

Safety Secrets 4 – Social Engineering

Goal: To teach students how social engineering works in our world today.

Time: 1 hour

Materials:

1. Flip Chart or Craft Paper
2. Pencils
3. Art Supplies on hand in the classroom.

Leader's Note:

1. Begin talking to students about the definition of Social Engineering.
2. Social Engineering is when a person can psychologically manipulate you into taking an action you don't want to take.
3. Social Engineering could also involve manipulating someone to tell a secret or give away confidential information.
4. Social Engineering can take place online.
 - a. For example, people scamming money from others via email or social media.

Leader's Note:

1. People who use Social Engineering often use cognitive biases to trick people.
2. Cognitive bias is an error in your thinking when processing information.
3. Below are biases we have when going through various situations.
 - a. Affect Heuristic – is your gut reaction.
 - i. If you have a dog in the home, the sight of dogs will make you happy.
 - ii. If you were bitten by a dog, the sight of dogs may terrify you.
 - iii. A person may know you love dogs and use this to lure you to their car or home.
 - b. The Decoy Effect – when you decide between two things and you discover a third option.
 - i. You have a choice between a small and medium drink. You were about to choose the small drink until you saw the large drink. You change your mind and choose the medium drink.
 - ii. In the example above, the decoy effect influences you to pay more for the medium drink instead of buying the small drink.

- c. The Ostrich Effect – when you want to have lots of information if it is good news. However, you avoid bad news
 - i. You don't want to open your report card because you did not study or do your homework.
 - ii. A sibling may threaten to tell your parents about the report card unless you give them something they want.
- d. Optimism Bias – always looking at the positive side of a situation but not considering the negative side.
 - i. You spend all your birthday gift money on a video game system (instead of saving some money) and expect your parents to give you money for the games. However, your parents won't give you money for the games.
 - ii. A person may use your optimism bias to get you to drink or eat a harmful substance because they know it's likely you won't consider the consequences.
- e. Regency Bias – thinking today's trends will continue in the future.
 - i. Your area has never had a tornado; however, the meteorologist says there will be a tornado tomorrow. You and your family will not prepare for the tornado because you have never seen one.
 - ii. Your peers may convince you not to do the reading assignment for class because it is known the teacher (who said they would give a pop quiz) never gives pop quizzes.

Leader's Note:

1. One tip to prevent use of cognitive bias to trick you is situational awareness, which is discussed in the first lesson.
 - a. If a stranger asks you for directions, look over your shoulder and around to ensure you are safe.
 - b. Before agreeing to help someone, ensure you are not isolating yourself.
 - c. Don't ever get into anyone's car.
 - d. Don't be afraid to leave quickly or call for help if you are uncomfortable.
 - e. Keep your distance if something seems odd.
2. Learn to Spot a Pretexting
 - a. Pretexting is when a situation is made up to engage a person so they will give away information or perform an action.
 - b. A person may pretend to be a police officer so you will answer their questions.
 - c. Tips to spot a pretexter are...

- i. Trust your gut when something may seem strange – A person says he is a cop but is not in uniform.
- ii. The details don't add up - A person is running really fast when everyone else is walking.
- iii. It's too good to be true – You get an email saying you just won \$1000.

Activity: Get Out!

1. Tell students they will do the activity called “Get Out”
2. Divide class into five equal groups.
3. Give each group two big pieces of flip chart or craft paper, pencils, markers, and regular sized paper.
4. Assign each group one of the five cognitive biases discussed in this lesson.
5. Then Assign each group a cognitive bias to “Get out” of. (this should be different from the cognitive biases previous assigned to them.)
 - a. For example, Group 1 is assigned Affect Heuristic and should “Get out” of the Regency Bias
6. Have each group create a scenario where they use their assigned cognitive bias to social engineer another group.
 - a. If group 1 is assigned the Affect Heuristic, then their scenario may be...
Shaun knows that his older sister, Lisa, will not leave the house without makeup. While she is sleeping, he takes her makeup and hides it. Lisa wakes up and can't find her makeup. She asks Shaun if he knows where it is. Shaun admits that he hid the makeup and won't return it until Lisa gives him \$10. How will Lisa “get out” of this dilemma.
7. Group 1 will write this scenario on a big piece of flip chart or craft paper and tape it on the wall.
8. The group assigned to “get out” of the Affect Heuristic will use the big paper given to them to write and draw their plan to “get out” the situation.
9. If Group 5 is assigned to “Get Out” of the Affect Heuristic bias then they should write and draw the solution below (below is an example) ...
 - i. *Lisa used situational awareness to “Get out” of this problem. She knew that her brother loves to hide things either in his book bag or under his bed. Before agreeing to give him money, she looked in both places. She found her makeup under his bed.*
10. By the end, all groups will ...
 - a. use one big piece of paper to create their social engineering scenario using their assigned cognitive bias.
 - b. use the other paper to write and draw their “get out” plan.
11. Have each group present their “get out” plan to the group.

Debrief the Activity: Ask the students the following...

1. Have you ever been a target for social engineering? When? What did you do?
2. Knowing what you know now, would you change how you reacted when being social engineered in the past?
3. Can you think of ways to encourage your family or friends to be aware of cognitive bias?