

**Budget Analysis Requested by the SOMSD Board of Education
for discussion of 2005-06 Budget**

**Examine potential efficiencies in the scheduling of specials at the
elementary level**

Identification of Need

Maintaining the specials at the elementary level (art, library, vocal music, instrumental music, Project Ahead, Enrichment, physical education, and Spanish) is important both educationally and contractually. Educationally, all of these specials fulfill the State mandated *Core Curriculum Content Standards* for their particular area. Although the State does not mandate how to schedule/deliver these specials (except for the 150 minutes per week of physical education/health/safety), the manner in which some of these specials are presently scheduled provides the contractual preparation time necessary for elementary classroom teachers.¹

Presently, all of the instructional time allocated for art, vocal music, and physical education in grades K-5 and library in grades K-2, as well as 30 minutes of the 45-minute Spanish class in grades 3, 4, and 5 provide the contractual preparation time for elementary classroom teachers. Project Ahead, Enrichment, and instrumental music are pullout programs and, therefore, do not provide preparation time for classroom teachers.

For the purpose of this analysis, the scheduling of art, vocal music, and physical education was examined to determine if any savings could be achieved by scheduling these specials in a more efficient manner. Presently, the number of FTEs needed for art, vocal music, and physical education is determined by the number of sections in each elementary school that need to be served, the availability of district staff to serve the schools at specific times of day, and the need to provide lunch time, travel time, and prep time for the specialists. Furthermore, each elementary principal creates an individual schedule for his/her building. Using a new software-scheduling package, which creates a more consistent formula for scheduling specials, some savings may be realized in the scheduling of specials.

Spanish was not included in this analysis since past budget reductions have resulted in three (3) world language teachers serving all students in grades 3, 4, and 5 in five (5) elementary buildings. Project Ahead, Enrichment, and instrumental music were not included because they are pullout programs. Library needed to be analyzed separately because, although it is not a pullout

¹ Elementary school teachers will have a preparation period each time their entire class is covered by a special teacher, and special teachers will continue to be scheduled so as to permit elementary teachers to receive no less than three (3) such preparation periods weekly. Elementary teachers are to receive not less than one-hundred-sixty (160) minutes per week based upon a five (5) day workweek. Any non-teaching time beyond the one-hundred-sixty (160) minutes may be assigned by the principals for CST meetings, parent conferences, grade level meetings and administrative meetings.

program, librarians not only teach classes, but also need to support teachers (instruction) and maintain the library facility.

Resources Provided by the District

Presently there are 6.1 art teachers (grade K-5), 6.2 vocal music teachers (grades K-5), 2.0 instrumental music teachers (grade 5), 11.4 physical education teachers (grades K-5), 6.7 librarians (grades K-5), 8.6 Project Ahead teachers (grades 1-5) and 3.0 Enrichment teachers (grades 4 and 5).

For the purpose of analyzing the scheduling of art, vocal music, and physical education classes, the elementary instructional day was divided into 7.5 full blocks (1 full block = 50 minutes). One full block was then eliminated each day for lunch and one full block for prep for these specialists. This resulted in five and one half full blocks during which to schedule art, vocal music, and physical education.

Tables 1-6 show the following information for each elementary school:

Column A identifies the special (art, vocal music, or physical education)

Column B identifies the grade level (s) being served

Columns C and D identify the number of full blocks (50 minutes) or half blocks (25 minutes) allocated for instruction per week for each special

Column E identifies the number of classes that need to be served by a specialist per week (these numbers are the same as those used in the elementary class size analysis and are based on our present class size policy)

Column F identifies the total number of full blocks (50 minutes) required to deliver the special per week in grades K-5 (# of half blocks x the number of classes divided by 2 + the # of full blocks x the number of classes)

Column G indicates the number of days a specialist is required to deliver the program per week based on 5 ½ blocks of student instruction per day (# of full blocks required divided by 5.5)

Column H indicates the number of FTEs per week (.2 FTE = 1 day) required to deliver the program (number of days required x .2 = number of required FTEs).

Each table also provides the same information if maximum class size were to be increased by +1, +2, +3, +4, or +5.

Clinton Elementary School
Required FTEs For Specials
2005 - 2006

Table 1

A	B	C	D	E	F	G	H								
		Allocated Time Per Week		Max Class Size				Max Class Size + 1				Max Class Size + 2			
Special	Grade(s)	Full Block	Half Block	Classes	Full Blocks Required	Days Required	FTE Required	Classes	Full Blocks Required	Days Required	FTE Required	Classes	Full Blocks Required	Days Required	FTE Required
Art	K		1	4	20.0	3.6	0.7	3	19.5	3.5	0.7	3	19.5	3.5	0.7
	1-5	1		18				18				18			
Vocal Music	K		1	4	20.0	3.6	0.7	3	19.5	3.5	0.7	3	19.5	3.5	0.7
	1-5	1		18				18				18			
Physical Education	K		2	4	40.0	7.3	1.5	3	39.0	7.1	1.4	3	39.0	7.1	1.4
	1-5	2		18				18				18			

		Allocated Time Per Week		Max Class Size + 3				Max Class Size + 4				Max Class Size + 5			
Special	Grade(s)	Full Block	Half Block	Classes	Full Blocks Required	Days Required	FTE Required	Classes	Full Blocks Required	Days Required	FTE Required	Classes	Full Blocks Required	Days Required	FTE Required
Art	K		1	3	18.5	3.4	0.7	3	17.5	3.2	0.6	3	17.5	3.2	0.6
	1-5	1		17				16				16			
Vocal Music	K		1	3	18.5	3.4	0.7	3	17.5	3.2	0.6	3	17.5	3.2	0.6
	1-5	1		17				16				16			
Physical Education	K		2	3	37.0	6.7	1.3	3	35.0	6.4	1.3	3	35.0	6.4	1.3
	1-5	2		17				16				16			

Full Block = 50min Half Block = 25min

Jefferson Elementary School

Required FTEs For Specials

2005 - 2006

Table 2

A	B	C		D	E	F	G	H								
		Allocated Time Per Week				Max Class Size			Max Class Size + 1				Max Class Size + 2			
Special	Grade(s)	Full Block	Half Block	Classes	Full Blocks Required	Days Required	FTE Required		Classes	Full Blocks Required	Days Required	FTE Required	Classes	Full Blocks Required	Days Required	FTE Required
Art	K-2				16.0	2.9	0.6			15.0	2.7	0.5		14.0	2.5	0.5
	3-5	1		16					15				14			
Vocal Music	K-2				16.0	2.9	0.6			15.0	2.7	0.5		14.0	2.5	0.5
	3-5	1		16					15				14			
Physical Education	K-2				32.0	5.8	1.2			30.0	5.5	1.1		28.0	5.1	1.0
	3-5	2		16					15				14			

		Allocated Time Per Week				Max Class Size + 3			Max Class Size + 4				Max Class Size + 5			
		Full Block	Half Block	Classes	Full Blocks Required	Days Required	FTE Required		Classes	Full Blocks Required	Days Required	FTE Required	Classes	Full Blocks Required	Days Required	FTE Required
Art	K-2				14.0	2.5	0.5			13.0	2.4	0.5		13.0	2.4	0.5
	3-5	1		14					13				13			
Vocal Music	K-2				14.0	2.5	0.5			13.0	2.4	0.5		13.0	2.4	0.5
	3-5	1		14					13				13			
Physical Education	K-2				28.0	5.1	1.0			26.0	4.7	0.9		26.0	4.7	0.9
	3-5	2		14					13				13			

Full Block = 50min Half Block = 25min

Marshall Elementary School

Required FTEs For Specials
2005 - 2006

Table 3

A	B	C	D	E	F	G	H								
		Allocated Time Per Week		Max Class Size				Max Class Size + 1				Max Class Size + 2			
Special	Grade(s)	Full Block	Half Block	Classes	Full Blocks Required	Days Required	FTE Required	Classes	Full Blocks Required	Days Required	FTE Required	Classes	Full Blocks Required	Days Required	FTE Required
Art	K		1	5	13.5	2.5	0.5	5	13.5	2.5	0.5	5	13.5	2.5	0.5
	1-2	1		11				11				11			
Vocal Music	K		1	5	13.5	2.5	0.5	5	13.5	2.5	0.5	5	13.5	2.5	0.5
	1-2	1		11				11				11			
Physical Education	K		2	5	27.0	4.9	1.0	5	27.0	4.9	1.0	5	27.0	4.9	1.0
	1-2	2		11				11				11			

		Allocated Time Per Week			Max Class Size + 3				Max Class Size + 4				Max Class Size + 5			
		Full Block	Half Block		Classes	Full Blocks Required	Days Required	FTE Required	Classes	Full Blocks Required	Days Required	FTE Required	Classes	Full Blocks Required	Days Required	FTE Required
Art	K		1	5	12.5	2.3	0.5	0.5	5	11.5	2.1	0.4	4	11.0	2.0	0.4
	1-2	1		10					9				9			
Vocal Music	K		1	5	12.5	2.3	0.5	0.5	5	11.5	2.1	0.4	4	11.0	2.0	0.4
	1-2	1		10					9				9			
Physical Education	K		2	5	25.0	4.5	0.9	0.9	5	23.0	4.2	0.8	4	22.0	4.0	0.8
	1-2	2		10					9				9			

Full Block = 50min Half Block = 25min

Seth Boyden Elementary School

Required FTEs For Specials

2005 - 2006

Table 4

A	B	C		D	E	F	G	H								
		Allocated Time Per Week				Max Class Size			Max Class Size + 1				Max Class Size + 2			
Special	Grade(s)	Full Block	Half Block	Classes	Full Blocks Required	Days Required	FTE Required		Classes	Full Blocks Required	Days Required	FTE Required	Classes	Full Blocks Required	Days Required	FTE Required
Art	K		1	4	23.0	4.2	0.8		4	22.0	4.0	0.8	3	20.5	3.7	0.7
	1-5	1		21					20				19			
Vocal Music	K		1	4	23.0	4.2	0.8		4	22.0	4.0	0.8	3	20.5	3.7	0.7
	1-5	1		21					20				19			
Physical Education	K		2	4	46.0	8.4	1.7		4	44.0	8.0	1.6	3	41.0	7.5	1.5
	1-5	2		21					20				19			

		Allocated Time Per Week				Max Class Size + 3			Max Class Size + 4				Max Class Size + 5			
		Full Block	Half Block	Classes	Full Blocks Required	Days Required	FTE Required		Classes	Full Blocks Required	Days Required	FTE Required	Classes	Full Blocks Required	Days Required	FTE Required
Art	K		1	3	19.5	3.5	0.7		3	18.5	3.4	0.7	3	18.5	3.4	0.7
	1-5	1		18					17				17			
Vocal Music	K		1	3	19.5	3.5	0.7		3	18.5	3.4	0.7	3	18.5	3.4	0.7
	1-5	1		18					17				17			
Physical Education	K		2	3	39.0	7.1	1.4		3	37.0	6.7	1.3	3	37.0	6.7	1.3
	1-5	2		18					17				17			

Full Block = 50min Half Block = 25min

South Mountain Elementary School

Required FTEs For Specials

2005 - 2006

Table 5

A	B	C		D	E	F	G	H								
		Allocated Time Per Week				Max Class Size			Max Class Size + 1				Max Class Size + 2			
Special	Grade(s)	Full Block	Half Block	Classes	Full Blocks Required	Days Required	FTE Required		Classes	Full Blocks Required	Days Required	FTE Required	Classes	Full Blocks Required	Days Required	FTE Required
Art	K		1	4	22.0	4.0	0.8		4	21.0	3.8	0.8	4	21.0	3.8	0.8
	1-5	1		20					19				19			
Vocal Music	K		1	4	22.0	4.0	0.8		4	21.0	3.8	0.8	4	21.0	3.8	0.8
	1-5	1		20					19				19			
Physical Education	K		2	4	44.0	8.0	1.6		4	42.0	7.6	1.5	4	42.0	7.6	1.5
	1-5	2		20					19				19			

		Allocated Time Per Week				Max Class Size + 3			Max Class Size + 4				Max Class Size + 5			
		Full Block	Half Block	Classes	Full Blocks Required	Days Required	FTE Required		Classes	Full Blocks Required	Days Required	FTE Required	Classes	Full Blocks Required	Days Required	FTE Required
Art	K		1	4	21.0	3.8	0.8		4	21.0	3.8	0.8	3	18.5	3.4	0.7
	1-5	1		19					19				17			
Vocal Music	K		1	4	21.0	3.8	0.8		4	21.0	3.8	0.8	3	18.5	3.4	0.7
	1-5	1		19					19				17			
Physical Education	K		2	4	42.0	7.6	1.5		4	42.0	7.6	1.5	3	37.0	6.7	1.3
	1-5	2		19					19				17			

Full Block = 50min Half Block = 25min

Tuscan Elementary School
Required FTEs For Specials
2005 - 2006

Table 6

A	B	C		D	E	F	G	H								
		Allocated Time Per Week				Max Class Size			Max Class Size + 1				Max Class Size + 2			
Special	Grade(s)	Full Block	Half Block	Classes	Full Blocks Required	Days Required	FTE Required		Classes	Full Blocks Required	Days Required	FTE Required	Classes	Full Blocks Required	Days Required	FTE Required
Art	K		1	4	24.0	4.4	0.9		4	24.0	4.4	0.9	4	23.0	4.2	0.8
	1-5	1		22					22				21			
Vocal Music	K		1	4	24.0	4.4	0.9		4	24.0	4.4	0.9	4	23.0	4.2	0.8
	1-5	1		22					22				21			
Physical Education	K		2	4	48.0	8.7	1.7		4	48.0	8.7	1.7	4	46.0	8.4	1.7
	1-5	2		22					22				21			

		Allocated Time Per Week				Max Class Size + 3			Max Class Size + 4				Max Class Size + 5			
		Full Block	Half Block	Classes	Full Blocks Required	Days Required	FTE Required		Classes	Full Blocks Required	Days Required	FTE Required	Classes	Full Blocks Required	Days Required	FTE Required
Art	K		1	4	22.0	4.0	0.8		4	21.0	3.8	0.8	4	21.0	3.8	0.8
	1-5	1		20					19				19			
Vocal Music	K		1	4	22.0	4.0	0.8		4	21.0	3.8	0.8	4	21.0	3.8	0.8
	1-5	1		20					19				19			
Physical Education	K		2	4	44.0	8.0	1.6		4	42.0	7.6	1.5	4	42.0	7.6	1.5
	1-5	2		20					19				19			

Full Block = 50min Half Block = 25min

Table 7 shows a district summary of the data in tables 1-6 by special.

Column A identifies the special

Column B identifies the number of full blocks (50 minutes) required for instruction per week for each special

Column C indicates the number of days a specialist is required to deliver the program per week based on $5\frac{1}{2}$ blocks of students instruction per day (# of full blocks required divided by 5.5.)

Column D indicates the number of FTEs per week) $.2 \text{ FTE} = 1 \text{ day}$) required to deliver the program (number of days required $\times .2 =$ number of required FTEs).

Column E indicates the actual FTEs required taking into account the need to provide travel time to some of the specialists

Tables 8, 9, and 10 are summaries of the specials by school. These summaries show the current total FTEs (2004-2005) for each special by school and the number of FTEs required for 2005-2006 based on the enrollment projections and using the current maximum class size policy (+0). The tables further indicate the same information when the maximum class size is increased by +1, +2, +3, +4, or +5.

At the bottom of each table, the FTE savings is indicated. This is the difference between the current 2004-2005 FTEs and the FTEs projected for 2005-2006 for each class size scenario.

Elementary Schools
Required FTEs For Specials
2005 - 2006

Table 7

A Special	B Max Class Size				C Max Class Size + 1				D Max Class Size + 2			
	Full Blocks Required	Days Required	FTE Required	Actual FTE Required	Full Blocks Required	Days Required	FTE Required	Actual FTE Required	Full Blocks Required	Days Required	FTE Required	Actual FTE Required
Art	118.5	21.5	4.3	4.5	115.0	20.9	4.2	4.4	111.5	20.3	4.1	4.4
Vocal Music	118.5	21.5	4.3	4.5	115.0	20.9	4.2	4.4	111.5	20.3	4.1	4.4
Physical Education	237.0	43.1	8.6	8.8	230.0	41.8	8.4	8.6	223.0	40.5	8.1	8.4

Special	Max Class Size + 3				Max Class Size + 4				Max Class Size + 5			
	Full Blocks Required	Days Required	FTE Required	Actual FTE Required	Full Blocks Required	Days Required	FTE Required	Actual FTE Required	Full Blocks Required	Days Required	FTE Required	Actual FTE Required
Art	107.5	19.5	3.9	4.2	102.5	18.6	3.7	4.0	99.5	18.1	3.6	3.8
Vocal Music	107.5	19.5	3.9	4.2	102.5	18.6	3.7	4.0	99.5	18.1	3.6	3.8
Physical Education	215.0	39.1	7.8	8.2	205.0	37.3	7.5	7.8	199.0	36.2	7.2	7.5

Full Block = 50min Half Block = 25min

Projected FTE's For Specials By Schools

Table 8	Art	Current FTE's (2004 - 2005)	Projected FTE's For Specials (2005 - 2006)					
			Max Class Size Policy					
			+0	+1	+2	+3	+4	+5
	Clinton E.S.	1.1	0.7	0.7	0.7	0.7	0.6	0.6
	Jefferson E.S.	0.8	0.6	0.5	0.5	0.5	0.5	0.5
	Marshall E.S.	1.0	0.5	0.5	0.5	0.5	0.4	0.4
	Seth Boyden E.S.	1.0	0.8	0.8	0.7	0.7	0.7	0.7
	South Mountain E.S.	1.0	0.8	0.8	0.8	0.8	0.8	0.7
	Tuscan E.S.	1.2	0.9	0.9	0.8	0.8	0.8	0.8
	Total	6.1	4.3	4.2	4.1	3.9	3.7	3.6
	FTE Savings (difference between 04-05 and 05-06)		-1.8	-1.9	-2.0	-2.2	-2.4	-2.5

Table 9	Vocal Music	Current FTE's (2004 - 2005)	Projected FTE's For Specials (2005 - 2006)					
			Max Class Size Policy					
			+0	+1	+2	+3	+4	+5
	Clinton E.S.	1.1	0.7	0.7	0.7	0.7	0.6	0.6
	Jefferson E.S.	0.9	0.6	0.5	0.5	0.5	0.5	0.5
	Marshall E.S.	1.0	0.5	0.5	0.5	0.5	0.4	0.4
	Seth Boyden E.S.	1.0	0.8	0.8	0.7	0.7	0.7	0.7
	South Mountain E.S.	1.0	0.8	0.8	0.8	0.8	0.8	0.7
	Tuscan E.S.	1.2	0.9	0.9	0.8	0.8	0.8	0.8
	Total	6.2	4.3	4.2	4.1	3.9	3.7	3.6
	FTE Savings (difference between 04-05 and 05-06)		-1.9	-2.0	-2.1	-2.3	-2.5	-2.6

Table 10	Physical Education	Current FTE's (2004 - 2005)	Projected FTE's For Specials (2005 - 2006)					
			Max Class Size Policy					
			+0	+1	+2	+3	+4	+5
	Clinton E.S.	2.0	1.5	1.4	1.4	1.3	1.3	1.3
	Jefferson E.S.	1.6	1.2	1.1	1.0	1.0	0.9	0.9
	Marshall E.S.	1.4	1.0	1.0	1.0	0.9	0.8	0.8
	Seth Boyden E.S.	2.0	1.7	1.6	1.5	1.4	1.3	1.3
	South Mountain E.S.	2.0	1.6	1.5	1.5	1.5	1.5	1.3
	Tuscan E.S.	2.4	1.7	1.7	1.7	1.6	1.5	1.5
	Total	11.4	8.6	8.4	8.1	7.8	7.5	7.2
	FTE Savings (difference between 04-05 and 05-06)		-2.8	-3.0	-3.3	-3.6	-3.9	-4.2

The following is an attempt to summarize the contents of this budget analysis:

Options	Potential Savings in FTEs	Potential Cost Savings ²	Considerations	Recommended?
- Strictly follow maximum class size policy in 2005-2006 AND - Successfully use the new scheduling model for specials (art, vocal music, physical education)	1.8 art teachers 1.9 vocal music teachers 2.8 physical education teachers	\$143,640 \$151,620 \$223,440	- Vocal music teachers in all elementary schools except Marshall devote some blocks of time to chorus several times a week. - In some elementary schools, blocks of time in vocal music and art are devoted to self-contained special education classes. - Final enrollment figures, the success of the new scheduling model, and the need to provide the appropriate amount of contractual prep time for teachers will drive the amount of savings.	Yes
Increase maximum class size at the elementary level, which will result in a cost savings for art, vocal music, and physical education FTE's.	Increase class size: +1 6.9 FTE's +2 7.4 FTE's +3 8.1 FTE's +4 8.8 FTE's +5 9.3 FTE's	\$550,620 \$590,520 \$646,380 \$702,240 \$742,140	Increasing class size does not best support the developmental and educational needs of our students.	No
Eliminate the Spanish program in grades 3, 4, 5	3.0 FTE's	\$239,400	This program has undergone cuts in previous years. Any further cuts would not make the program pedagogically sound and would negatively impact the provision for contractual prep time for teachers.	No

² Average teacher salary plus benefits (\$79,800 x FTE's)

Options	Potential Savings in FTEs	Potential Cost Savings ²	Considerations	Recommended?
Eliminate instrumental music in grade 5	2.0 FTE's	\$159,600	This program has undergone cuts in previous years. Any further cuts would not make the program pedagogically sound and would have a severe negative impact on the middle school instrumental music program.	No
Eliminate or reduce the number of Project Ahead teachers delivering math and language arts remedial services to students in grades 1-5	8.6 FTE's	\$686,280	A detailed study of the possible reductions in this program was completed for the 2004-2005 budget and is available on the district website.	No
Eliminate the Enrichment Program (math and language arts) in grades 4 and 5	3.0 FTE's	\$239,400	A detailed study of the possible reductions in this program was completed for the 2004-2005 budget and is available on the district website.	No

²Average teacher salary plus benefits (\$79,800 x FTE's)

budget 05-06: Budget Analysis elementary specials