The Epsilon School

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Roadmap

☞Number of students per grade

☞Use percentages for students per teacher

☞Number of students per class

☞Distribute fairly

Known:

☞ currently, 490 students in total

☞ total # 10th grade students $\cong$ total # 12th grade students + (0.05a)

    ☞ a - 0.05a $\cong$ c

☞ new a = 140 + original a

How many students are in each grade?

ASSUME

☞ 2% of the 10th grade class students drop out between 10th and 11th

☞ 3% of the 10th grade class drop out between 11th and 12th

☞ The Epsilon School forbids students from dropping out during an academic year

$$a + (a - 0.02a) + (a - 0.05a) = 490$$

How many students are in each grade?

$$a + (a - 0.02a) + (a - 0.05a) = 490$$

$$a + 0.98a + 0.95a = 490$$

$$2.93a = 490$$

$$a \cong 168$$

Total 10th grade students = a = 168 students
Total 11th grade students = b $\cong$ 163 students
Total 12th grade students = c $\cong$ 160 students
TOTAL STUDENTS = 491

Teachers/Student:

ASSUME

☞ Every teacher teaches 4 classes.

☞ There are 6 blocks in a day, and each teacher gets a Prep block and a lunch block

The Languages

CURRENT

Total French	Classes for Teacher 1	Classes for Teacher 2	Classes for Teacher 3
157	3	0	2
	Students for Teacher 1		Students for Teacher 3
	96		64
	Students/Class/Teacher 1		Students/Class/Teacher 2
	32		32
Total German	Classes for Teacher 1	Classes for Teacher 2	Classes for Teacher 3
67	1	1	0
	Students for Teacher 2	Students for Teacher 2	
	34	34	
	Students/Class/Teacher 1	Students/Class/Teacher 2	
	34	34	
Total Spanish	Classes for Teacher 1	Classes for Teacher 2	Classes for Teacher 3
153	0	3	2
		Students for Teacher 2	Students for Teacher 3
		93	62
		Students/Class/Teacher 2	Students/Class/Teacher 3
		31	31

The Decision

Class	10th Grade Enrollments	Fraction of 10th Grade	Predicted New 10th Grade	Rounded	Total Students (all grades)	Students/Teacher (rounded)	Students/Class	Students/Class (rounded up)	
Art	31	0.18452381	56.83333333	57	125	125	31.25	32	add 1
Bio	198	1.178571429	363	363	484	121	30.25	31	add 1
Chem	59	0.351190476	108.1666667	109	344	115	28.75	29	
Eng	183	1.089285714	335.5	336	643	129	32.25	33	add 1
Fr	41	0.244047619	75.16666667	76	157		31.4	32	
Ger	19	0.113095238	34.83333333	35	67		33.5	34	
Spa	51	0.303571429	93.5	94	153		30.6	31	add 2
Math	184	1.095238095	337.3333333	338	801	134	33.5	34	add 1
Music	50	0.297619048	91.66666667	92	197	197	49.25	50	add 1
Physics	50	0.297619048	91.66666667	92	333	111	27.75	28	
S.S.	183	1.089285714	335.5	336	526	106	26.5	27	
TOTALS	1049								

The Languages NEW

ASSUME

Teacher 1	Teacher 2	Teacher 3	Teacher 4	Teacher 5
French	Spanish	French	Spanish	French
French	Spanish	French	Spanish	French
French	Spanish	Spanish	Spanish	French
German	German	Spanish	German	German

Final Class Sizes

Class	Total Students (all grades)	Students/Block	Students/Block (rounded up)
Art	125	15.625	16
Bio	484	24.2	25
Chem	344	28.66666667	29
Eng	643	26.79166667	27
Fre	157	26.16666667	27
Ger	67	16.75	17
Spa	153	25.5	26
Math	801	28.60714286	29
Music	197	24.625	25
Physics	333	27.75	28
S.S.	526	26.3	27

Thank You!