

# 2017 PROGRAM EVALUATION WEST VIRGINIA

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## **Statistical Tests**

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Exhibit 1 Operation Tone-Up 2017 Program Evaluation West Virginia

Mean Score Improvement & Percentage Improvement by County

			Knowledge of Nutrients		Push	Push-Ups		Sit-Ups	
		Student	Mean	Mean %	Mean	Mean %	Mean	Mean %	
County	School	Count*	Change	Change	Change	Change	Change	Change	
Kanawha	Chesapeake	63	4.27	118.5%	3.60	44.2%	15.35	99.8%	
	Anne Bailley	14	4.64	110.2%	6.86	290.9%	11.14	410.5%	
Kanawha Total		77	4.34	116.8%	4.20	59.4%	14.58	111.5%	
McDowell	Kimball	20	4.10	149.1%	10.00	93.3%	14.33	71.5%	
McDowell Total		20	4.10	149.1%	10.00	93.3%	14.33	71.5%	
Ohio	Middle Creek	41	3.37	102.2%	9.20	172.0%	41.06	221.6%	
	Woodsdale	65	4.43	124.7%	7.02	68.2%	11.69	33.8%	
	Madison	19	2.21	76.4%	2.05	229.4%	7.84	49.5%	
Ohio Total		125	3.74	111.2%	6.95	104.7%	19.96	74.7%	
Putnam	Conner Street	47	4.55	152.9%	5.13	69.4%	6.54	57.1%	
Putnam Total		47	4.55	152.9%	5.13	69.4%	6.54	57.1%	
Raleigh	Crescent	118	2.69	69.0%	6.78	170.9%	11.78	104.4%	
•	Marsh Fork	57	2.96	137.4%	6.04	123.8%	10.94	68.7%	
	Sophia Creek	21	5.52	196.6%	3.57	38.1%	6.86	75.4%	
Raleigh Total		216	3.17	98.1%	6.55	122.1%	11.30	87.0%	
Randolph	Beverly	18	6.33	207.3%	3.75	34.7%	4.75	19.8%	
Randolph Total	j	18	6.33	207.3%	3.75	34.7%	4.75	19.8%	
Total		483	3.76	113.4%	5.97	93.2%	13.27	79.1%	

			Systolic Blood Pressure		Diastolic Blood Pressure		Resting Heart Rate	
		Chudant						
		Student	Mean	Mean %	Mean	Mean %	Mean	Mean %
County	School	Count*	Change	Change	Change	Change	Change	Change
Kanawha	Chesapeake	63	-3.57	-3.2%	-7.74	-11.2%	-11.81	-12.9%
	Anne Bailley	14						
Kanawha Total		77	-3.57	-3.2%	-7.74	-11.2%	-11.81	-12.9%
McDowell	Kimball	20						
McDowell Total								
Ohio	Middle Creek	41						
	Woodsdale	65	1.58	1.6%	-2.63	-4.0%	-9.30	-11.0%
	Madison	19						
Ohio Total		125	1.58	1.6%	-2.63	-4.0%	-9.30	-11.0%
Putnam	Conner Street	47	-6.91	-6.5%	-2.25	-3.3%	-4.43	-4.9%
Putnam Total		47	-6.91	-6.5%	-2.25	-3.3%	-4.43	-4.9%
Raleigh	Crescent	118	-2.10	-2.1%	-2.44	-3.8%	-10.87	-12.0%
	Marsh Fork	57	-5.06	-4.4%	-1.21	-1.7%		
	Sophia Creek	21					-5.50	-6.7%
Raleigh Total		216	-3.01	-2.9%	-2.06	-3.1%	-10.23	-11.4%
Randolph	Beverly	18				·		
Randolph Total		18						
Total		483	-3.40	-3.2%	-2.99	-4.5%	-9.30	-10.4%

<sup>\*</sup>Student count is based upon the number of students that had a pre and post test score for knowledge of nutrients

Exhibit 2 Operation Tone-Up 2017 Program Evaluation West Virginia

Mean Score Improvement & Percentage Improvement by School

			Knowledge of Nutrients		Push	-Ups	Sit-	Ups
School	Classroom	Student Count*	Mean	Mean %	Mean	Mean %	Mean	Mean %
			Change	Change	Change	Change	Change	Change
Conner Street	Keisha Dunn	17	2.82	80.0%	3.33	42.7%	9.13	57.5%
	Carrie Shamblin	30	5.53	207.5%	6.03	83.8%	5.17	56.8%
Crescent	Kim Dalton	18	4.28	111.6%	2.83	566.7%	9.95	209.5%
	Bolen / Jane	21	1.33	40.0%	9.05	463.4%	11.90	195.3%
	Kirby / Jane	21	0.95	27.0%	7.50	300.0%	8.38	102.6%
	Sullivan / Jane	16	0.44	10.3%	9.12	5166.7%	6.14	33.3%
	Katelyn Cooper	22	5.09	128.7%	6.43	63.0%	17.62	95.1%
	Lisa DellaMea	20	3.70	79.6%	3.47	52.5%	15.40	106.6%
Marsh Fork	Katelyn Moore	57	2.96	137.4%	6.04	123.8%	10.94	68.7%
Middle Creek	Stephanie Crow	24	3.63	102.4%	11.96	225.4%	53.92	418.6%
	Amber Orth	17	3.00	102.0%	5.47	101.1%	11.82	37.7%
Woodsdale	Jane Baker	21	3.52	97.4%	8.10	103.2%	10.43	72.8%
	Carrie Austin	20	5.30	151.4%			1.05	5.4%
	Omaits	24	4.50	127.1%	6.13	49.7%	21.21	33.0%
Chesapeake	Brandy Lowther	21	5.05	149.3%	1.20	14.5%	5.10	56.6%
	Allison Pack	15	3.20	82.8%	5.00	80.6%	4.53	21.9%
	Holli Petersen	14	4.29	109.1%	-1.07	-12.3%	11.57	73.3%
	Allison Sigman	13	4.23	127.9%	10.69	112.1%	48.46	253.0%
Madison	Ellen Triveri	19	2.21	76.4%	2.05	229.4%	7.84	49.5%
Anne Bailley	Brandy Copen	14	4.64	110.2%	6.86	290.9%	11.14	410.5%
Beverly	Lucy Godwin	18	6.33	207.3%	3.75	34.7%	4.75	19.8%
Sophia Creek	Amber Hart	21	5.52	196.6%	3.57	38.1%	6.86	75.4%
Kimball	Laura Goforth	20	4.10	149.1%	10.00	93.3%	14.33	71.5%
Total		483	3.76	113.4%	5.97	93.2%	13.27	79.1%

			Systolic Blo	ood Pressure	Diastolic Blo	od Pressure	Resting F	leart Rate
		Student	Mean	Mean %	Mean	Mean %	Mean	Mean %
School	Classroom	Count*	Change	Change	Change	Change	Change	Change
Conner Street	Keisha Dunn	17	-0.63	-0.6%	1.25	1.8%	-8.56	-8.6%
	Carrie Shamblin	30	-10.50	-9.8%	-4.25	-6.3%	-2.07	-2.4%
Crescent	Kim Dalton	18	-5.87	-5.6%	-3.87	-5.8%	-20.93	-21.49
	Bolen / Jane	21	2.09	2.1%	-0.45	-0.7%	-6.22	-6.4%
	Kirby / Jane	21	-2.09	-2.1%	-2.61	-4.1%	-10.48	-11.89
	Sullivan / Jane	16	-2.71	-2.7%	-2.94	-4.6%	-16.06	-17.69
	Katelyn Cooper	22	-1.39	-1.4%	-1.91	-3.0%	-10.57	-11.89
	Lisa DellaMea	20	-4.32	-4.2%	-3.58	-5.5%	-4.74	-6.1%
Marsh Fork	Katelyn Moore	57	-5.06	-4.4%	-1.21	-1.7%		
Middle Creek	Stephanie Crow	24						
	Amber Orth	17						
Woodsdale	Jane Baker	21						
	Carrie Austin	20	1.58	1.6%	-2.63	-4.0%	-9.30	-11.09
	Omaits	24						
Chesapeake	Brandy Lowther	21						
	Allison Pack	15	3.20	2.8%	-2.07	-3.0%	-18.87	-21.69
	Holli Petersen	14	-10.50	-9.0%	-15.14	-20.1%	-14.25	-14.79
	Allison Sigman	13	-3.92	-3.8%	-6.31	-10.2%	-2.15	-2.3%
Madison	Ellen Triveri	19						
Anne Bailley	Brandy Copen	14						
Beverly	Lucy Godwin	18						
Sophia Creek	Amber Hart	21					-5.50	-6.7%
Kimball	Laura Goforth	20						
Total		483	-3.40	-3.2%	-2.99	-4.5%	-9.30	-10.49

<sup>\*</sup>Student count is based upon the number of students that had a pre and post test score for knowledge of nutrients

#### Exhibit 3 Operation Tone-Up 2017 Program Evaluation West Virginia

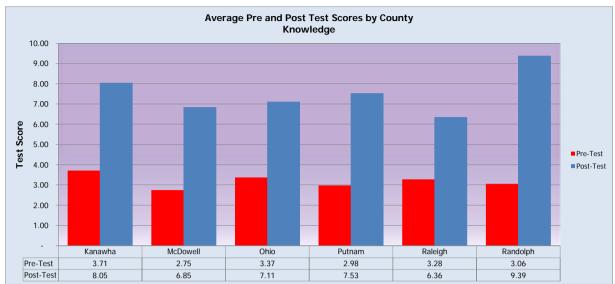
#### Mean Score Improvement & Percentage Improvement by Grade Level

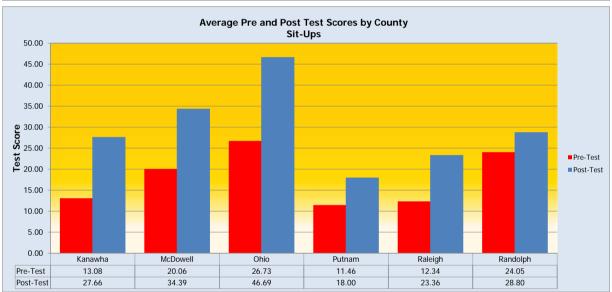
		Knowledge of Nutrients		Push-Ups		Sit-Ups	
	Student	Mean	Mean %	Mean	Mean %	Mean	Mean %
Grade	Count*	Change	Change	Change	Change	Change	Change
3rd	104	5.06	155.6%	5.83	74.2%	14.27	125.1%
4th	214	3.32	105.6%	6.54	117.2%	14.41	112.4%
5th	165	3.50	98.1%	5.22	79.3%	10.97	42.3%
Total	483	3.76	113.4%	5.97	93.2%	13.27	79.1%

		Systolic Blood Pressure		Diastolic Blo	od Pressure	Resting Heart Rate	
	Student	Mean	Mean %	Mean	Mean %	Mean	Mean %
Grade	Count*	Change	Change	Change	Change	Change	Change
3rd	104	-5.89	-5.7%	-3.84	-5.9%	-7.69	-8.6%
4th	214	-2.46	-2.3%	-1.00	-1.5%	-8.33	-8.8%
5th	165	-2.35	-2.2%	-4.89	-7.3%	-11.97	-13.9%
Total	483	-3.40	-3.2%	-2.99	-4.5%	-9.30	-10.4%

<sup>\*</sup>Student count is based upon the number of students that had a pre and post test score for knowledge of nutrients

Exhibit 4 Operation Tone-Up 2017 Program Evaluation West Virginia





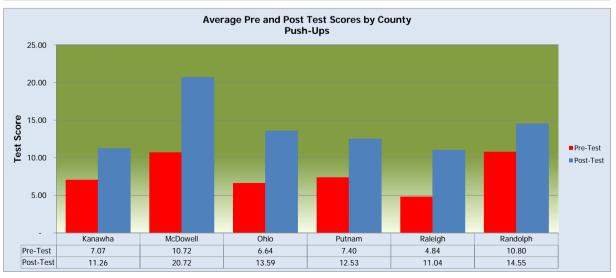
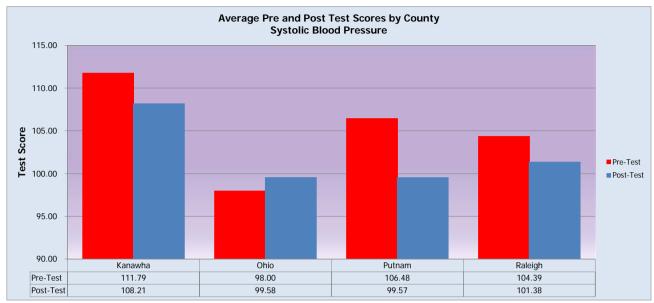
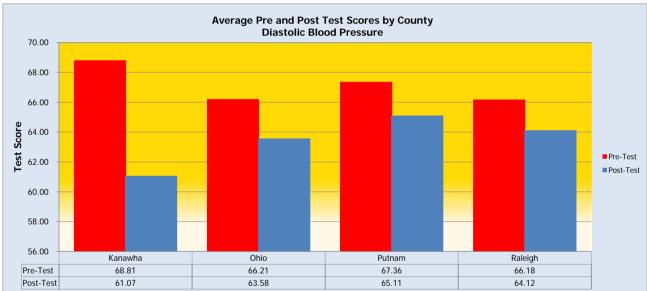


Exhibit 5 Operation Tone-Up 2017 Program Evaluation West Virginia





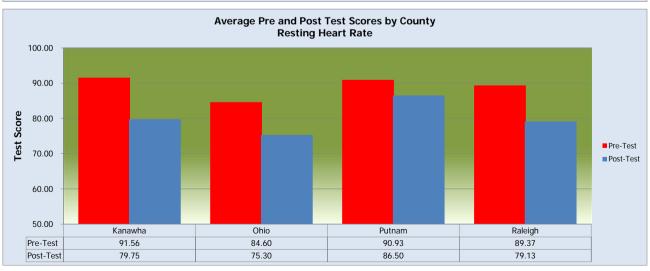
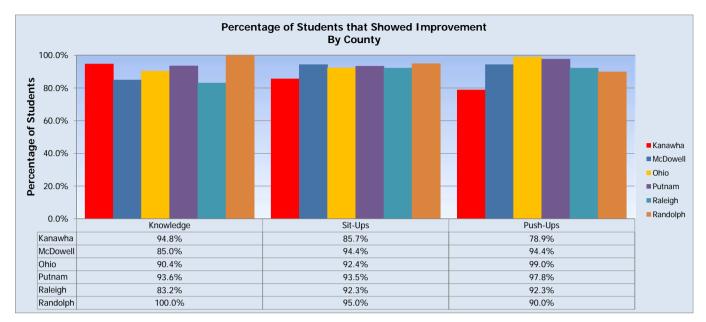


Exhibit 6 Operation Tone-Up 2017 Program Evaluation West Virginia



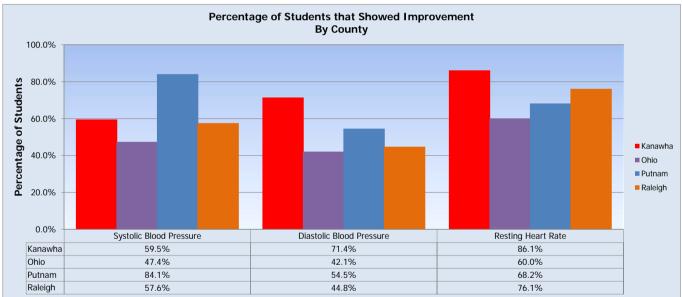


Exhibit 7 Operation Tone-Up 2017 Program Evaluation West Virginia

**Pre & Post Test Scores for Knowledge of Nutrients** 

		(a)	(b)	(c) = (b) - (a)	(d) = (c) / (a)
	Student	Pre Test	Post Test	Mean	Mean
School	Count	Mean Score	Mean Score	Change	% Change
Conner Street	47	2.98	7.53	4.55	152.9%
Crescent	118	3.91	6.60	2.69	69.0%
Marsh Fork	57	2.16	5.12	2.96	137.4%
Middle Creek	41	3.29	6.66	3.37	102.2%
Woodsdale	65	3.55	7.98	4.43	124.7%
Chesapeake	63	3.60	7.87	4.27	118.5%
Madison	19	2.89	5.11	2.21	76.4%
Anne Bailley	14	4.21	8.86	4.64	110.2%
Beverly	18	3.06	9.39	6.33	207.3%
Sophia Creek	21	2.81	8.33	5.52	196.6%
Kimball	20	2.75	6.85	4.10	149.1%
Total	483	3.31	7.07	3.76	113.4%

Exhibit 8
Operation Tone-Up
2017 Program Evaluation
West Virginia

**Pre & Post Test Scores for Push-Ups** 

		(a)	(b)	(c) = (b) - (a)	(d) = (c) / (a)
	Student	Pre Test	Post Test	Mean	Mean
School	Count	Mean Score	Mean Score	Change	% Change
Conner Street	45	7.40	12.53	5.13	69.4%
Crescent	112	3.96	10.74	6.78	170.9%
Marsh Fork	49	4.88	10.92	6.04	123.8%
Middle Creek	40	5.35	14.55	9.20	172.0%
Woodsdale	44	10.30	17.32	7.02	68.2%
Chesapeake	62	8.13	11.73	3.60	44.2%
Madison	19	0.89	2.95	2.05	229.4%
Anne Bailley	14	2.36	9.21	6.86	290.9%
Beverly	20	10.80	14.55	3.75	34.7%
Sophia Creek	21	9.38	12.95	3.57	38.1%
Kimball	18	10.72	20.72	10.00	93.3%
Total	444	6.40	12.37	5.97	93.2%

**Pre & Post Test Scores for Sit-Ups** 

		(a)	(b)	(c) = (b) - (a)	(d) = (c) / (a)
	Student	Pre Test	Post Test	Mean	Mean
School	Count	Mean Score	Mean Score	Change	% Change
Conner Street	46	11.46	18.00	6.54	57.1%
Crescent	120	11.29	23.08	11.78	104.4%
Marsh Fork	54	15.93	26.87	10.94	68.7%
Middle Creek	36	18.53	59.58	41.06	221.6%
Woodsdale	64	34.58	46.27	11.69	33.8%
Chesapeake	63	15.38	30.73	15.35	99.8%
Madison	19	15.84	23.68	7.84	49.5%
Anne Bailley	14	2.71	13.86	11.14	410.5%
Beverly	20	24.05	28.80	4.75	19.8%
Sophia Creek	21	9.10	15.95	6.86	75.4%
Kimball	18	20.06	34.39	14.33	71.5%
Total	475	16.76	30.03	13.27	79.1%

Exhibit 9 Operation Tone-Up 2017 Program Evaluation West Virginia

**Pre & Post Test Scores for Systolic Blood Pressure** 

	Student	(a) Pre Test	(b) Post Test	(c) = (b) - (a) Mean	(d) = (c) / (a) Mean
School	Count	Mean Score	Mean Score	Change	% Change
Conner Street	44	106.48	99.57	-6.91	-6.5%
Crescent	119	99.98	97.88	-2.10	-2.1%
Marsh Fork	53	114.28	109.23	-5.06	-4.4%
Woodsdale	19	98.00	99.58	1.58	1.6%
Chesapeake	42	111.79	108.21	-3.57	-3.2%
Total	277	105.40	102.00	-3.40	-3.2%

#### **Pre & Post Test Scores for Diastolic Blood Pressure**

	Student	(a) Pre Test	(b) Post Test	(c) = (b) - (a) Mean	(d) = (c) / (a) Mean
School	Count	Mean Score	Mean Score	Change	% Change
Conner Street	44	67.36	65.11	-2.25	-3.3%
Crescent	119	64.03	61.60	-2.44	-3.8%
Marsh Fork	53	71.00	69.79	-1.21	-1.7%
Woodsdale	19	66.21	63.58	-2.63	-4.0%
Chesapeake	42	68.81	61.07	-7.74	-11.2%
Total	277	66.77	63.78	-2.99	-4.5%

**Pre & Post Test Scores for Resting Heart Rate** 

		(a)	(b)	(c) = (b) - (a)	(d) = (c) / (a)
	Student	Pre Test	Post Test	Mean	Mean
School	Count	Mean Score	Mean Score	Change	% Change
Conner Street	44	90.93	86.50	-4.43	-4.9%
Crescent	118	90.38	79.51	-10.87	-12.0%
Woodsdale	20	84.60	75.30	-9.30	-11.0%
Chesapeake	36	91.56	79.75	-11.81	-12.9%
Sophia Creek	16	81.88	76.38	-5.50	-6.7%
Total	234	89.59	80.29	-9.30	-10.4%

Exhibit 10 Operation Tone-Up 2017 Program Evaluation West Virginia

Pre & Post Test Scores by Systolic Blood Pressure Range

	Systolic Blood Pressure								
Systolic		(a)	(b)	(c) = (b) - (a)	(d) = (c) / (a)				
Pre Test	Student	Pre Test	Post Test	Mean	Mean				
Range	Count	Mean Score	Mean Score	Change	% Change				
$0 < X \le 114$	214	100.13	99.38	-0.75	-0.7%				
114 < X ≤ 125	49	119.47	109.45	-10.02	-8.4%				
> 125	14	136.79	116.00	-20.79	-15.2%				
Total	277	105.40	102.00	-3.40	-3.2%				

**Pre & Post Test Scores by Diastolic Blood Pressure Range** 

<u>Diastolic Blood Pressure</u>								
Diastolic		(a)	(b)	(c) = (b) - (a)	(d) = (c) / (a)			
Pre Test	Student	Pre Test	Post Test	Mean	Mean			
Range	Count	Mean Score	Mean Score	Change	% Change			
0 < X ≤ 75	231	63.96	63.00	-0.95	-1.5%			
75 < X ≤ 85	40	79.55	66.90	-12.65	-15.9%			
> 85	6	89.83	72.83	-17.00	-18.9%			
Total	277	66.77	63.78	-2.99	-4.5%			

**Pre & Post Test Scores by Resting Heart Rate Range** 

Resting Heart Rate								
RHR		(a)	(b)	(c) = (b) - (a)	(d) = (c) / (a)			
Pre Test	Student	Pre Test	Post Test	Mean	Mean			
Range	Count	Mean Score	Mean Score	Change	% Change			
$0 < X \le 80$	71	73.68	73.96	0.28	0.4%			
$80 < X \le 100$	107	90.53	80.60	-9.93	-11.0%			
> 100	56	107.96	87.71	-20.25	-18.8%			
Total	234	89.59	80.29	-9.30	-10.4%			

# Systolic Blood Pressure Range 0 < X ≤ 114

	Systolic Blood Pressure (Pre Test Score less than or equal to 114)							
		(a)	(b)	(c) = (b) - (a)	(d) = (c) / (a)			
	Student	Pre Test	Post Test	Mean	Mean			
School	Count	Mean Score	Mean Score	Change	% Change			
Conner Street	35	102.43	97.54	-4.89	-4.8%			
Crescent	106	97.40	96.77	-0.62	-0.6%			
Marsh Fork	30	104.20	106.83	2.63	2.5%			
Woodsdale	19	98.00	99.58	1.58	1.6%			
Chesapeake	24	105.46	104.13	-1.33	-1.3%			
Total	214	100.13	99.38	-0.75	-0.7%			

# Systolic Blood Pressure Range 114 < X ≤ 125

Systolic Blood Pressure (Pre Test Score less than or equal to 125 and greater than 114)							
		(a)	(b)	(c) = (b) - (a)	(d) = (c) / (a)		
	Student	Pre Test	Post Test	Mean	Mean		
School	Count	Mean Score	Mean Score	Change	% Change		
Conner Street	8	120.75	104.88	-15.88	-13.1%		
Crescent	11	119.45	105.45	-14.00	-11.7%		
Marsh Fork	14	119.29	110.43	-8.86	-7.4%		
Woodsdale							
Chesapeake	16	119.00	113.63	-5.38	-4.5%		
Total	49	119.47	109.45	-10.02	-8.4%		

# **Systolic Blood Pressure Range > 125**

	Systolic Blood Pressure (Pre Test Score greater than 125)							
		(a)	(b)	(c) = (b) - (a)	(d) = (c) / (a)			
	Student	Pre Test	Post Test	Mean	Mean			
School	Count	Mean Score	Mean Score	Change	% Change			
Conner Street	1	134.00	128.00	-6.00	-4.5%			
Crescent	2	130.00	115.00	-15.00	-11.5%			
Marsh Fork	9	140.11	115.33	-24.78	-17.7%			
Woodsdale								
Chesapeake	2	130.00	114.00	-16.00	-12.3%			
Total	14	136.79	116.00	-20.79	-15.2%			

# **Diastolic Blood Pressure Range 0 < X ≤ 75**

	Diastolic Blood Pressure (Pre Test Score less than or equal to 75)						
		(a)	(b)	(c) = (b) - (a)	(d) = (c) / (a)		
	Student	Pre Test	Post Test	Mean	Mean		
School	Count	Mean Score	Mean Score	Change	% Change		
Conner Street	36	64.75	63.61	-1.14	-1.8%		
Crescent	110	62.80	61.36	-1.44	-2.3%		
Marsh Fork	38	66.45	69.42	2.97	4.5%		
Woodsdale	16	63.25	63.00	-0.25	-0.4%		
Chesapeake	31	64.45	60.26	-4.19	-6.5%		
Total	231	63.96	63.00	-0.95	-1.5%		

# Diastolic Blood Pressure Range 75 < X ≤ 85

Diastolic Blood Pressure (Pre Test Score less than or equal to 85 and greater than 75)							
		(a)	(b)	(c) = (b) - (a)	(d) = (c) / (a)		
	Student	Pre Test	Post Test	Mean	Mean		
School	Count	Mean Score	Mean Score	Change	% Change		
Conner Street	8	79.13	71.88	-7.25	-9.2%		
Crescent	9	79.11	64.44	-14.67	-18.5%		
Marsh Fork	11	79.36	69.09	-10.27	-12.9%		
Woodsdale	2	80.00	70.00	-10.00	-12.5%		
Chesapeake	10	80.40	62.10	-18.30	-22.8%		
Total	40	79.55	66.90	-12.65	-15.9%		

# **Diastolic Blood Pressure Range > 85**

Diastolic Blood Pressure (Pre Test Score greater than 85)							
		(a)	(b)	(c) = (b) - (a)	(d) = (c) / (a)		
	Student	Pre Test	Post Test	Mean	Mean		
School	Count	Mean Score	Mean Score	Change	% Change		
Conner Street							
Crescent							
Marsh Fork	4	91.25	75.25	-16.00	-17.5%		
Woodsdale	1	86.00	60.00	-26.00	-30.2%		
Chesapeake	1	88.00	76.00	-12.00	-13.6%		
Total	6	89.83	72.83	-17.00	-18.9%		

# Resting Heart Rate Range 0 < X ≤ 80

Resting Heart Rate (Pre Test Score less than or equal to 80)							
		(a)	(b)	(c) = (b) - (a)	(d) = (c) / (a)		
	Student	Pre Test	Post Test	Mean	Mean		
School	Count	Mean Score	Mean Score	Change	% Change		
Conner Street	9	73.67	76.33	2.67	3.6%		
Crescent	38	73.47	73.79	0.32	0.4%		
Woodsdale	10	73.30	73.00	-0.30	-0.4%		
Chesapeake	7	74.57	69.71	-4.86	-6.5%		
Sophia Creek	7	74.43	77.43	3.00	4.0%		
Total	71	73.68	73.96	0.28	0.4%		

## Resting Heart Rate Range 80 < X ≤ 100

Resting Heart Rate (Pre Test Score less than or equal to 80 and greater than 100)								
		(a) (b)		(c) = (b) - (a)	(d) = (c) / (a)			
	Student	Pre Test	Post Test	Mean	Mean			
School	Count	Mean Score	Mean Score	Change	% Change			
Conner Street	24	89.79	85.58	-4.21	-4.7%			
Crescent	46	91.59	80.74	-10.85	-11.8%			
Woodsdale	8	91.00	74.75	-16.25	-17.9%			
Chesapeake	20	90.10	78.90	-11.20	-12.4%			
Sophia Creek	9	87.67	75.56	-12.11	-13.8%			
Total	107	90.53	80.60	-9.93	-11.0%			

## **Resting Heart Rate Range > 100**

Resting Heart Rate (Pre Test Score greater than 100)								
		(a)	(b)	(c) = (b) - (a)	(d) = (c) / (a)			
	Student	Pre Test	Post Test	Mean	Mean			
School	Count	Mean Score	Mean Score	Change	% Change			
Conner Street	11	107.55	96.82	-10.73	-10.0%			
Crescent	34	107.65	84.24	-23.41	-21.7%			
Woodsdale	2	115.50	89.00	-26.50	-22.9%			
Chesapeake	9	108.00	89.44	-18.56	-17.2%			
Sophia Creek								
Total	56	107.96	87.71	-20.25	-18.8%			

Appendix A
Operation Tone-Up
2017 Program Evaluation
West Virginia
Statistical Tests

Test and Confidence Interval for Paired t-Test							99.8% Confidence		
	Sample		Standard	Standard	Paired	Degrees	P-Value	Interval of I	Difference
Program Indicator	Size	Mean	Deviation	Error Mean	t- Statistic	of Freedom	(less than)	Lower	Upper
Knowledge of Nutrients	483	3.758	2.507	0.114	32.946	482	0.001	3.403	4.112
Sit-Ups	475	13.265	30.089	1.381	9.608	474	0.001	8.974	17.556
Push-Ups	444	5.971	5.854	0.278	21.491	443	0.001	5.107	6.834
Systolic Blood Pressure	277	-3.401	12.178	0.732	4.648	276	0.001	-5.684	-1.118
Diastolic Blood Pressure	277	-2.989	10.195	0.613	4.880	276	0.001	-4.900	-1.078
Resting Heart Rate	234	-9.303	13.407	0.876	10.615	233	0.001	-12.042	-6.565

#### Knowledge of Nutrients

HO: Mean Post Test Score is less than or equal to the Mean Pre Test Score

Ha: Mean Post Test Score is greater than the Mean Pre Test Score

The difference between the mean Pre Test Score and the mean Post Test Score was significant at the 0.001 level.

We reject the H0; there was sufficient evidence to conclude that the average score for Knowledge of Nutrients improved as a result of the Operation Tone-Up Program.

#### Sit- Ups

HO: Mean Post Test Score is less than or equal to the Mean Pre Test Score

Ha: Mean Post Test Score is greater than the Mean Pre Test Score

The difference between the mean Pre Test Score and the mean Post Test Score was significant at the 0.001 level.

We reject the H0; there was sufficient evidence to conclude that the average score for Sit-Ups improved as a result of the Operation Tone-Up Program.

#### Push-Ups

H0: Mean Post Test Score is less than or equal to the Mean Pre Test Score

Ha: Mean Post Test Score is greater than the Mean Pre Test Score

The difference between the mean Pre Test Score and the mean Post Test Score was significant at the 0.001 level.

We reject the H0; there was sufficient evidence to conclude that the average score for Push-Ups improved as a result of the Operation Tone-Up Program.

#### Systolic Blood Pressure

H0: Mean Post Test Score is greater than or equal to the Mean Pre Test Score

Ha: Mean Post Test Score is less than the Mean Pre Test Score

The difference between the mean Pre Test Score and the mean Post Test Score was significant at the 0.001 level.

We reject the H0; there was sufficient evidence to conclude that the average score for Systolic Blood Pressure improved as a result of the Operation Tone-Up Program.

#### <u>Diastolic Blood Pressure</u>

HO: Mean Post Test Score is greater than or equal to the Mean Pre Test Score

Ha: Mean Post Test Score is less than the Mean Pre Test Score

The difference between the mean Pre Test Score and the mean Post Test Score was significant at the 0.001 level.

We reject the H0; there was sufficient evidence to conclude that the average score for Diastolic Blood Pressure improved as a result of the Operation Tone-Up Program.

#### Resting Heart Rate

H0: Mean Post Test Score is greater than or equal to the Mean Pre Test Score

Ha: Mean Post Test Score is less than the Mean Pre Test Score

The difference between the mean Pre Test Score and the mean Post Test Score was significant at the 0.001 level.

We reject the H0; there was sufficient evidence to conclude that the average score for Resting Heart Rate improved as a result of the Operation Tone-Up Program.