	540	90%	1081	-19	29
2008	533	531	535	87%	1064	-17	12

Connecticut

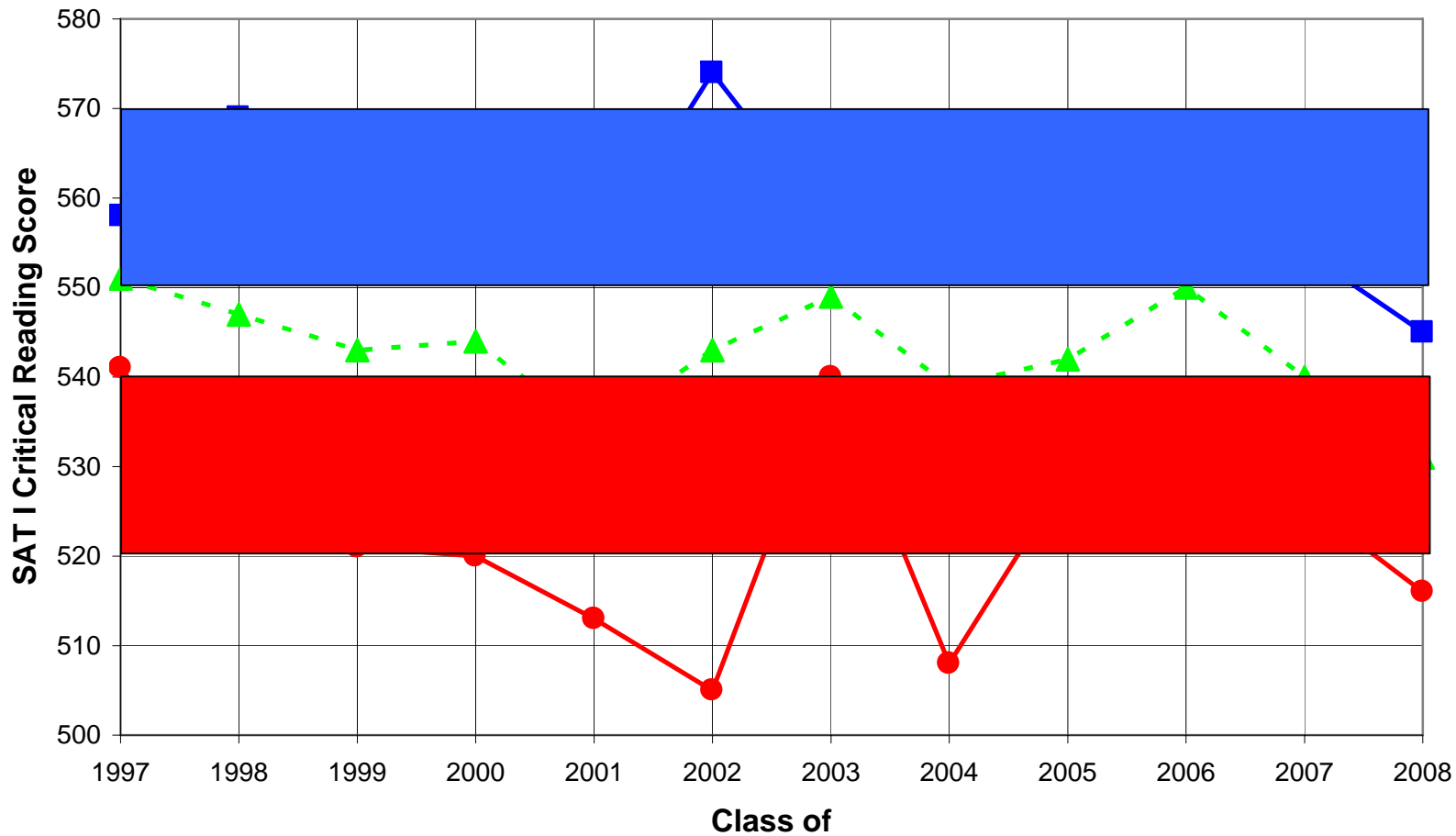
Year	Math	Critical Reading (Verbal)	Writing	Participation	Total Score	Yearly Change	Cumulative Change from 1992
1992	501	500			1001		
1993	503	500			1003	2	2
1994	504	499			1003	0	2
1995	506	504		81%	1010	7	9
1996	504	507		79%	1011	1	10
1997	507	509		79%	1016	5	15
1998	509	510		81%	1019	3	18
1999	509	510		80%	1019	0	18
2000	509	508		80%	1017	-2	16
2001	510	509		82%	1019	2	18
2002	509	509		83%	1018	-1	17
2003	514	512		84%	1026	8	25
2004	515	515		85%	1030	4	29
2005	517	517		86%	1034	4	33
2006	516	512	511	84%	1028	-6	27
2007	512	510	511	84%	1022	-6	21
2008	513	509	513	83%	1022	0	21

SAT I - Math Score Long Term Trends



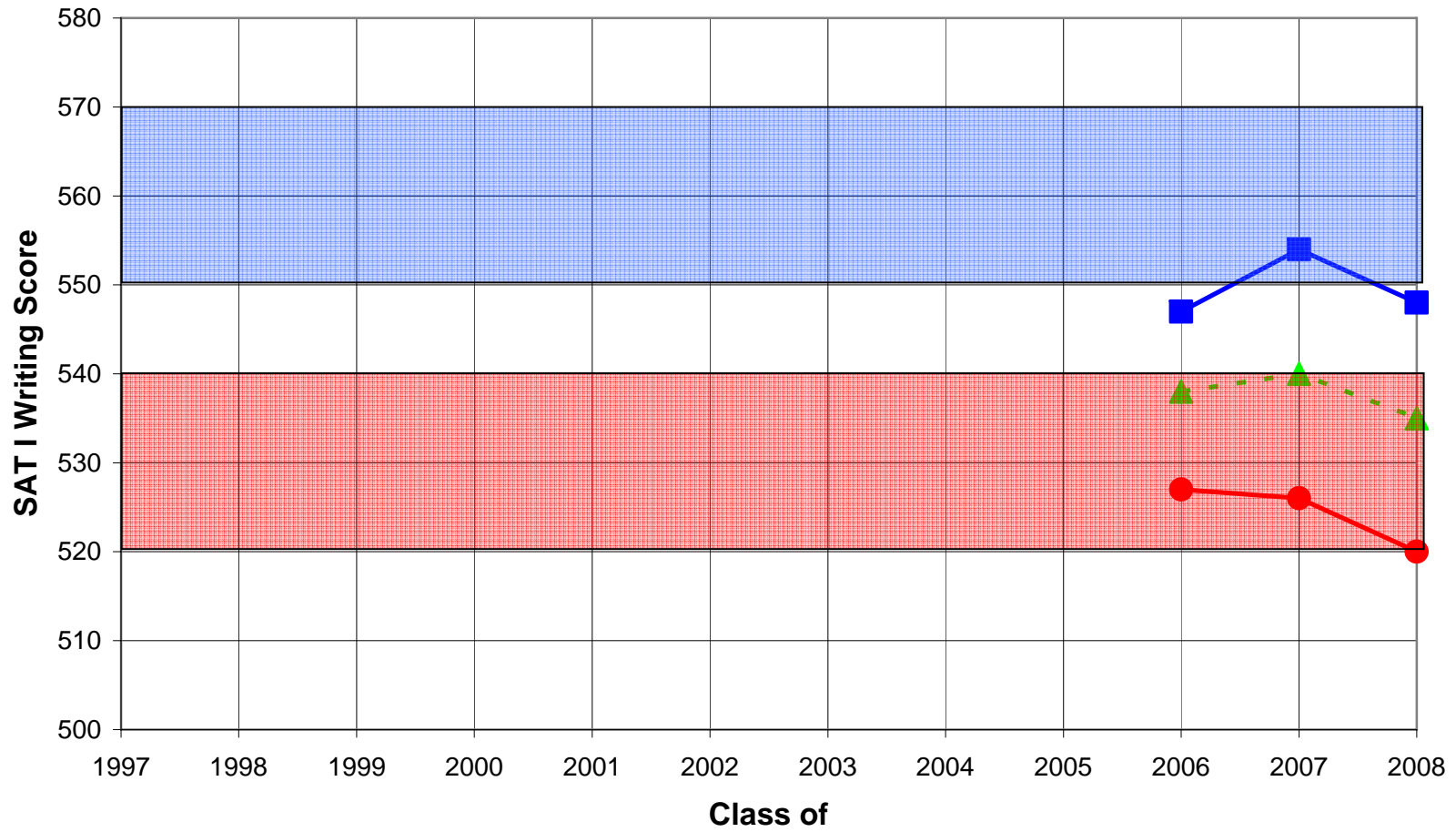
—●— Conard —■— Hall -▲- District

SAT I - Critical Reading Score Long Term Trends



—●— Conard —■— Hall -▲- District

SAT I - Writing Score Long Term Trends



—●— Conard —■— Hall -▲- District

Advanced Placement (AP) Scores:

The attached tables summarize the results of the 2008 administration of AP exams. The AP program gives students the opportunity to pursue college-level studies while still in high school and to receive advanced placement, credit, or both in college. The courses are very challenging and provide the student an opportunity to learn a subject in depth, to develop analytical reasoning skills, and to form disciplined study habits that can contribute to continued success in college.

Each exam is scored on a 5-point scale, where a 5 represents the highest score possible and 1 is the lowest. Each individual college decides which AP exam grades they will accept for advanced placement and/or credit in which subject area; many accept 3 or above and almost all accept a score of 4 or 5.

2008 was another excellent year for the AP Program – we had 68 more exams taken for a total of 1,514 though we had 10 fewer students taking one or more exams for a total of 776. The participation rate, which is the total number of exam takers divided by the grade 11 and 12 enrollment, averaged 55.2% for the district, which was highest it has ever been. English Lit, Spanish Language and Calculus all saw substantial increases in the number of exams taken this year. In total AP exams were taken in 25 different subjects.

Conard Results:

- 433 students took 887 exams. Average score was 3.09 and 68% received 3 or higher
- Number of exam takers increased by 6%, and the participation rate soared to 66%
- Number of exams increased 14%
- Most popular exam – English Language – 137 students, mostly juniors took exam, 73% received 3 or higher
- 50.6% of the class of 2008 earned a 3 or higher on at least one AP exam according to the College Board's data set – the highest ever

Hall Results:

- 343 students took 627 exams. Average score was 3.82 and 87% received 3 or higher
- Number of exam takers decreased 9.5% and participation decreased to 45.5%
- Number of exams decreased by 6%
- Most popular exam – Psychology – 78 students took exam, 87% received 3 or higher
- 44.7% of the class of 2008 earned a 3 or higher on at least one exam according to the College Board's data set.

A final note about average scores and percent of students earning a 3 or higher. This is the one area of test reporting where higher is not always better. It is easy to get high average scores on the AP exam – just limit the test takers to students who will score a 5. But enrollment in AP courses should be much more than getting a 5 on the exam. Many

students, who will not get 5's or 4's or even 3's on the exam can benefit from the challenging curriculum and content provided by these courses.

2008 AP Exam Results

Exam	Conard		Hall	
	Number of Tests	% 3 or higher	Number of Tests	% 3 or higher
English Language	137	73%	73	95%
English Literature	88	80%	67	96%
French Language	19	11%	21	81%
French Lit	1	100%	4	100%
Spanish Language	64	63%	33	97%
Spanish Lit	8	100%	0	
Calculus AB	38	92%	60	97%
Calculus BC	17	88%	10	100%
Statistics	17	76%	24	71%
Biology	70	66%	40	95%
Chemistry	32	84%	36	94%
Physics B	28	75%	26	92%
Environ. Science	30	40%	6	67%
Econ. – Micro	39	56%	14	79%
Econ. – Macro	39	51%	14	79%
European History	54	52%	26	85%
US History	105	52%	91	66%
Psychology	84	82%	78	87%
Other exams taken	Art- (5), Govt Comp (7), Govt US (5)		Art (1), Physics C (3),	
Totals	887	67%	627	87%

Performance on the Board Goal:

The Board Goal states that 60% of high school graduates who enter high school as 9th graders will successfully complete at least 1 Advanced Placement course during high school. The table below shows the calculation of the AP statistic for the Classes of 2004 through 2008 at Conard and Hall. In this calculation we look at graduating seniors who were enrolled in West Hartford Public schools at the start of their 9th grade year and count how many successfully completed 1 or more AP courses during their years in West Hartford Public Schools. Successfully completed was defined as earning a C or higher in the AP course. At Conard we have seen a steady gain from 52% of graduates successfully completing 1 or more AP course in 2005 to 71% in 2007 and 64% in 2008. At Hall, 66% of 2008 graduates successfully completed one or more AP courses.

School	Year	Grads who entered as 9 th graders	Number of grads who successfully completed 1 or more AP courses	Percent
Conard	Class of 2004	260	144	55%
	Class of 2005	281	146	52%
	Class of 2006	276	163	59%
	Class of 2007	318	226	71%
	Class of 2008	283	182	64%
Hall	Class of 2004	308	185	60%
	Class of 2005	319	190	60%
	Class of 2006	317	198	62%
	Class of 2007	353	249	71%
	Class of 2008	323	212	66%

Number of AP Exams taken by Subject Area

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Art (Drawing/General)	12	12	17	23	16	17	19	13	7	6
Biology	134	179	142	114	131	146	181	189	115	110
Calculus - AB	39	21	50	43	37	40	35	60	78	98
Calculus - BC	27	31	27	36	31	30	29	34	27	27
Chemistry	56	51	51	32	73	54	40	85	74	68
Economics - Macro	53	62	55	65	54	38	53	30	47	53
Economics - Micro	19	42	70	43	47	33	48	30	45	53
English Lit. & Comp.	98	87	97	133	121	78	102	116	101	155
English Language	74	108	132	155	151	147	171	205	201	210
Environmental Science									35	36
European History	90	88	109	106	102	56	103	64	72	80
French Language	16	26	32	24	25	25	25	34	49	40
Physics B	59	44	64	70	30	36	47	48	40	54
Psychology				40	31	116	115	151	202	162
Spanish Language	51	44	58	56	38	47	53	79	81	97
Spanish Literature						0	15	7	16	8
Statistics	47	37	21	49	35	30	44	42	55	41
U.S. History	97	104	114	149	94	158	131	171	161	196
Other	7	5	22	18	31	16	18	19	31	20
Total	879	941	1061	1156	1047	1067	1229	1377	1437	1514

AP Exam Scores - Historical Summary

Conard High School

<u>Year</u>	<u>Subjects</u>	<u>Exams</u>	<u>Avg Score</u>	<u>Percent 3 or higher</u>	<u>Candidates</u>	<u>11-12 Enrollment</u>	<u>Participation Rate</u>	<u>State Rank</u>	<u>AP Equity & Excellence</u>
1994	11	204	2.99	63%	173	473	36.6%	1st	
1995	11	249	3.07	64%	186	503	37.0%	2nd	
1996	11	203	3.14	71%	146	532	27.4%	6th	
1997	11	198	3.44	80%	153	571	26.8%	4th	
1998	14	257	3.04	66%	181	619	29.2%	6th	
1999	17	381	3.31	76%	238	601	39.6%	2nd	
2000	17	434	3.24	74%	257	633	40.6%	3rd	
2001	19	544	3.08	67%	320	681	47.0%	2nd	
2002	20	587	3.13	72%	322	710	45.4%	2nd	
2003	22	575	3.21	74%	333	669	49.8%	2nd	
2004	21	521	3.36	75%	314	627	50.1%	3rd	
2005	21	663	3.23	71%	384	646	59.4%	1st	38.4%
2006	21	776	3.24	71%	417	678	61.5%	1st	49.4%
2007	26	778	3.25	74%	407	697	58.4%		40.6%
2008	23	887	3.09	68%	433	652	66.4%		50.6%

Hall High School

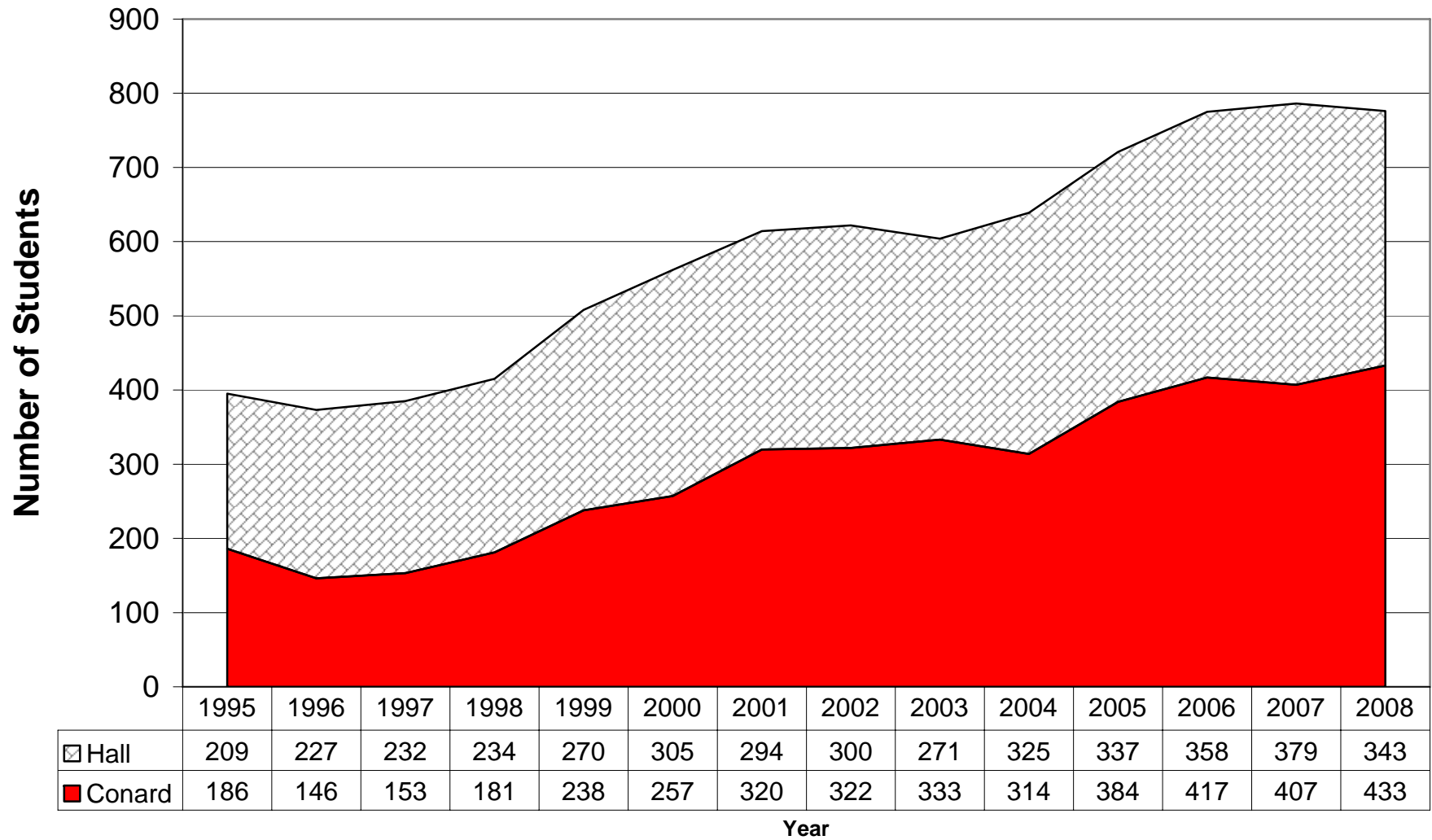
<u>Year</u>	<u>Subjects</u>	<u>Exams</u>	<u>Avg Score</u>	<u>Percent 3 or higher</u>	<u>Candidates</u>	<u>11-12 Enrollment</u>	<u>Participation Rate</u>	<u>State Rank</u>	<u>AP Equity & Excellence</u>
1994	16	283	3.63	86%	189	559	33.8%	2nd	
1995	18	363	3.64	84%	209	486	43.0%	1st	
1996	14	396	3.48	81%	227	553	41.0%	1st	
1997	15	425	3.68	88%	232	563	41.2%	1st	
1998	18	406	3.69	85%	234	604	38.7%	1st	
1999	19	498	3.66	84%	270	583	46.3%	1st	
2000	18	507	3.62	83%	305	596	51.2%	1st	
2001	23	536	3.60	84%	294	678	43.4%	4th	
2002	22	569	3.77	89%	300	691	43.4%	3rd	
2003	18	472	3.82	88%	271	718	37.7%	9th	
2004	18	546	3.95	92%	325	739	44.0%	4th	
2005	22	566	3.75	86%	337	731	46.1%	4th	46.3%
2006	21	601	3.84	89%	358	745	48.1%	4th	47.9%
2007	23	668	3.81	88%	379	769	49.3%		54.0%
2008	20	627	3.82	87%	343	754	45.5%		44.7%

AP Exam Scores - Historical Summary

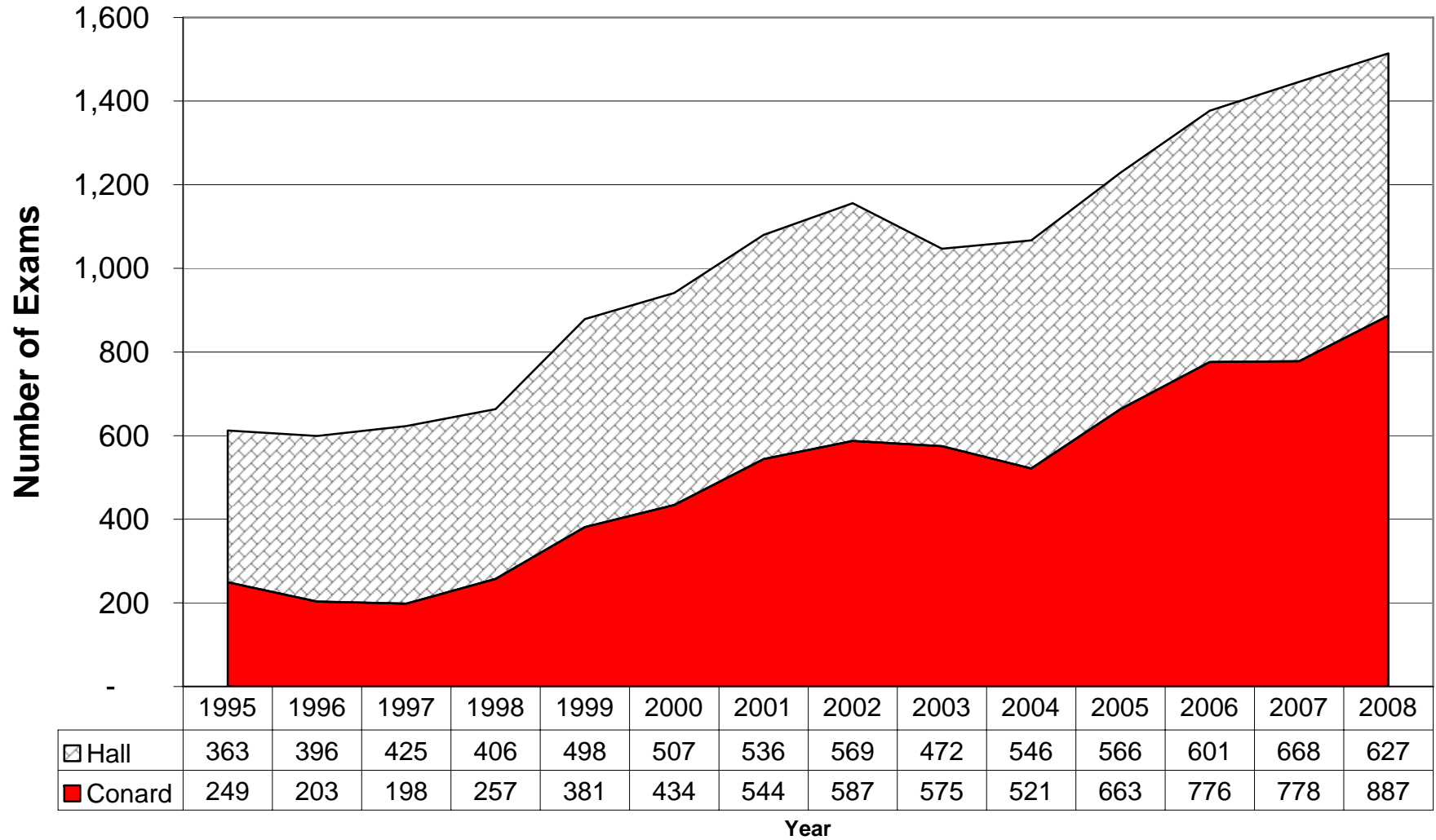
West Hartford Public Schools

	<u>Subjects</u>	<u>Exams</u>	<u>Avg Score</u>	<u>Percent 3 or higher</u>	<u>Candidates</u>	<u>11-12 Enrollment</u>	<u>Participation Rate</u>	<u>State Rank</u>	<u>AP Equity & Excellence</u>
1994	16	487	3.36	76%	362	1032	35.1%	1st	
1995	18	612	3.41	76%	395	989	39.9%	1st	
1996	14	599	3.36	78%	373	1085	34.4%	2nd	
1997	15	623	3.60	85%	385	1134	34.0%	1st	
1998	18	663	3.44	78%	415	1223	33.9%	3rd	
1999	19	879	3.51	81%	508	1184	42.9%	1st	
2000	18	941	3.44	79%	562	1229	45.7%	1st	
2001	24	1080	3.34	75%	614	1359	45.2%	1st	
2002	24	1156	3.44	80%	622	1401	44.4%	2nd	
2003	22	1047	3.49	80%	604	1387	43.5%	5th	
2004	22	1067	3.66	84%	639	1366	46.8%	3rd	
2005	22	1229	3.47	78%	721	1377	52.4%	2nd	42.4%
2006	22	1377	3.50	79%	775	1423	54.5%	1st	48.7%
2007	29	1437	3.51	80%	783	1466	53.4%		47.3%
2008	25	1514	3.39	76%	776	1406	55.2%		47.7%

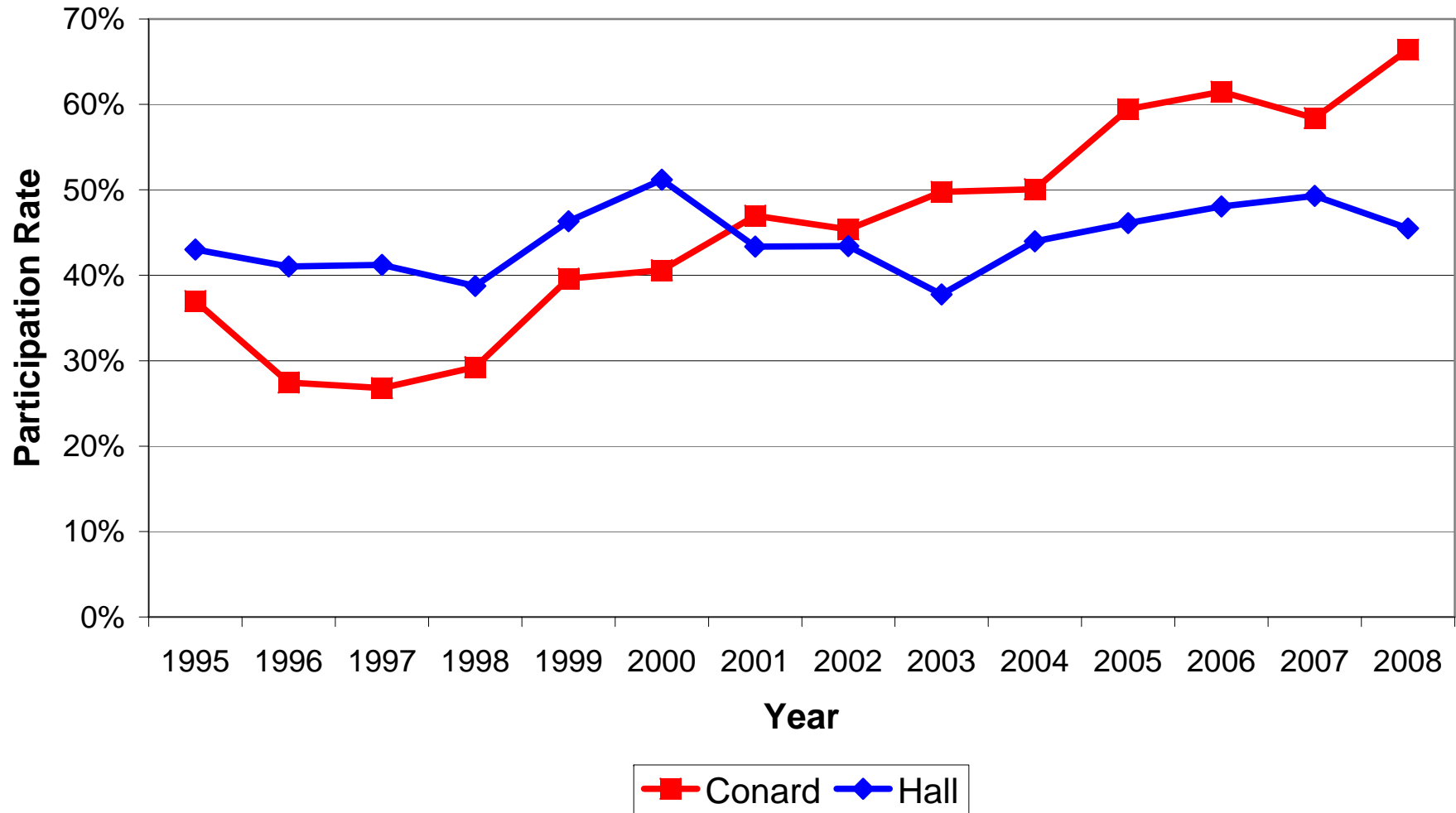
Number of Students Taking AP Exams



Number of AP Exams Taken



"Participation" Rate - Number of students taking an AP exam/Number of 11th and 12th graders



Average AP Exam Score

