The increased independence and freedom of choice associated with late adolescence and the transition to college is often associated with poor eating habits, decreased physical activity, and weight gain. Effective intervention strategies are needed to encourage healthy eating habits and physical activity behaviors as overweight and obesity in adolescence significantly increases the risk of obesity in adulthood. Toward this goal, we have developed an interactive online curriculum entitled *The Science of Energy Balance*. The curriculum is science-based to promote a deeper understanding of the physiological impact of diet and physical activity choices, aligns with national and state health education standards and supports the Guidelines for Healthy Americans 2010. Additionally, it was designed around the constructs of the Theory of Planned Behavior. Consistent with this theory, mediators of behavioral intention, including attitude, social pressure and perceived behavioral control beliefs are targeted for improvement. The curriculum includes peer and professional video interviews developed to reinforce the benefits and importance of the concepts presented, while interactive activities and behavioral strategies are offered to improve diet and physical activity behaviors. Student participation in their own diet analysis and goal-setting activity reinforces the personal relevance of the curriculum and the individual responsibility inherent in behavioral choices. Results in the preliminary testing of the effectiveness of this curriculum support this intervention as an effective tool in reducing the risk of poor eating habits, reduced physical activity behaviors and weight gain during late adolescence and early adulthood.