

These activities and questions have been designed for you to have engaging discussions with your student about the STEM jobs they are encountering in their Learning Blade schoolwork. Here is an overview of what is included in this.



Table Talk: These are questions you can ask your student without having any background knowledge in STEM. These will be easy conversation starters.



Dig Deeper: These are questions with suggested links to learn more about different STEM careers to explore with your student.



Home Lab: This is an easy, hands-on activity to do with your STEM student.

What Has Your Student Been Learning?

In this mission, your student's goal is to complete their work on a robotics project and assist their school in recovering from being hacked by a rival school. Along the journey students will need to determine, what tools (**social media, mobile applications, cyber security, cloud computing, robot development**) and teammates/experts (**information security analyst, software engineer, web developer, data scientist, UI/UX designer**) are needed to assist in preventing future hacks and recovering their lost data. It is up to the student to determine what help is required based on the clues provided.

TABLE TALK

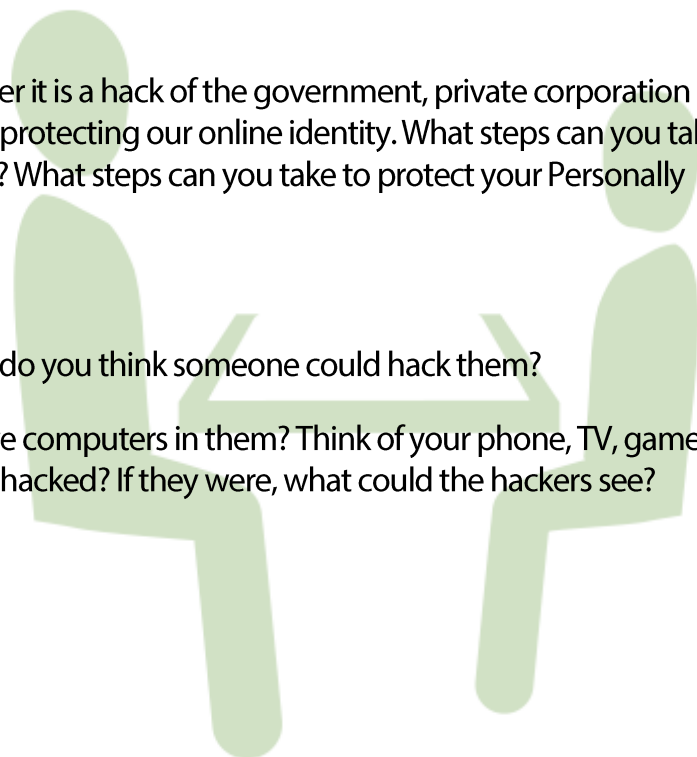
Starter Question:

Computer Hacks are in the news all the time. Whether it is a hack of the government, private corporation or an individual citizen, we should all learn more about protecting our online identity. What steps can you take to keep your computers/phones from being hacked? What steps can you take to protect your Personally Identifiable Information?

Helpful Hint:

What electronics in your home can be hacked? How do you think someone could hack them?

How many different items in your home actually have computers in them? Think of your phone, TV, game players or cameras. Could these items potentially be hacked? If they were, what could the hackers see?



DIG DEEPER

Resources for More Information:

In this section, we provide a series of links and associated questions to DIG DEEPER on individual careers addressed in the Hack Attack Mission. Feel free to explore these with your STEM student as you model curiosity and lifelong learning.

Are there any **computer science** professionals in your community? Off the top of your head, what do you think a computer scientist does and what materials do they work with? Where are computer science professionals needed in your community? Below is a link on inspiring future computer scientists.

<https://code.org/educate/resources/inspire>

Have you ever had to update the software on a computer or phone? Software includes your utilities, operation systems, and more. **Software engineers** make sure your technology runs the way it should. Think of software you have used such as the software on a computer or phone. What glitches or problems did the software have? What did the software do well? Software engineers work hard to make sure your software is as efficient as possible. Learn more about software engineer careers by exploring the link below.

<http://www.computerscienceonline.org/software-engineering/>

What do you think **Information Technology (IT)** really means? Information technology is used in many different areas such as investigation, research, laboratories, public health and more. IT includes the use of computers and communication to transform data into information for others to use. Have you ever heard of an IT department at school, at a business, etc.? What do you think IT teams do? Learn more about what IT careers do at the link below.

<http://www.computerscienceonline.org/information-technology/>

What changes have occurred in your life time to how we keep, store and record information? Have your student try to imagine they are a detective and ask them to describe how they could stop a hacker from stealing your money from your bank. Learn about how **information security analysts** work to keep your information safe!

<https://www.bls.gov/ooh/computer-and-information-technology/information-security-analysts.htm#tab-2>

HOME LAB

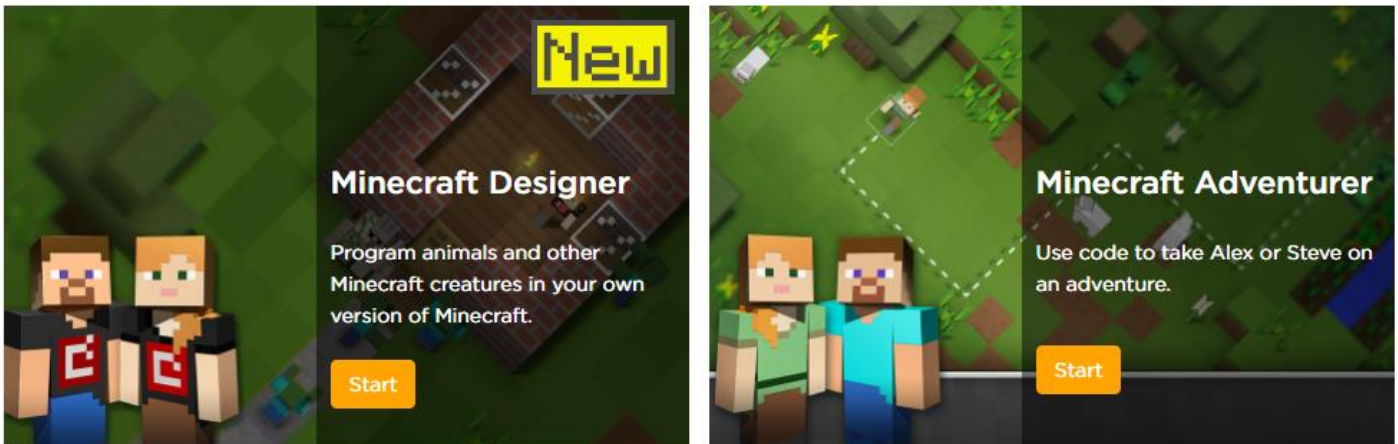
In the Hack Attack Mission, students learn about computer coding. Hour of Code and Minecraft have teamed up to have students build their own Minecraft world while they learn to code. Experiment with coding by clicking this link <https://code.org/api/hour/begin/mc> to design your own Minecraft world. We suggest both parent and student go through the lessons. Show them you are interested by taking the time to learn to code as well.

Students can watch a tutorial then begin designing their own Minecraft world.



Minecraft Hour of Code Tutorials

Many languages | Modern browsers and tablets | Grades 2+



Don't have Internet? Download the offline version of Minecraft Adventurer.





#STEM4Parents Hack Attack

Dear Parent/Guardian,

I kindly ask that you fill out and sign this piece of paper so I can provide your student with a completed grade for this #STEM4Parents homework assignment.

I discussed with _____ the Hack Attack Mission in Learning Blade.
(student name)

Student Signature



Parent/Guardian Name (print)

Date

Parent/Guardian Signature