

TABLE 6

## Evaluation of the Effectiveness of *Going Viral!*

To assess the effectiveness of the *Going Viral!* kit, we performed paired, two-tailed *t*-tests to determine if the average scores and student rankings on pre- and post-surveys statistically varied from one another. The knowledge assessment component of the survey had five questions, and the average total score (out of five) was used to determine if students' gained knowledge by completing the kit. The self-perceived knowledge assessment component had three questions where students ranked their understanding and abilities on different topics using a five-point Likert scale. The average ranking for each question was used to determine if students' perceived knowledge about each topic increased after completing the kit.

KNOWLEDGE ASSESSMENT						
	Mean Avg. Score Pre-Kit	Mean Avg. Score Post-Kit	Delta M (Post-Pre)	<i>t</i> score ( <i>df</i> = 29)	<i>p</i> value	Statistically significant?
Pre/Post Knowledge Assessment (n = 30)	3.57 (SD = 1.00)	4.23 (SD = 0.817)	+0.66	<i>t</i> (29) = 3.084	<i>p</i> = 0.0045	yes
SELF-PERCEIVED KNOWLEDGE ASSESSMENT						
	Mean Rank Pre-Kit (Ranked 1-5)	Mean Rank Post-Kit (Ranked 1-5)	Delta M (Post-Pre)	<i>t</i> statistic ( <i>df</i> =29)	<i>p</i> value	Statistically significant?
Perceived ability to identify differences between bacteria and viruses (n = 30)	3.00 (SD = 0.743)	4.43 (SD = 0.504)	+1.43	<i>t</i> (29) = 13.81	<i>p</i> < 0.0001	yes
Perceived understanding of the immune response (n = 30)	3.13 (SD = 1.106)	4.67 (SD = 0.479)	+1.54	<i>t</i> (29) = 7.818	<i>p</i> < 0.0001	yes
Perceived understanding of vaccines (n = 30)	4.267 (SD = 0.692)	4.667 (SD = 0.545)	+0.40	<i>t</i> (29) = 3.525	<i>p</i> = 0.0014	yes

### Legend:

Mean [M] = Average score or ranking

Standard Deviation [SD] = the average amount variation from the mean for each student within the population

Number of students [*n*] = total number of students who completed the survey

*t* statistic [*t*] = one component of a *t* test that helps determine if two groups are statistically different from one another, traditionally used for referencing a *t*-chart to determine significance

Degrees of freedom [*df*] = value used for determining statistical significance of *t* test results, calculated by taking (*n* - 1)

*p* value [*p*] = a component of a *t* test that shows us what proportion of the result is likely due to random chance. A smaller *p* value indicates a smaller likelihood that the result is due to chance. A *p* value of 0.05 or smaller is typically acceptable.

Delta M = change of mean, in this case, how the mean changed from the pre- to the post-survey