

Supplemental Documents for Mathematics Teacher Leadership Center

Baseline Data for Students

The following tables present data from the 2007 administration of assessments from the Colorado Student Assessment Program (CSAP) for the major participating school districts in Colorado: Weld County 6, Ft. Morgan RE-3, and Poudre R-1. These data will be used as the baseline data to measure student achievement growth resulting from efforts made in the Math TLC. Specifically, the 2007 data will be used to measure changes from 2007 to 2008, which will provide a basis to compare work done in the Math TLC to those already in place as school districts work toward achieving Adequate Yearly Progress.

Third-grade Colorado Student Assessment Program 2007 Data by District

3 rd grade	Total N	NS	U	PP	P	A
Colorado	58,080	0.29%	7.39%	24.02%	42.97%	25.33%
Weld County 6						
American Indian or Alaskan Native	7	0.00%	14.29%	14.29%	57.14%	14.29%
Asian or Pacific Islander	18	0.00%	0.00%	22.22%	55.56%	22.22%
Black (not Hispanic)	21	0.00%	9.52%	47.62%	28.57%	14.29%
Hispanic	788	0.13%	20.43%	42.51%	31.47%	5.46%
White (not Hispanic)	606	0.33%	7.26%	21.12%	47.69%	23.60%
FARM Eligible/Free-Reduced Lunch	877	0.00%	20.41%	39.91%	33.07%	6.61%
Female	735	0.27%	15.92%	34.69%	38.10%	11.02%
Male	705	0.14%	12.91%	31.63%	39.29%	16.03%
ESL	461	0.00%	24.30%	46.64%	26.46%	2.60%
Disabled	153	0.00%	47.06%	33.33%	16.99%	2.61%
Total	1440	0.21%	14.44%	33.19%	38.68%	13.47%
Ft. Morgan RE-3						
American Indian or Alaskan Native	1	0.00%	0.00%	0.00%	100.00%	0.00%
Asian or Pacific Islander	0	-	-	-	-	-
Black (not Hispanic)	1	0.00%	0.00%	100.00%	0.00%	0.00%
Hispanic	143	0.00%	15.38%	54.55%	29.37%	0.70%
White (not Hispanic)	87	0.00%	4.60%	34.48%	39.08%	21.84%
FARM Eligible/Free-Reduced Lunch	165	0.00%	15.15%	50.91%	30.91%	3.03%
Female	107	0.00%	17.76%	43.93%	30.84%	7.48%
Male	125	0.00%	5.60%	49.60%	35.20%	9.60%
ESL/ELL	96	0.00%	15.63%	51.04%	32.29%	1.04%
Disabled/Special Needs	27	0.00%	25.93%	62.96%	11.11%	0.00%
Total	232	0.00%	11.21%	46.98%	33.62%	8.62%
Poudre R-1						
American Indian or Alaskan Native	15	x	x	x	x	x
Asian or Pacific Islander	84	0.00%	3.57%	11.90%	38.10%	46.43%
Black (not Hispanic)	29	0.00%	10.34%	20.69%	51.72%	17.24%
Hispanic	294	0.00%	10.54%	28.57%	43.20%	17.69%
White (not Hispanic)	1,426	0.07%	2.66%	12.97%	48.45%	35.83%
FARM Eligible/Free-Reduced Lunch	520	0.19%	8.85%	29.23%	41.54%	20.19%
Female	920	0.11%	3.70%	16.52%	48.80%	30.87%
Male	928	0.00%	4.53%	14.87%	45.26%	35.34%
ESL/ELL	234	0.00%	11.11%	27.35%	38.46%	23.08%
Disabled/Special Needs	119	0.00%	16.81%	33.61%	35.29%	14.29%
Total	1,848	0.05%	4.11%	15.69%	47.02%	33.12%

KEY:

NS: No score

U: Unsatisfactory

PP: Partially Proficient

P: Proficient

A: Advanced

FARM: Free and Reduced Meals

ESL: English as a Second Language

ELL: English Language Learners

x: Group not large enough to report

Fourth-grade Colorado Student Assessment Program 2007 Data by District

	Total N	NS	U	PP	P	A
Colorado	56,799	0.27%	8.58%	20.57%	43.27%	27.31%
Weld County 6						
American Indian or Alaskan Native	10	0.00%	0.00%	50.00%	30.00%	20.00%
Asian or Pacific Islander	14	0.00%	0.00%	14.29%	64.29%	21.43%
Black (not Hispanic)	20	0.00%	15.00%	25.00%	50.00%	10.00%
Hispanic	748	0.40%	20.72%	34.63%	35.83%	8.42%
White (not Hispanic)	565	0.18%	6.19%	20.88%	44.07%	28.67%
FARM Eligible/Free-Reduced Lunch	810	0.49%	20.00%	36.42%	34.81%	8.27%
Female	675	0.15%	14.96%	28.00%	42.37%	14.52%
Male	682	0.44%	13.49%	29.33%	37.10%	19.65%
ESL	326	0.31%	36.50%	39.57%	21.78%	1.84%
Disabled	147	0.68%	48.98%	25.85%	19.73%	4.76%
Total	1357	0.29%	14.22%	28.67%	39.72%	17.10%
Ft. Morgan RE-3						
American Indian or Alaskan Native	2	0.00%	0.00%	50.00%	50.00%	0.00%
Asian or Pacific Islander	0	-	-	-	-	-
Black (not Hispanic)	2	0.00%	0.00%	50.00%	50.00%	0.00%
Hispanic	150	0.00%	14.67%	42.00%	38.00%	5.33%
White (not Hispanic)	92	0.00%	8.70%	16.30%	58.70%	16.30%
FARM Eligible/Free-Reduced Lunch	171	0.00%	14.04%	39.18%	40.94%	5.85%
Female	129	0.00%	11.63%	33.33%	48.06%	6.98%
Male	117	0.00%	12.82%	31.62%	43.59%	11.97%
ESL/ELL	113	0.00%	16.81%	44.25%	32.74%	6.19%
Disabled/Special Needs	25	0.00%	60.00%	28.00%	12.00%	0.00%
Total	246	0.00%	12.20%	32.52%	45.93%	9.35%
Poudre R-1						
American Indian or Alaskan Native	15	x	x	x	x	x
Asian or Pacific Islander	76	0.00%	0.00%	9.21%	35.53%	55.26%
Black (not Hispanic)	33	0.00%	9.09%	30.30%	48.48%	12.12%
Hispanic	256	0.39%	9.38%	26.17%	48.05%	16.02%
White (not Hispanic)	1,332	0.60%	3.60%	12.99%	40.17%	42.64%
FARM Eligible/Free-Reduced Lunch	433	0.23%	11.55%	28.41%	43.65%	16.17%
Female	846	0.59%	4.02%	15.25%	44.21%	35.93%
Male	866	0.46%	4.85%	15.36%	38.22%	41.11%
ESL/ELL	211	0.95%	7.58%	26.54%	39.34%	25.59%
Disabled/Special Needs	133	1.50%	22.56%	32.33%	27.82%	15.79%
Total	1,712	0.53%	4.44%	15.30%	41.18%	38.55%

Fifth-grade Colorado Student Assessment Program 2007 Data by District

	Total N	NS	U	PP	P	A
Colorado	56,958	0.39%	10.61%	24.25%	35.18%	29.56%
Weld County 6						
American Indian or Alaskan Native	8	0.00%	12.50%	25.00%	25.00%	37.50%
Asian or Pacific Islander	14	0.00%	0.00%	14.29%	42.86%	42.86%
Black (not Hispanic)	22	0.00%	18.18%	36.36%	18.18%	27.27%
Hispanic	679	0.74%	24.15%	36.23%	30.49%	8.39%
White (not Hispanic)	553	0.00%	7.78%	22.97%	39.42%	29.84%
FARM Eligible/Free-Reduced Lunch	749	0.67%	24.70%	34.58%	30.04%	10.01%
Female	601	0.33%	15.31%	34.78%	32.61%	16.97%
Male	675	0.44%	17.78%	26.07%	35.70%	20.00%
ESL	240	0.42%	40.83%	40.00%	17.08%	1.67%

Disabled	158	0.00%	56.33%	27.22%	13.92%	2.53%
Total	1276	0.39%	16.61%	30.17%	34.25%	18.57%
Ft. Morgan RE-3						
American Indian or Alaskan Native	2	0.00%	50.00%	0.00%	50.00%	0.00%
Asian or Pacific Islander	0	-	-	-	-	-
Black (not Hispanic)	1	0.00%	0.00%	0.00%	0.00%	100.00%
Hispanic	113	0.00%	10.62%	40.71%	36.28%	12.39%
White (not Hispanic)	97	0.00%	10.31%	27.84%	36.08%	25.77%
FARM Eligible/Free-Reduced Lunch	140	0.00%	12.86%	42.14%	35.71%	9.29%
Female	103	0.00%	8.74%	34.95%	34.95%	21.36%
Male	110	0.00%	12.73%	33.64%	37.27%	16.36%
ESL/ELL	78	0.00%	8.97%	39.74%	38.46%	12.82%
Disabled/Special Needs	15	0.00%	53.33%	40.00%	6.67%	0.00%
Total	213	0.00%	10.80%	33.80%	36.15%	18.78%
Poudre R-1						
American Indian or Alaskan Native	22	4.55%	9.09%	36.36%	22.73%	27.27%
Asian or Pacific Islander	73	0.00%	2.74%	6.85%	32.88%	57.53%
Black (not Hispanic)	36	0.00%	11.11%	30.56%	36.11%	22.22%
Hispanic	291	0.34%	12.71%	33.68%	38.14%	15.12%
White (not Hispanic)	1,400	0.50%	3.93%	14.86%	35.36%	45.36%
FARM Eligible/Free-Reduced Lunch	501	0.60%	11.98%	31.74%	36.53%	19.16%
Female	864	0.81%	6.02%	19.68%	34.95%	38.54%
Male	958	0.21%	5.01%	16.70%	36.12%	41.96%
ESL/ELL	232	0.43%	10.34%	31.90%	33.62%	23.71%
Disabled/Special Needs	138	2.17%	22.46%	28.26%	36.26%	10.87%
Total	1,822	0.49%	5.49%	18.11%	35.57%	40.34%

Sixth-grade Colorado Student Assessment Program 2007 Data by District

	Total N	NS	U	PP	P	A
Colorado	56,711	0.46%	12.87%	26.87%	35.35%	24.83%
Weld County 6						
American Indian or Alaskan Native	8	0.00%	37.50%	12.50%	37.50%	12.50%
Asian or Pacific Islander	7	0.00%	14.29%	71.43%	14.29%	0.00%
Black (not Hispanic)	8	0.00%	0.00%	50.00%	50.00%	0.00%
Hispanic	708	0.42%	31.07%	45.34%	19.92%	3.25%
White (not Hispanic)	532	0.38%	11.09%	31.77%	36.09%	20.68%
FARM Eligible/Free-Reduced Lunch	732	0.41%	32.65%	44.67%	18.17%	4.10%
Female	597	0.67%	21.94%	41.71%	26.97%	8.71%
Male	666	0.15%	22.82%	37.69%	27.03%	12.31%
ESL	208	0.00%	58.65%	37.98%	3.37%	0.00%
Disabled	146	2.05%	66.44%	25.34%	4.79%	1.37%
Total	1263	0.40%	22.41%	39.59%	27.00%	10.61%
Ft. Morgan RE-3						
American Indian or Alaskan Native	0	-	-	-	-	-
Asian or Pacific Islander	1	0.00%	0.00%	0.00%	0.00%	100.00%
Black (not Hispanic)	0	-	-	-	-	-
Hispanic	129	0.00%	21.71%	41.86%	33.33%	3.10%
White (not Hispanic)	104	0.00%	11.54%	29.81%	43.27%	15.38%
FARM Eligible/Free-Reduced Lunch	147	0.00%	19.73%	40.82%	34.69%	2.72%
Female	124	0.00%	16.13%	34.68%	40.32%	8.87%
Male	110	0.00%	19.09%	38.18%	33.64%	9.09%
ESL/ELL	87	0.00%	21.84%	41.38%	32.18%	4.60%
Disabled/Special Needs	20	0.00%	60.00%	35.00%	0.00%	5.00%
Total	234	0.00%	17.95%	35.90%	37.18%	8.97%

Poudre R-1						
American Indian or Alaskan Native	18	0.00%	16.67%	22.22%	38.89%	22.22%
Asian or Pacific Islander	64	0.00%	3.13%	4.69%	40.63%	51.56%
Black (not Hispanic)	44	0.00%	9.09%	29.55%	45.45%	15.91%
Hispanic	266	0.38%	16.17%	27.82%	36.09%	19.55%
White (not Hispanic)	1,415	0.35%	3.04%	15.34%	37.03%	44.24%
FARM Eligible/Free-Reduced Lunch	442	0.68%	13.80%	29.86%	35.29%	20.36%
Female	859	0.12%	4.77%	17.23%	38.53%	39.35%
Male	948	0.53%	5.70%	17.19%	36.08%	40.51%
ESL/ELL	207	0.00%	14.49%	32.85%	29.47%	23.19%
Disabled/Special Needs	119	0.00%	26.89%	41.18%	21.85%	10.08%
Total	1,807	0.33%	5.26%	17.21%	37.24%	39.96%

Seventh-grade Colorado Student Assessment Program 2007 Data by District

	Total N	NS	U	PP	P	A
Colorado	57,153	0.54%	14.29%	34.69%	29.54%	20.94%
Weld County 6						
American Indian or Alaskan Native	10	0.00%	30.00%	20.00%	50.00%	0.00%
Asian or Pacific Islander	10	0.00%	10.00%	20.00%	60.00%	10.00%
Black (not Hispanic)	16	0.00%	37.50%	37.50%	25.00%	0.00%
Hispanic	642	0.78%	34.74%	49.53%	12.31%	2.65%
White (not Hispanic)	597	1.17%	14.24%	40.37%	31.49%	12.73%
FARM Eligible/Free-Reduced Lunch	703	1.00%	34.42%	48.36%	13.51%	2.70%
Female	585	1.03%	22.22%	49.40%	19.83%	7.52%
Male	690	0.87%	27.25%	40.58%	24.06%	7.25%
ESL	163	1.23%	61.96%	35.58%	0.61%	0.61%
Disabled	174	2.30%	60.92%	31.03%	5.75%	0.00%
Total	1275	0.94%	24.94%	44.63%	22.12%	7.37%
Ft. Morgan RE-3						
American Indian or Alaskan Native	0	-	-	-	-	-
Asian or Pacific Islander	1	0.00%	0.00%	100.00%	0.00%	0.00%
Black (not Hispanic)	0	-	-	-	-	-
Hispanic	131	0.00%	29.77%	54.20%	12.21%	3.82%
White (not Hispanic)	111	0.00%	18.92%	41.44%	26.13%	14.41%
FARM Eligible/Free-Reduced Lunch	152	0.00%	28.95%	55.26%	13.16%	3.29%
Female	124	0.00%	20.97%	51.61%	19.35%	7.26%
Male	119	0.00%	29.41%	45.38%	17.65%	9.24%
ESL/ELL	58	0.00%	43.10%	44.83%	8.62%	3.45%
Disabled/Special Needs	21	0.00%	76.19%	19.05%	4.76%	0.00%
Total	243	0.00%	25.10%	48.97%	18.93%	7.82%
Poudre R-1						
American Indian or Alaskan Native	20	0.00%	15.00%	40.00%	20.00%	25.00%
Asian or Pacific Islander	51	0.00%	1.96%	15.69%	29.41%	52.94%
Black (not Hispanic)	30	0.00%	26.67%	26.67%	33.33%	13.33%
Hispanic	287	1.05%	30.31%	34.84%	23.34%	10.45%
White (not Hispanic)	1,521	0.39%	5.85%	25.51%	34.58%	33.66%
FARM Eligible/Free-Reduced Lunch	468	1.28%	25.64%	41.88%	21.15%	10.04%
Female	929	0.75%	9.58%	28.09%	34.34%	27.23%
Male	980	0.20%	10.10%	25.61%	30.92%	33.16%
ESL/ELL	211	0.95%	29.86%	32.70%	24.64%	11.85%
Disabled/Special Needs	144	0.00%	34.72%	50.00%	9.72%	5.56%
Total	1,909	0.47%	9085%	26.82%	32.58%	30.28%

Eighth-grade Colorado Student Assessment Program 2007 Data by District

	Total N	NS	U	PP	P	A
Colorado	58,162	0.93%	22.28%	31.03%	28.76%	17.00%
Weld County 6						
American Indian or Alaskan Native	4	0.00%	50.00%	25.00%	25.00%	0.00%
Asian or Pacific Islander	11	0.00%	45.45%	9.09%	36.36%	9.09%
Black (not Hispanic)	20	0.00%	35.00%	45.00%	15.00%	5.00%
Hispanic	752	1.20%	52.53%	33.51%	10.51%	2.26%
White (not Hispanic)	594	0.67%	22.56%	36.20%	27.78%	12.79%
FARM Eligible/Free-Reduced Lunch	729	0.55%	56.38%	30.04%	10.97%	2.06%
Female	696	1.15%	36.78%	36.06%	19.11%	6.90%
Male	685	0.73%	41.90%	33.14%	17.37%	6.86%
ESL	180	0.56%	82.78%	15.56%	1.11%	0.00%
Disabled	156	0.64%	79.49%	16.03%	1.92%	1.92%
Total	1381	0.94%	39.32%	34.61%	18.25%	6.88%
Ft. Morgan RE-3						
American Indian or Alaskan Native	2	0.00%	100.00%	0.00%	0.00%	0.00%
Asian or Pacific Islander	0	-	-	-	-	-
Black (not Hispanic)	1	0.00%	0.00%	0.00%	100.00%	0.00%
Hispanic	116	0.86%	44.83%	37.93%	16.38%	0.00%
White (not Hispanic)	87	0.00%	28.74%	40.23%	24.14%	6.90%
FARM Eligible/Free-Reduced Lunch	128	0.78%	42.19%	38.28%	17.97%	0.78%
Female	93	1.08%	41.94%	40.86%	15.05%	1.08%
Male	113	0.00%	35.40%	36.28%	23.89%	4.42%
ESL/ELL	28	3.57%	57.14%	39.29%	0.00%	0.00%
Disabled/Special Needs	15	0.00%	93.33%	6.67%	0.00%	0.00%
Total	206	0.00%	37.86%	37.86%	19.90%	2.91%
Poudre R-1	Total N	NS	U	PP	P	A
American Indian or Alaskan Native	14	x	x	x	x	x
Asian or Pacific Islander	42	0.00%	9.52%	21.43%	30.95%	38.10%
Black (not Hispanic)	36	5.56%	22.22%	33.33%	33.33%	5.56%
Hispanic	294	1.70%	41.16%	31.97%	18.71%	6.46%
White (not Hispanic)	1,533	0.91%	10.89%	27.01%	35.09%	26.09%
FARM Eligible/Free-Reduced Lunch	429	2.10%	38.69%	37.53%	17.02%	4.66%
Female	912	0.77%	13.93%	28.62%	35.09%	21.60%
Male	1,007	1.39%	17.68%	27.01%	29.89%	24.03%
ESL/ELL	185	1.08%	45.95%	34.59%	12.97%	5.41%
Disabled/Special Needs	123	3.25%	48.78%	30.89%	8.13%	8.84%
Total	1,919	1.09%	15.89%	27.77%	32.36%	22.88%

Ninth-grade Colorado Student Assessment Program 2007 Data by District

	Total N	NS	U	PP	P	A
Colorado	60,980	2.38%	7.80%	23.54%	62.43%	3.86%
Weld County 6						
American Indian or Alaskan Native	16	6.25%	68.75%	12.50%	12.50%	0.00%
Asian or Pacific Islander	11	9.09%	27.27%	36.36%	18.18%	9.09%
Black (not Hispanic)	16	6.25%	62.50%	18.75%	12.50%	0.00%
Hispanic	674	4.60%	63.80%	22.70%	7.86%	1.04%
White (not Hispanic)	674	1.48%	29.08%	33.83%	25.07%	10.53%
FARM Eligible/Free-Reduced Lunch	599	5.18%	63.61%	23.21%	7.01%	1.00%
Female	694	2.31%	48.13%	31.27%	14.41%	3.89%
Male	697	4.02%	45.34%	24.82%	18.36%	7.46%
ESL	138	5.07%	86.23%	6.52%	2.17%	0.00%
Disabled	143	4.90%	89.51%	4.90%	0.70%	0.00%
Total	1391	3.16%	46.73%	28.04%	16.39%	5.68%

Ft. Morgan RE-3						
American Indian or Alaskan Native	1	0.00%	100.00%	0.00%	0.00%	0.00%
Asian or Pacific Islander	0	-	-	-	-	-
Black (not Hispanic)	2	100.00%	0.00%	0.00%	0.00%	0.00%
Hispanic	128	1.00%	63.00%	28.00%	8.00%	1.00%
White (not Hispanic)	100	0.00%	29.00%	34.00%	29.00%	8.00%
FARM Eligible/Free-Reduced Lunch	142	2.00%	61.00%	27.00%	9.00%	1.00%
Female	115	1.00%	50.00%	34.00%	12.00%	3.00%
Male	116	2.00%	46.00%	26.00%	21.00%	5.00%
ESL/ELL	33	9.00%	85.00%	6.00%	0.00%	0.00%
Disabled/Special Needs	13	0.00%	92.00%	8.00%	0.00%	0.00%
Total	231	1.00%	48.00%	30.00%	17.00%	4.00%
Poudre R-1						
American Indian or Alaskan Native	22	4.55%	0.00%	18.18%	77.27%	0.00%
Asian or Pacific Islander	54%	0.00%	3.70%	5.56%	77.78%	12.96%
Black (not Hispanic)	41	2.44%	2.44%	31.71%	60.98%	2.44%
Hispanic	299	2.68%	12.37%	35.45%	48.49%	1.00%
White (not Hispanic)	1,608	1.24%	1.99%	11.88%	75.62%	9.27%
FARM Eligible/Free-Reduced Lunch	444	1.80%	11.71%	34.23%	51.35%	0.90%
Female	970	1.34%	1.96%	13.09%	72.68%	10.93%
Male	1,054	1.61%	5.03%	18.03%	70.21%	5.12%
ESL/ELL	183	0.00%	15.85%	40.44%	43.17%	0.55%
Disabled/Special Needs	223	2.69%	21.52%	45.74%	29.60%	0.45%
Total	2,024	1.48%	3.56%	15.66%	71.39%	7.91%

Tenth-grade Colorado Student Assessment Program 2007 Data by District

	Total N	NS	U	PP	P	A
Colorado	56,593	3.01%	8.43%	19.45%	60.10%	9.01%
Weld County 6						
American Indian or Alaskan Native	9	11.11%	66.67%	11.11%	11.11%	0.00%
Asian or Pacific Islander	11	0.00%	18.18%	27.27%	45.45%	9.09%
Black (not Hispanic)	19	5.26%	52.63%	26.32%	10.53%	5.26%
Hispanic	592	5.74%	64.02%	24.16%	5.74%	0.34%
White (not Hispanic)	659	1.52%	30.35%	33.54%	30.35%	4.25%
FARM Eligible/Free-Reduced Lunch	495	5.05%	64.65%	22.02%	7.88%	0.40%
Female	625	3.04%	47.68%	31.04%	17.12%	1.12%
Male	665	4.06%	44.96%	26.92%	20.30%	3.76%
ESL	97	7.22%	85.57%	4.12%	3.09%	0.00%
Disabled	118	1.69%	85.59%	10.17%	2.54%	0.00%
Total	1290	3.57%	46.28%	28.91%	18.76%	2.48%
Ft. Morgan RE-3						
American Indian or Alaskan Native	2	0.00%	100.00%	0.00%	0.00%	0.00%
Asian or Pacific Islander	3	0.00%	33.00%	33.00%	33.00%	0.00%
Black (not Hispanic)	0	-	-	-	-	-
Hispanic	92	0.00%	60.00%	35.00%	4.00%	1.00%
White (not Hispanic)	103	1.00%	35.00%	40.00%	19.00%	5.00%
FARM Eligible/Free-Reduced Lunch	118	1.00%	56.00%	40.00%	4.00%	0.00%
Female	83	0.00%	46.00%	41.00%	11.00%	2.00%
Male	117	1.00%	48.00%	35.00%	15.00%	3.00%
ESL/ELL	20	0.00%	79.00%	21.00%	0.00%	0.00%
Disabled/Special Needs	13	8.00%	92.00%	0.00%	0.00%	0.00%
Total	200	1.00%	47.00%	37.00%	12.00%	3.00%
Poudre R-1						
American Indian or Alaskan Native	25	12.00%	4.00%	16.00%	56.00%	12.00%

Asian or Pacific Islander	52	1.92%	3.85%	9.62%	69.23%	15.38%
Black (not Hispanic)	38	7.89%	10.53%	18.42%	57.89%	5.26%
Hispanic	260	3.46%	11.54%	28.46%	50.38%	6.15%
White (not Hispanic)	1,592	3.08%	2.76%	10.11%	66.90%	17.15%
FARM Eligible/Free-Reduced Lunch	364	4.40%	13.46%	29.40%	48.90%	3.85%
Female	985	3.76%	2.74%	10.46%	63.55%	19.49%
Male	982	2.85%	5.50%	15.07%	65.38%	11.20%
ESL/ELL	131	2.29%	19.08%	32.06%	45.04%	1.53%
Disabled/Special Needs	176	4.55%	22.73%	44.89%	27.27%	0.06%
Total	1,967	3.30%	4.12%	12.76%	64.46%	15.35%

Evaluation Plan

Formative and summative evaluations will be based on a combination of qualitative and quantitative measurements and judgments during project implementation to improve the quality of program performance, processes, and outputs. Some formative-evaluation findings (short-term outcomes, effective strategies, strengths and weaknesses of activities, models, lessons learned) will inform the program's summative evaluation, which will determine overall MSP project effectiveness and attainment of outcomes. Formative progress evaluation will assess the project's progress toward meeting its annual goals and work plan and will evaluate unexpected developments, as well as the project's strengths and weaknesses. Recommendations for project improvement will benefit from an external view strengthened by adherence to the four evaluation standards: *utility, feasibility, propriety, and accuracy* (Joint Committee on Standards for Education Evaluation, 1994). Standard qualitative methods (organization, meaningful reduction, cross-case analysis, themes, and trends) will be used to analyze qualitative data. Quantitative data will be analyzed using descriptive statistics and frequency distributions charts (with bar and line graphs illustrating disaggregated data) and association tests (e.g., Chi-square and correlation). Formative evaluation feedback will be reported to the Principal Investigator through emails, phone calls and written quarterly reports. Horizon Research (2000) observation protocols will be used in the observation of *Math TLC* sessions and teachers' classrooms.

Formative and Summative Evaluation Alignment with the Goals and Objectives		
Objective	Evaluation Methods	Timeline
Goals 1&4: Develop a shared vision		
1: Recruit and retain	(a) Maintain teacher data; (b) administer satisfaction survey; (c) interview stakeholders for lessons learned, ideas for improvement	(a) Ongoing, (b) each semester, (c) each spring
2: Delivery of PD	(a) Observe targeted sample of PD; (b) all PD courses administer cultural competence pre/post test; compare to non-MSP; (c) Interview teachers, principals on leadership change at schools	(a) Spring year 3, (b) each PD course, (c) each spring of year 1, 2, and 3.
3. Integrate expertise	(a) Observe PD; (b) survey teachers (opinion, learning); (c) interview master teachers and professors-lessons learned, etc.	(a) Beginning, middle, end (b) after PD; (c) end PD & project
4. Assess	Administer UNCo-developed pre/post test; compare scores to non-MSP teachers	Beginning & end of course; also compare longitudinally
Goals 2&3: Improve teacher content knowledge and pedagogy in mathematics		
1: Provide PD to teachers and teacher-leaders	(a) Record applicant data and maintain teacher data including HQ status; (b) observe sample of PD sessions; (c) survey teachers about quality, value, learning from PD, (d) changes in practice	(a) Update each spring, (b, c) Ongoing as PD delivered d) each spring observe, interview
2: (Re)Develop and deliver courses	(a) Document alignment with work plan; (b) survey teachers (opinion, learning); observe PD; use information to refine courses	(a) During dev. (b) Ongoing as courses developed & improved
3. Integrate expertise	(a) Observe PD; (b) survey teachers (opinion, learning); (c) interview master teachers and professors-lessons learned, etc.	(a) Beginning, middle, end (b) after PD; (c) end PD & project
4. Rigorously	UNCo pre/post test; compare scores to non-MSP grad students	Compare: start&end; longit.
Goal 5: Improve student achievement in mathematics and the sciences		
Teachers who earned PD≥9 hours	(a) Maintain records of courses completed by teachers; (b) observe random sample of classrooms (c) survey teachers	(a) Ongoing, (b) Pre, end of years 2, 3, 4 & 5 (c) end

Benchmarking. The professional-development outcome evaluation design is a quasi-experimental pretest-posttest matched comparison group design, using validated assessments. Since in comparison-group studies, well-matched studies are the most likely to generate valid conclusions about an intervention’s effectiveness, treatment and comparison group teachers will be matched on student test scores prior to MSP participation, demographic characteristics (gender, ethnicity/race, teaching experience), and highly qualified status prior to project participation. *Diagnostic Teacher Assessments in Mathematics and Science (DTAMS)* will assess teachers’ mathematics content knowledge.

For Goal 5, the effects of the *Math TLC* program’s mathematics professional development on student CSAP scores will be analyzed using a two-way repeated measure design with one between-subject factor (GROUP: treatment or control) and one-within subject factor (TIME: pretest-posttest). If the *F*-test for the GROUP*TIME interaction is significant, then this result will be studied using a means-plot. Because randomization will not be possible, treatment and comparison groups will be matched on significant factors. A two-way repeated measures design will also be used to analyze effects of the science professional-development, using the MOSART (MOSART can be used to assess student content knowledge and teacher content knowledge).

Based on the premise that each teacher leader will impact the entire school and, hence, the academic performance of all students, the effect of teacher leadership on the schools (Goals 1 and 5) will be assessed by school performance on the CSAP tests as summarized in the CDE Accountability Reports and percentages of students proficient or above on the CSAP tests, and if schools administer them, any validated assessments (such as NWEA – see tables below). Longitudinal study of school academic performance is appropriate since for trends over time.

Project Dimension	Evaluation Design	Data Analysis	Measure	Measure Description
Teacher Content Knowledge	Matched comparison groups	Pre-post data comparisons	Selected E TS items	Standardized test items
Instruction by Teachers	Non-matched comparison groups	Comparison with national data	Horizon Research Observation Protocol	Nationally validated
Grades 6-10 Content Knowledge	Matched comparison groups	Comparison with national norms	NWEA Mathematics Test	Nationally normed and standardized
Grades 6-10 Content Knowledge	Matched comparison groups	Comparison with comparable schools	Mathematics CSAP	Standardized test
Grade 11 Content Knowledge	Matched comparison group	Comparison with comparable schools	ACT mathematics section	Nationally normed and standardized
Teacher Leadership	Matched comparison group	Pre/post data comparisons	NWEA and AIMSweb	Nationally normed and standardized
Understanding of Reform by Principals	Qualitative data only	Pre, post, delayed post	Locally developed	Not tested for validity and reliability

Goal	Target	Outcome Evaluation Design	Assessment	Analysis Methods	Assessment Description
1	Mathematics teachers	Matched comparison	DTAMS	Pretest-posttest	Valid & reliable
3	Students – Mathematics	Matched comparison	CSAP	Pretest-posttest repeated measures	State assessment
4	Mathematics teacher leaders	Matched comparison	School-level CSAP	Longitudinal comparisons	State assessment

The external evaluation will include designs for the Department of Education’s MSP GPRA indicators for mathematics and science:

- (*MSP GPRA indicator for Teacher Content Knowledge is the percentage of MSP teachers who significantly increase their content knowledge, as reflected in project-level pre- and post-assessments.*) Pretest-posttest DTAMS scores for mathematics and MOSART: pretest will be

administered before any professional development and posttest will be administered at the end of the academic.

- (MSP GPRA indicators for Student Achievement are (a) The percentage of students in classrooms of MSP teachers who score at the basic level or above in State assessments of mathematics or science, and (b) The percent of students in classrooms of MSP teachers who score at the proficient level or above in State assessments of mathematics or science.) Participating teachers will provide their students' SASID numbers and these numbers will be submitted annually to CDE.

The system for maintaining information for all participating teachers was developed by Dr. Shaw during the previous MSP. Baseline data are collected on the application form, which includes email addresses and teacher's signature permission to provide external evaluation information. Each Spring a questionnaire for updating essential information (e.g., *Did you become highly qualified as a result of the Math TLC professional development this year? Have you earned a Masters degree from UNC? Are you teaching in the same school this year as last year? What grades did you teach this year?*) is posted on the External Evaluator's website and the link is sent by email to participating teachers. Non-responders are contacted to ensure a high response rate. Participants' information updated and maintained by Dr. Shaw.

The surveys, questionnaires, and interview protocols developed by the External Evaluator and the *Math TLC* management team. Annual stakeholder (partners, instructors, PI, co-PIs) interviews will help assess program strengths, weaknesses, obstacles, and solutions. Horizon Research's teacher attitude surveys and interview protocols will be used at entry for new participants and each subsequent Spring. Principals will be interviewed regarding the impact of *Math TLC* teacher-leaders on their schools. A continuous loop of evaluation, inquiry, and feedback to the PI will help ensure performance measures will be addressed and met. The evaluation will be *embedded in the Math TLC activities*; evidence will be provided that program improvements and refinements are guided by evaluation qualitative and quantitative results.

Course Descriptions of the MA Degree Program

Required Courses

MATH 534 Continuous Mathematics (3) Students will explore selected topics in mathematical analysis such as differential mappings and chaotic systems.

MATH 543 Modern Geometry (3) A survey of both traditional Euclidean geometry and contemporary geometries, in which applications of geometry are integrated into the study of the mathematical structure of geometrical systems.

MED 600 Introduction to Research in Mathematics Education (3) An examination and critique of current research in mathematics education. A focus on research design, analysis and reporting of both qualitative and quantitative research.

Mathematics Courses

MATH 528 Discrete Mathematics (3) Consists of a broad, deep, survey of topics in combinatorics, graph theory addressing existence, enumeration, optimization. Blend of mathematics, applications and development of mathematical reasoning skills, guided by the NCTM standards.

MATH 529 Mathematical Problem Solving (3) Techniques in problem solving applied to algebra, number theory, geometry, probability, discrete mathematics, logic and calculus. A study of Polya's heuristic rules of mathematical discovery.

MATH 537 Mathematical Modeling (3) Introduction to the process of mathematical modeling and its use in teaching secondary school mathematics. Emphasizes development and communication of models.

MATH 550 Applied Probability and Statistics (3) Concepts include history, counting techniques, distributions and inference (confidence intervals, point estimation, testing, ANOVA, regression, non-parametrics). The Context focus is secondary level mathematics.

MATH 591 Abstract Algebra and Number Theory (3) Basic methods of problem solving in abstract algebra and number theory with applications in secondary school mathematics.

Mathematics Education Courses

MED 522 Assessment Practices in K–12 Mathematics (2) Methods of assessment that connect assessment theory and models to teachers' practice. Focus on assessment practices consistent with standard-based mathematics, classroom assessment of student learning, and standardized testing practices.

MED 528 Teaching of Discrete Mathematics (2) Methods of teaching discrete mathematics including using technology, projects, cooperative groups and the development of curriculum materials. Topics will include the teaching of existence problems, counting problems and optimization problems.

MED 534 Teaching Algebra and Trigonometry (2) Current research on instruction in algebra/trigonometry; current curricular issues. Approach teaching of Algebra and Trigonometry from a conceptual and problem solving point of view.

MED 543 Teaching Geometry (2) Students will develop teaching modules and models based on current theories of cognition and recommendations of professional societies.

MED 550 Teaching Applied Probability and Statistics (2) Methods of teaching topics of probability and statistics including hands-on experience in collecting and analyzing data. Topics include descriptive techniques, random variables, curve fitting and use of technology.

MED 599 Action Research Project (1) Research a current problem in secondary mathematics education relevant to their own teaching situation. Develop goals, review relevant literature and plan the project while progressing through the program. Repeatable, may be taken three times.

Partnership Leadership Team and Disciplinary Partners

Person	Roles/Responsibilities	Time commitment
S. Hauk , Math, Math Ed	Lead research team, oversee project	.1 FTE yr 1, .2 FTE yrs 2-5
J. Novak , Math	Oversee project, develop, teach courses in MP and TLP	2.8 m yr 1, 2.7 m, 1.5 m summer, yr 2-5
R. Grassl, Math	Develop, teach courses in MP	<i>.75 m summer, yrs 2-5, .1 FTE year 2</i>
S. Leth, Math	Develop, teach courses in MP	<i>.75 months summer, yrs 2-5, .1 FTE yr 4</i>
S. Fitchett, Math	Develop, teach courses in MP	<i>.75 months summer, yr 2, .1 FTE yr 1</i>
D. Allison, Math	Dept chair, oversee affiliation	<i>as needed</i>
A. Dzhamay, Math	Develop, teach courses in MP	<i>.75 months summer, yr 4, .1 FTE yr 3</i>
N. Miller, Math	Grad chair, oversee program changes	<i>as needed</i>
W. Blubaugh, Math Ed	Develop, teach courses in MP	<i>.1 FTE, .5 m summer and .067 FTE years 1-5</i>
R. Powers, Math Ed	Develop, teach courses in MP, TLP, research	<i>.1 FTE yrs 1-5, .5 m summer and .1 FTE yr 1, 1 m summer and .2 FTE yrs 2-5</i>
H. Ku, Ed Technology	research on online instructional design, support for online courses design	<i>.2 FTE yr 1, .1 FTE and 1 m summer yrs 2-5,</i>
Post doc, Math Ed	Research, develop, deliver MP, TLP	<i>.5 FTE yrs 1 and 5, 1 FTE yrs 2-4, 2 m summer yr 2-5</i>
B. Shader , Math	Oversee UWy component, develop, teach MP courses	<i>2 m CY, yrs 1-3, 1 m CY yrs 4-5</i>
J. Spitler, Math	Develop, teach courses in MP	<i>.75 m summer, yrs 2-5, .1 FTE yrs 1-4</i>
M. Chamberlin, Math Ed	Develop, teach courses in TLP	<i>.1 FTE yrs 1-4</i>
R. Mayes , Math Ed	Oversee project, develop, teach courses in MP and TLP, research	<i>2 m CY, yrs 1-5, .1FTE yr 1</i>
L. Hutchinson, Teacher Ed	Develop, teach courses in MP	<i>.1 FTE yr1</i>
M. Christiansen , Math Teacher Leader	District liaison, oversee project, provide data	<i>12 days, yrs 1-5</i>

KEY:

faculty in bold are on the partnership leadership team
 m=months, all FTE is academic year FTE
 .1FTE=1 3 hour course release
 MP=Master's Program
 TLP=Teacher Leader Program

CY=calendar year
 italicized indicates part of faculty load
 UNCo faculty above double line
 UWy faculty between double lines
 school district personnel below double line