DIGITAL LOGIC

Engage

Scenario

The Bank of Rivendell has received a heist demand! They are being hacked and if they do not hand over 600 million gold coins and a second breakfast the Shire will be turned into swampland and no longer habitable. The bank manager has determined where the hack is and desperately needs your assistance with thwarting the hackers by using your hacking skills…..Can you out-hack the hackers????

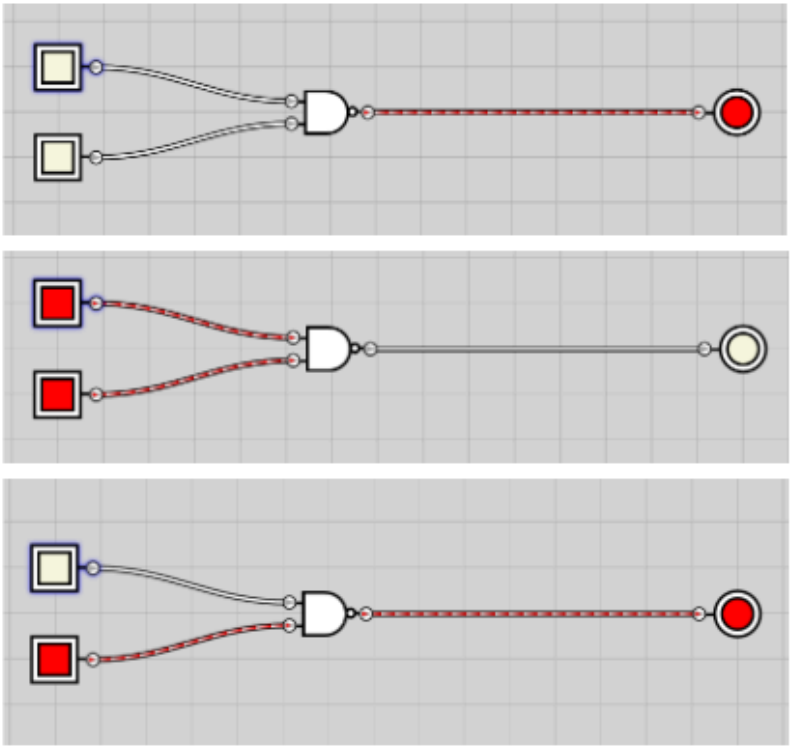
Binary Code that was found

1010 0010 1100

Truth Table

A	B	C
0	0	1
0	1	1
1	0	1
1	1	0

Images



Complete the Notice and Wonder chart as we review the clues left behind by the Hackers.

Notice	Wonder

Discuss in your groups and add to your Notice and Wonder charts. We will discuss as a whole class also.

Exploration

1. Notes from “Introduction to Digital Logic Circuits” video

2. Additional notes from your partner discussion using the guiding questions

3. Notes from “Digital Design Careers” video

4. Notes from “The Hour of Code” introduction video

5. Insert a screenshot or a sketch of your character you created here from your dance party.

6. Insert a screenshot or sketch of your completed code from Dance Party here.

7. How will what you've learned in this section help us defeat the hackers?

Explain

1. Notes from "Moore's Law" video

2. Agreed upon DQB questions (4-6)

3. Research to answer the DQB questions (include sources)

4. Notes from class discussion

5. Insert screenshot or sketch from Dance Party exploration

6. How will what you've learned in this section help us defeat the hackers?

Elaborate

1. Take notes as we review the OpenROAD resource on the Chip Industry and the future of our workforce and economy.

2. As you work in small groups, review this second document to find pertinent information (or take aways). Jot it down here and also on your group's chart paper.

3. Watch each of the four videos listed below and take notes below
    a. Careers in Electronic Engineering

    b. Electronic Engineering Subfields

    c. Sound Engineering Technician

    d. Digital Electronics Jobs

4. Use the digital choice board and complete one activity. Specify which option you chose here.

5. How will what you've learned in this section help us defeat the hackers?

Evaluate

1. Use the Informational Technology Careers packet to evaluate your choice of IT career.

2. Insert a screenshot or sketch of your final project from the Dance Party.

a. Provide feedback on your own experience here:

b. Provide feedback on your classmates here:

3. Use this Truth Table and logic.ly to create a logic gate circuit that satisfies the Truth Table (hint: use the truth table button to see if they match). Once you have the correct circuit, insert a screenshot or sketch of it here.

TruthTable

In 1	In 2	In 3	Output
0	0	0	1
0	0	1	0
0	1	0	1
0	1	1	1
1	0	0	1
1	0	1	1
1	1	0	1
1	1	1	0