



The Science Behind Click City: Tobacco

Why 5th grade?

There is a large jump in tobacco use (primarily e-cigarettes and cigarettes) between the 5th and 6th grade, and kids' intentions to use tobacco in the future and willingness to use it increase dramatically over this period. It is important to intervene in the 5th grade before kids first initiate tobacco use and prior to an increase in their intentions and willingness. The goal of this program is to decrease students' intentions and willingness to use tobacco, and to prevent or delay their use of tobacco.

Structure of the Program

Number of Recommended Lessons per Week. Scientists have shown that lessons spaced out over time (spaced practice) results in better retention than lessons that occur one after the other. Therefore, we designed and tested this program for lessons to be delivered two days a week, for four weeks.

The Importance of Experiential Learning. Programs that engage students and encourage interaction are more effective than programs in which students passively listen. We use both interactive instructional activities with game-like activities to keep students engaged.

Hearing Things More Than Once in Different Ways Is Important. Repetition is the key to retention. The program repeats key messages to maximize retention.

Advanced Organizers. Each activity begins with an introduction by a "buddy". The buddy provides an advanced organizer to the student, going over the key points that will be learned in that activity. These are summarized again at the end of each activity.

Targeting Specific Risk Factors. Researchers have shown that specific risk factors are related to children's early initiation of tobacco use (including e-cigarettes and cigarettes). We designed each activity to target one or two risk factors. Each activity was evaluated in the laboratory to assure that it changed the risk factor. Only activities that changed the targeted risk factor(s) were included in the program. The targeted risk factors are listed below:

Risk Factors Included in Click City: Tobacco

Children's Social Images of Smokers. If children have positive images of kids who smoke cigarettes or vape e-cigarettes (e.g., think they are cool, exciting, or popular), they are more likely to initiate smoking and/or vaping in the future. Click City: Tobacco changes children's social images of vapers and smokers from positive to negative.

Children's Normative Social Images of Smokers. If children think that their peers have positive images of kids who smoke or vape, they are more likely to try smoking or vaping. Kids think that if they smoke or vape, they will have these positive attributes. This program gives students feedback from their classmates to show that most kids have negative images of smokers and vapers.

Perception of Their Peer's Tobacco Use. Children often overestimate what their peers are doing, including smoking and vaping. Since they strive to be like their peers, the overestimation of

tobacco use can lead to tobacco initiation. Click City: Tobacco teaches kids that few of their peers actually use tobacco, even though they may think most kids use tobacco.

Risk of Addiction. Children often think that they can try smoking or vaping and not get addicted. Several activities show students that once they start using tobacco, it is very hard to avoid addiction, and once addicted it is difficult to quit.

Risk of Physical Consequences. Activities visually depict the physical consequences associated with using tobacco. Click City: Tobacco is designed to create negative feelings about tobacco use. If youth have more negative feelings about tobacco use, they are less likely to try vaping or smoking.

Cumulative Consequences. Activities show students that tobacco use can be harmful, even if they use it only one time. Further, every time that they use tobacco, the harmful consequences increase. Kids who understand the cumulative consequences of tobacco use are less likely to try smoking or vaping.

Risk Associated with Secondhand Smoke and Secondhand Vapor. Activities show the negative effects of secondhand smoke and secondhand vapor. Showing the effects of secondhand smoke and vapor on others can motivate students not to smoke or vape because they do not want to harm others.

Optimism Bias. Many students think that other kids will get addicted from trying a cigarette or an e-cigarette, but that they (themselves) will not. Click City: Tobacco shows kids that everyone, including them, can get addicted to tobacco.