

## **Research Results for ZAPS ACT Test Preparation Delivered by Trained Teachers in Boulder Valley School District, Colorado**

In January of 2010, three schools in the Boulder Valley School District, Colorado, contracted with *ZAPS* Learning Company to train a group of faculty members to present the *ZAPS* ACT test-preparation curriculum within the district. The trained faculty members at the three schools — Arapahoe Ridge (district alternative high school), Broomfield, and Centaurus — went on to instruct the entirety of each schools' junior class in the *ZAPS* ACT test-preparation strategies program.

In October 2010, the Boulder Valley School District published the results of ACT test scores within the district over the past seven years. The data was unique in that it allowed for a comparison with the ACT score pre- and post- *ZAPS* participation (3 high schools, 616 students), as well as the scores of the Control Group who did not offer the *ZAPS* training to the teachers or students (7 high schools, 1535 students).

The ACT Composite score at the three participating high schools was up an average of 1.4 points. In comparison, students in the Control Group showed a very slight decline of -0.1 points during this same time period.

Performance on subject-area subtests was fairly consistent with the Composite gain in each of the three participating high schools. On average, students improved 1.5 in English, 1.4 in Math, 1.5 in Reading, and 1.2 in Science (See Table 4).

The data published by the Boulder Valley School District indicates that *ZAPS* ACT training had a significantly positive impact on the ACT scores of students who participated in the trial.

### **Follow Up Note—**

Performance in 2011 continued to improve at the three high schools offering the *ZAPS* program. On average, the ACT Composite Score improved from 16.9 in 2009 to 18.3 in 2010, and to 19.4 in 2011.

**Table 1**  
**Grade 11 ACT Scores Published by the**  
**Boulder Valley School District Colorado**

Schools	11th Grade Enrollment						
	2004	2005	2006	2007	2008	2009	2010
CO State Total	47412	47568	49070	50436	51490	51485	52951
BVSD District Total	1967	2130	2132	2197	2260	2162	2151
ARAPAHOE RIDGE	98	63	69	49	66	54	54
BROOMFIELD	255	342	316	350	330	330	335
CENTAURUS	233	222	195	216	254	272	227

Schools	Composite For Schools Teaching ZAPS to ALL Juniors						
	2004	2005	2006	2007	2008	2009	2010
CO State Total	18.8	19.0	19.0	19.1	19.4	19.6	19.4
BVSD District Total	21.1	21.8	21.9	21.9	22.2	22.2	22.6
ARAPAHOE RIDGE	10.7	11.4	8.9	12.3	12.9	10.7	12.8
BROOMFIELD	20.6	21.0	20.8	20.8	20.8	21.4	22.5
CENTAURUS	17.9	19.9	19.9	18.3	19.4	18.5	19.6

**Table 2**  
**Subject Test Scores for Schools Participating in**  
**the ZAPS Learning Company Program**

<b>Schools</b>	<b>English</b>						
	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>
ARAPAHOE RIDGE	9.9	10.6	8.5	11.2	11.6	9.3	<b>10.9</b>
BROOMFIELD	19.7	20.4	20.2	19.7	20.0	20.6	<b>21.9</b>
CENTAURUS	16.2	18.8	18.5	17.1	18.4	17.6	<b>19.1</b>
	<b>Math</b>						
	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>
ARAPAHOE RIDGE	10.7	11.5	8.8	14.1	13.5	11.5	<b>13.8</b>
BROOMFIELD	20.9	21.0	21.0	21.2	21.2	21.8	<b>22.8</b>
CENTAURUS	18.6	20.3	20.1	18.8	19.6	19.0	<b>19.7</b>
	<b>Reading</b>						
	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>
ARAPAHOE RIDGE	11.0	11.8	9.4	12.9	12.7	10.5	<b>13.2</b>
BROOMFIELD	20.9	21.2	21.0	21.1	21.2	21.6	<b>22.2</b>
CENTAURUS	18.4	19.8	20.3	18.6	19.7	18.5	<b>19.7</b>
	<b>Science Reasoning</b>						
	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>
ARAPAHOE RIDGE	10.9	11.3	8.9	11.8	13.7	11.1	<b>12.7</b>
BROOMFIELD	20.6	21.0	20.7	20.6	20.5	21.3	<b>22.4</b>
CENTAURUS	18.1	20.3	20.1	18.3	19.5	18.6	<b>19.6</b>

**Table 3**  
**Composite ACT scores for the Control Group:**  
**Schools in the Boulder Valley School District That**  
**Did Not Participate in the ZAPS training**

<b>High School</b>	<b>Composite Scores for Control Group: School Not Participating With ZAPS</b>						
	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>
BOULDER	22.5	22.3	23.0	23.2	23.5	23.0	<b>23.5</b>
BOULDER PREP		17.6	15.6	15.7	17.4	19.2	<b>16.1</b>
FAIRVIEW	23.7	24.6	24.0	24.5	24.7	24.8	<b>24.1</b>
JUSTICE HIGH				12.3	14.1	14.9	<b>14.3</b>
MONARCH	21.9	22.2	22.6	22.4	23.0	23.5	<b>23.4</b>
NEDERLAND	19.5	20.3	20.0	19.7	20.6	21.5	<b>20.7</b>
NEW VISTA	21.1	18.8	22.4	20.5	21.3	20.7	<b>21.8</b>

**Table 4**  
**Results of ZAPS Preparation Delivered by District Teachers in**  
**Boulder Valley School District, by Composite and Subject Area**

<b>Impact on ACT Composite Score</b>			
<b>High School</b>	<b>2009 ACT Composite</b>	<b>2010 ACT Composite</b>	<b>Change</b>
Control Group*	23.5	23.4	-0.1
ZAPS School A	10.7	12.8	2.1
ZAPS School B	21.4	22.5	1.1
ZAPS School C	18.5	19.6	1.1
<b>Average</b>	<b>16.9</b>	<b>18.3</b>	<b>1.4</b>

<b>Impact on ACT English Score</b>			
<b>High School</b>	<b>2009 ACT English</b>	<b>2010 ACT English</b>	<b>Change</b>
ZAPS School A	9.3	10.9	1.6
ZAPS School B	20.6	21.9	1.3
ZAPS School C	17.6	19.1	1.5
<b>Average</b>	<b>15.8</b>	<b>17.3</b>	<b>1.5</b>

<b>Impact on ACT Mathematics Score</b>			
<b>High School</b>	<b>2009 ACT Math</b>	<b>2010 ACT Math</b>	<b>Change</b>
ZAPS School A	11.5	13.8	2.3
ZAPS School B	21.8	22.8	1.0
ZAPS School C	19.0	19.7	0.7
<b>Average</b>	<b>17.4</b>	<b>18.8</b>	<b>1.4</b>

<b>Impact on ACT Reading Score</b>			
<b>High School</b>	<b>2009 ACT Reading</b>	<b>2010 ACT Reading</b>	<b>Change</b>
ZAPS School A	10.5	13.2	2.7
ZAPS School B	21.6	22.2	0.6
ZAPS School C	18.5	19.7	1.2
<b>Average</b>	<b>16.9</b>	<b>18.4</b>	<b>1.5</b>

<b>Impact on ACT Science Score</b>			
<b>High School</b>	<b>2009 ACT Science</b>	<b>2010 ACT Science</b>	<b>Change</b>
ZAPS School A	11.1	12.7	1.6
ZAPS School B	21.3	22.4	1.1
ZAPS School C	18.6	19.6	1.0
<b>Average</b>	<b>17.0</b>	<b>18.2</b>	<b>1.2</b>

\*The Control Group included 7 high schools that did not offer ZAPS training to the students or teachers.