❏ 1. Obtain a correct password (1 of 6)

❏ 2. Obtain a correct password (2 of 6)

❏ 3. Obtain a correct password (3 of 6)

❏ 4. Explain to an instructor how you were able to obtain the three passwords. Did the activity give you any ideas on what *not* to do in order to keep your passwords safe?

Option 1 - Robots

❏ 5. Develop a clear plan with at least three objectives on how you will improve your robots

❏ 6. Objective 1

❏ 7. Objective 2

❏ 8. Objective 3

Option 2 - Rolling Key Cipher

❏ 9. Using two microbits, write a program that simulates a garage door and garage door receiver

❏ 10. Upgrade your programs to use a simple rolling key cipher - increment the key by 1

❏ 11. Upgrade the program to use a more advanced rolling key cipher - use randomization if possible

❏ 12. Explain to an instructor what a rolling key cipher does, its advantages and disadvantages, and give two real world examples besides garage doors where rolling key ciphers could be, or are, used.

Option 3 - Continue Cracking Passwords

❏ 13. Obtain a correct password (4 of 6)

❏ 14. Obtain a correct password (5 of 6)

❏ 15. Obtain a correct password (6 of 6)

❏ 16. Explain to an instructor which of the passwords you found most difficult to crack, and explain what made it so difficult. Describe how you can use what you've learned to secure your own sensitive information.