

Overview

In this activity, learners will be challenged to solve missions in *wizard-like* style! Through a series of hands-on activities, learners will gain a better understanding of coding vocabulary and concepts that can then be transferred to digitally coded creations.

What You'll Need

- Book – *If I Were a Wizard* (by: Paul C Hamilton)
- Mission Cards (see below)
- 1 Envelope for each set of mission cards
- Marker
- Chart Paper
- Mission Bag (brown paper bag – 1 per small group with the following items inside: Four ½ pieces of white paper, 1 paperclip, 1 pencil, 1 piece of looseleaf, 5 blank stickers/labels, 1 marker, 1 crayon - slightly broken)
- Timer – iPad or digital clock
- Laptops or iPads (optional)

Instructions

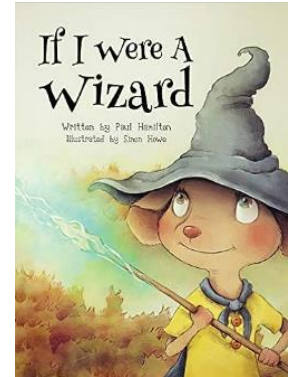
1. **WORD DEFINITIONS:** Gather together. Using chart paper, write out the following words (pictured here) and have learners share what they believe the words to mean (whether correct or not) to determine what learners already know. *There will be time to return to this chart and adjust meanings based on new knowledge. *
2. **WIZARD-WONDERFUL MISSIONS:** Explain that all learners will be working in small groups to complete 8 missions. Feel free to go over any concepts before beginning the mission time (examples: cardinal directions, patterns, sorting, review of hallway etiquette, etc.). Divide the class into small groups of 3-5 learners. Using the printable mission cards below, pass each group their mission envelope and their mission bag, which includes all needed materials to complete their tasks. Explain that students will begin with Mission #1 and must complete it before moving on to #2, etc. Set the timer for 20 minutes, and as a whole group, countdown from “3, 2, 1, GO!” (While groups work, play Mission Impossible music to set the atmosphere:

Word Definitions:

- | | |
|-------------|---------------|
| - Loop | - Conditional |
| - Sequence | - Function |
| - Algorithm | - Debugging |
| - Variable | - Pattern |

<https://www.youtube.com/watch?v=ViYlCt9S1Y4>. Once time is over, gather groups together to discuss how many missions they were able to complete. Encourage students to discuss challenges and successes. Have any groups willing to share their DANCE from Mission #6, as well. Discuss: *“What did these missions have in common?”*

3. **READ ALOUD – If I Were a Wizard:** Before reading, ask: Discuss: *“What is a wizard? What do they do? What famous wizards do you know of? If you could be magical, what would you do?”* Read the story until page 22. After reading, ask learners if their previous missions reminded them of similar situations in the story. Have them match them up. Then, return to the chart from earlier. Can learners begin to match up their missions with the vocabulary? Have learners return to their small groups and on the back of the mission cards, write the vocabulary word that best describes the actions. Read through pages 23-27 together, and have groups see how they did. Adjust the definitions on the chart paper, as well.



Answer Key:

Mission #1 – Loop
Mission #2 – Sequence
Mission #3 – Algorithm
Mission #4 – Variable
Mission #5 – Conditional
Mission #6 – Function
Mission #7 – Debugging
Mission #8 - Pattern

4. **REFLECTION & NEXT STEPS:** Have students reflect on the missions and their teamwork by asking them to think and respond to the following questions: *“Were there any words that you have learned for the first time today? Did the missions feel like we using coding concepts? How did the activity today help you grow in your knowledge of coding?”*
5. **CAREER CONNECTIONS:** Discuss: *“Did you know that real wizards do exist? Doing what we just did today? They are not called wizards – but computer programmers.”* Discuss with learners how these wizards must write and give specific algorithms, or instructions, for computers to do what we want them to do. A computer does not have a brain – they use yours! Using a class set of laptops or iPads, give learners an opportunity to put into practice all that they learned today by writing their own code. (Possible sites: code.org or Scratch).

6. **SHARE:** Feel free to send photos of your class completing this learning activity to us via Twitter: @NBCOE or email: COE@gnb.ca.

Digital Literacy Framework



Computational Thinking: Students break down problems into individual components, create abstract and relevant representations, look for patterns, and develop algorithms to better understand, manage, and solve complex problems in a variety of educational contexts, as well as everyday life.

Cross-Curricular Outcomes

Personal Wellness	Strand: Career Connected Learning – Big Idea: Experiencing Potential Career Pathways
English Language Arts	Strand: Interactions – Big Idea: Expression Strand: Interactions – Big Idea: Exchanges Strand: Reading – Big Idea: Reading Comprehension Strand: Representations – Big Idea: Composition

Acknowledgements

1. Youtube - Mission Impossible Theme Song 30 Min Long:
<https://www.youtube.com/watch?v=ViYlCt9S1Y4>, 30 Minutes of Music, 2021.

Please print and cut out. Place 1 set into an envelope to give to each small group of learners to complete.

MISSION #1:

Running around as a wizard can get very hot! Using the 4 half pieces of white paper in your mission bag, create 4 paper fans to help cool you off. Once completed, place in your bag and move on to Mission #2. Good luck!



MISSION #2:



Out of your bag, have 1 member of the group hold onto the paperclip. Now, do the following actions together: **1)** walk to the nearest water fountain and put the paperclip near it **2)** tiptoe to the Smart Board **3)** hop to the teacher's desk **4)** "slow-mo" walk to each of your bookbags **5)** backwards crab walk to the nearest desk of the group.

NOW – **RETRACE YOUR STEPS** (with all of the actions backwards) AND RETRIEVE THE PAPERCLIP!

MISSION #3:

PRACTICE FIRE ALARM! Using the pencil and looseleaf in your bag, write down the FASTEST and exact directions (north, east, south, west, numbers of tiles, etc.) from the door of your classroom to the nearest fire exit.



MISSION #4:

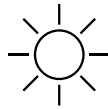
Using each member's outdoor shoes, organize and group similar kinds of shoes together and create labels with the stickers and marker in your bag. Place the labels on your shoes in the hallway neatly. (Examples: sneakers, winter boots, rubber boots, sandals, crocs, etc.)





MISSION #5:

You may run 1 lap around your playground **IF** the weather is sunny and warm. (If it's not sunny and warm, you must stand still like statues for 30 seconds dreaming of the sunshine and warmer temperatures.)



MISSION #6:

Every member must select 1 dance move. Put each move together to create a short "mission" dance that every member does in sync. (Use the music playing to inspire you!)



MISSION #7:

Find the broken crayon in your bag. Can it be used again? Think of a way to fix it using items around the classroom.



MISSION #8:

Patterns are everywhere! Find one in your classroom and write it down here with the pencil in your bag:



