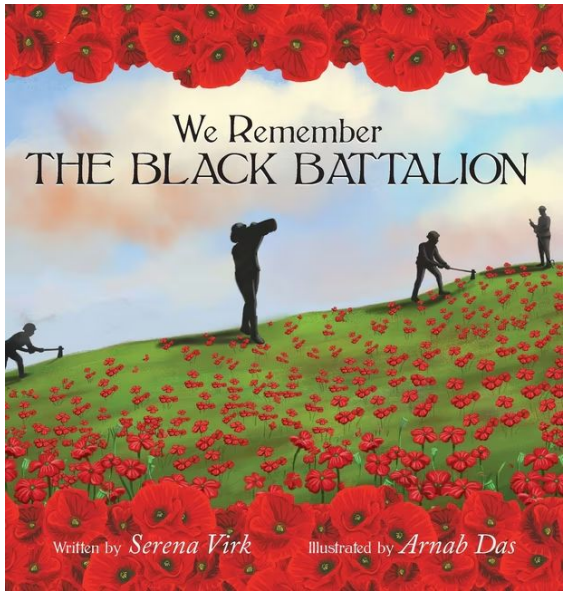
This is a comprehensive cross-curricular unit for Grades 1-3 using Serena Virk's *We Remember The Black Battalion* picture book. Students will have the opportunity to practise their coding skills, and develop their reading comprehension and oral language skills while learning about the importance of the No. 2 Black Construction Battalion during WWI. This unit addresses expectations in the Ontario Science, Math and Language curricula. Learning Activity 1 focuses on unplugged coding while Learning Activity 2 involves coding using an Ozobot.



Science Curriculum Links for Grades 1-3:

	Grade 1	Grade 2	Grade 3
Science: A. STEM Skills and Connections A2. Coding and Emerging Technologies	**A2.1** Write and execute code in investigations and when modelling concepts, with a focus on creating clear and precise instructions for simple algorithms	**A2.1** Write and execute code in investigations and when modelling concepts, with a focus on decomposing problems into smaller steps	**A2.1** Write and execute code in investigations and when modelling concepts, with a focus on testing, debugging, and refining programs

Science Learning Goals for Grades 1-3:

	Grade 1	Grade 2	Grade 3
Learning Goal	I can write and perform clear and precise code for simple events.	I can write and perform code In order to break down events into smaller steps.	I can write and perform code in order to test, debug and improve code efficiency.

Math Curriculum Links for Grades 1-3:

	Grade 1	Grade 2	Grade 3
Math: C. Algebra C3. Coding	**C3.1** Solve problems and create computational representations of mathematical situations by writing and executing code, including code that involves sequential events	**C3.1** Solve problems and create computational representations of mathematical situations by writing and executing code, including code that involves sequential and concurrent events	**C3.1** Solve problems and create computational representations of mathematical situations by writing and executing code, including code that involves sequential, concurrent, and repeating events
Math: E. Spatial Sense E1. Geometric and Spatial Reasoning	**E1.4** Describe the relative locations of objects or people, using positional language E1.5 give and follow directions for moving from one location to another	**E1.5** Describe the relative positions of several objects and the movements needed to get from one object to another	**E1.4** Give and follow multi step instructions involving movement from one location to another, including distances and half- and quarter-turns

Math Learning Goals for Grades 1-3:

	Grade 1	Grade 2	Grade 3
Learning Goals	I can write and perform code for an event. I can use movement words (up, down, left, right) to describe moving from one place to another. I can give and follow directions to move from one location to another.	I can write and perform code for two events happening at the same time. I can describe the steps needed to get from one object to another.	I can write and perform code for two events happening at the same time and show steps that repeat in my code. I can use many steps to describe movement from one locations to another using half and quarter-turns.

Language Curriculum Links for Grades 1-3:

	Grade 1	Grade 2	Grade 3
Language: B. Foundations of Language B1. Oral and Non-Verbal Communication	**B1.2** Identify and use listening strategies before, during, and after listening to comprehend information communicated orally and non-verbally **B1.3** Identify the purpose and audience for speaking in formal and informal contexts, and use appropriate speaking strategies, including taking turns, understanding when to speak, and knowing how much to say, to communicate clearly and coherently **B1.5** Use appropriate word choice, including new vocabulary, grammar, and cohesive phrases and sentences when speaking and communicating ideas	**B1.2** Identify and use a variety of listening strategies before, during, and after listening to comprehend information communicated orally and non-verbally, and to recognize when a message is difficult to understand **B1.3** Identify the purpose and audience for speaking in formal and informal contexts, and use appropriate speaking strategies, including taking turns and staying on topic, to communicate meaning clearly and coherently **B1.5** Use appropriate word choice, including new vocabulary, grammar, and cohesive sentences when speaking and communicating ideas, to support audience comprehension	**B1.2** Select and use a variety of listening strategies before, during, and after listening to comprehend information communicated orally and non-verbally, recognize when a message is difficult to understand, and develop an appropriate response **B1.3** Identify the purpose and audience for speaking in formal and informal contexts, and use appropriate speaking strategies, including establishing a rapport with the audience, to communicate clearly and coherently **B1.5** Use appropriate word choice, including new vocabulary, grammar, and cohesive sentences when speaking and communicating ideas in various contexts, to support audience comprehension
Language: C. Comprehension: Understanding and Responding to Texts C2. Comprehension Strategies	**C2.6** Identify important information in a simple text, including the main idea	**C2.6** Identify the main idea in a simple text, and relate important details in sequence	**C2.6** Identify the main idea in a simple text, and relate important details in sequence

Language Learning Goals for Grades 1-3:

	Grade 1	Grade 2	Grade 3
Learning Goals	I can listen to understand information.	I can listen to understand information and know when the information is difficult to understand.	I can listen to understand information, know when the information is difficult to understand and ask questions to clarify my understanding.
	I can speak clearly for others to understand.	I can speak clearly for others to understand.	I can speak clearly for others to understand and connect with the audience.
	I can use words from the story when sharing my ideas.	I can use words from the story when sharing my ideas to make sure the audience understands.	I can use words from the story when sharing my ideas to make sure the audience understands.
	I can retell important parts in a simple text, including the main idea.	I can identify the main idea of a simple text by retelling important details in order.	I can identify the main idea of a simple text by retelling important details in order.

Learning Activity 1

This first learning activity for Grades 1-3 using Serena Virk's *We Remember The Black Battalion* picture book introduces students to basic unplugged coding skills. Students will demonstrate their comprehension of the story by retelling the main events (provided in the grid) of the No. 2 Black Construction Battalion history, using arrows to code. Additional events have been included in the grid for grades two and three.

This learning activity can provide an excellent opportunity for you to gain an assessment of your student's learning in Math (Algebra and Spatial Sense), Science (STEM), Language (Reading Comprehension).

For this lesson activity, you have the option to assign your students this task by paper and pencil, or to your Google Classroom using the following links: Grade 1, Grade 2, Grade 3

Photo References:

No. 2 Black Construction Battalion arrive overseas

Soldiers cutting wood

Soldiers transporting cut wood to mill

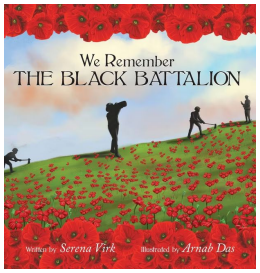
Soldiers transporting milled lumber for various uses

Milled lumber used for trenches

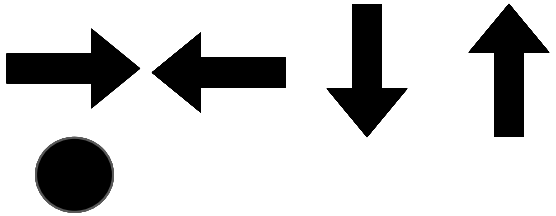
Milled lumber used for railway ties

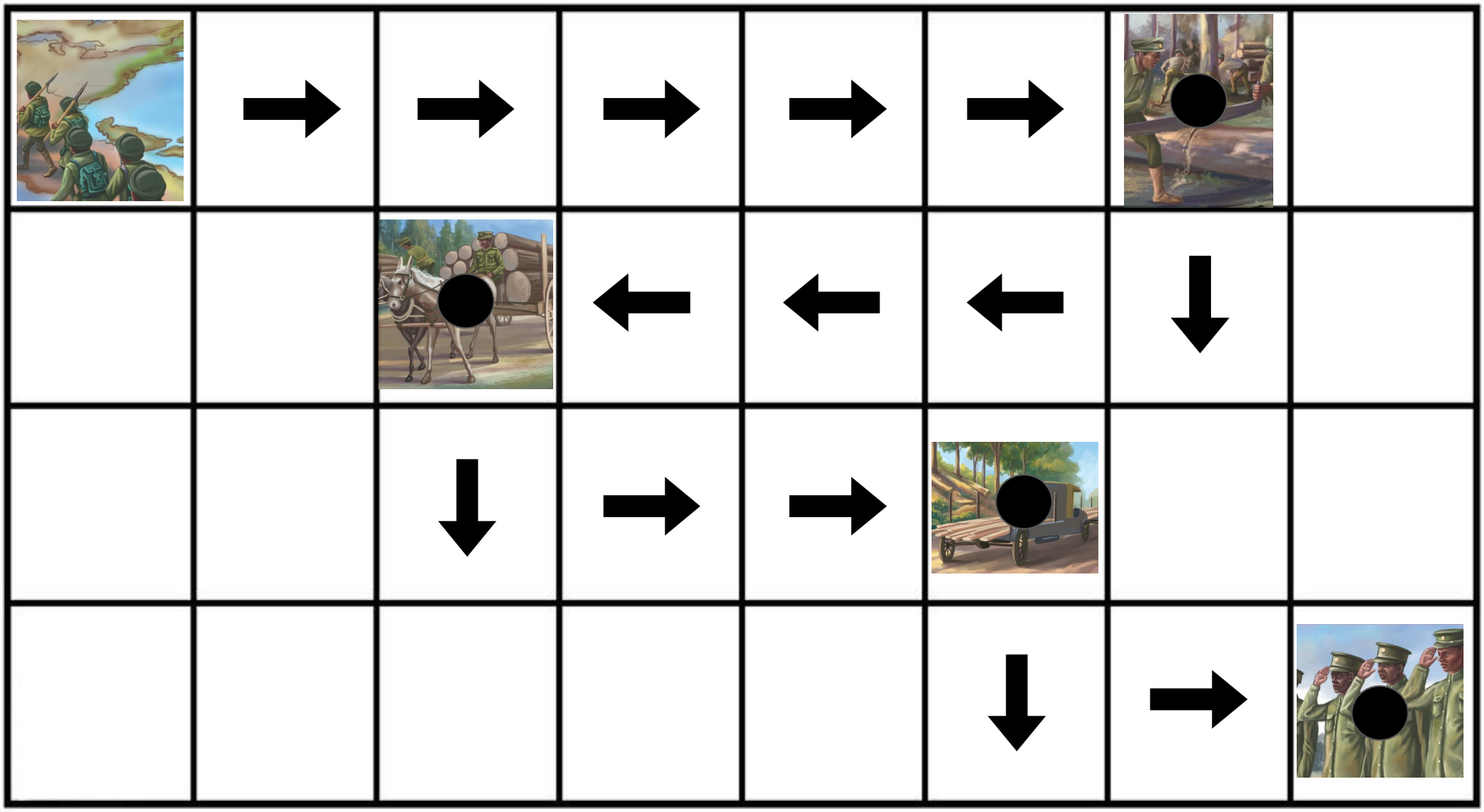
No. 2 Black Construction Battalion proud to serve their country

Sample Code for Teacher Reference



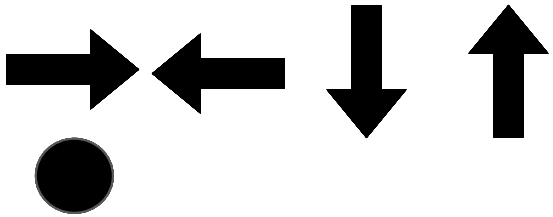
Once members of the No. 2 Black Battalion were allowed to enlist to serve during WWI, they worked many jobs. Code the path to show that once they arrived, they cut down the trees, milled the logs, and drove the lumber to be used for trenches, walkways and railway ties. We remember them for their pride and courage.





Sample Code for Teacher Reference

No. 2 Black Battalion's path



5 →	●	↓	3 ←	●	↓	2 →	●	↓	→
●									

To be projected during lesson.

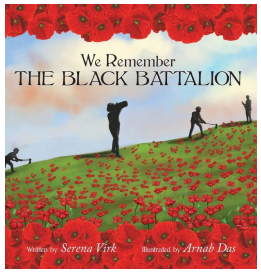
LEARNING ACTIVITY

Reread or listen to *We Remember the Black Battalion* again.

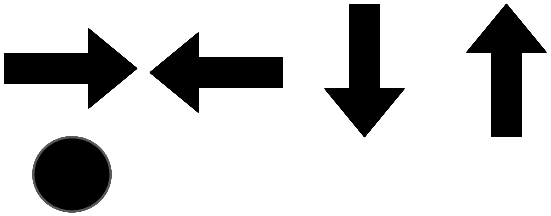
Retell the story in sequence using the photos provided in the grid by drawing arrows to show the direction of the No. 2 Black Construction Battalion's journey.

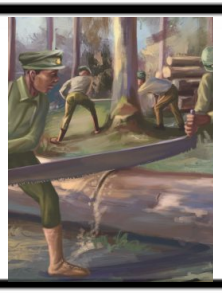
Then, use your arrows (direction) to write out your code.

Grade 1

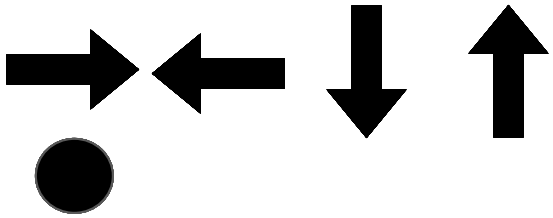


Once members of the No. 2 Black Battalion were allowed to enlist to serve during WWI, they worked many jobs. Code the path to show that once they arrived, they cut down the trees, milled the logs, and drove the lumber to be used for trenches, walkways and railway ties. We remember them for their pride and courage.

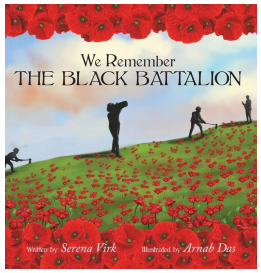




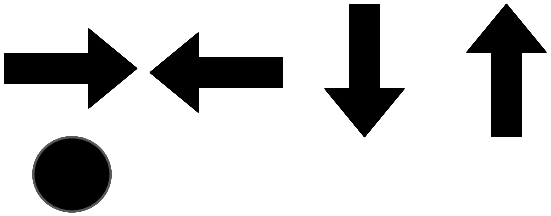
No. 2 Black Battalion's path

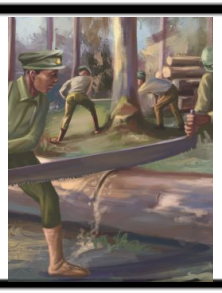


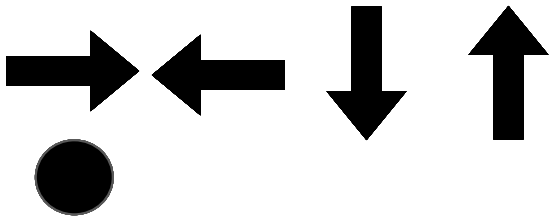
Grade 2



Once members of the No. 2 Black Battalion were allowed to enlist to serve during WWI, they worked many jobs. Code one path to show that once they arrived, they cut down the trees, and drove the milled lumber to be used for trenches. Code a second path to show that once they arrived, they cut down the trees, and drove the milled lumber to be used for railway ties. We remember them for their pride and courage.



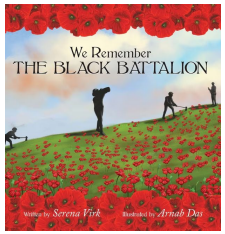




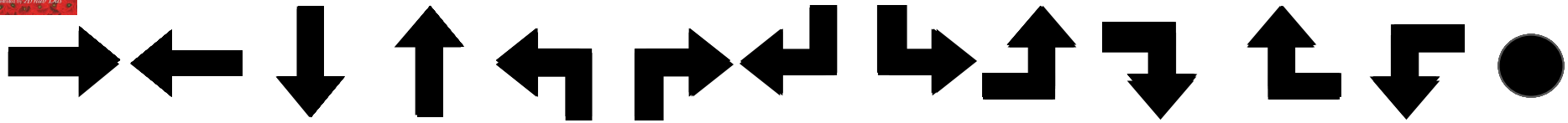
No. 2 Black Battalion's path for trenches:

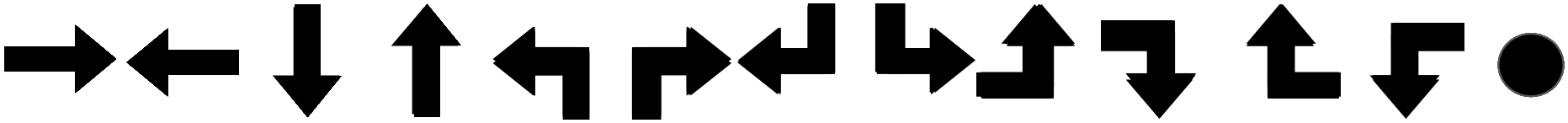
No. 2 Black Battalion's path for railway ties:

Grade 3



Once members of the No. 2 Black Battalion were allowed to enlist to serve during WWI, they worked many jobs. Code one path to show that once they arrived, they cut down the trees, and drove the milled lumber to be used for trenches. Code a second path to show that once they arrived, they cut down the trees, and drove the milled lumber to be used for railway ties. We remember them for their pride and courage. Note: When writing out your code, remember to include at least one loop. (A loop allows the same action to be repeated).





No. 2 Black Battalion's path for trenches:

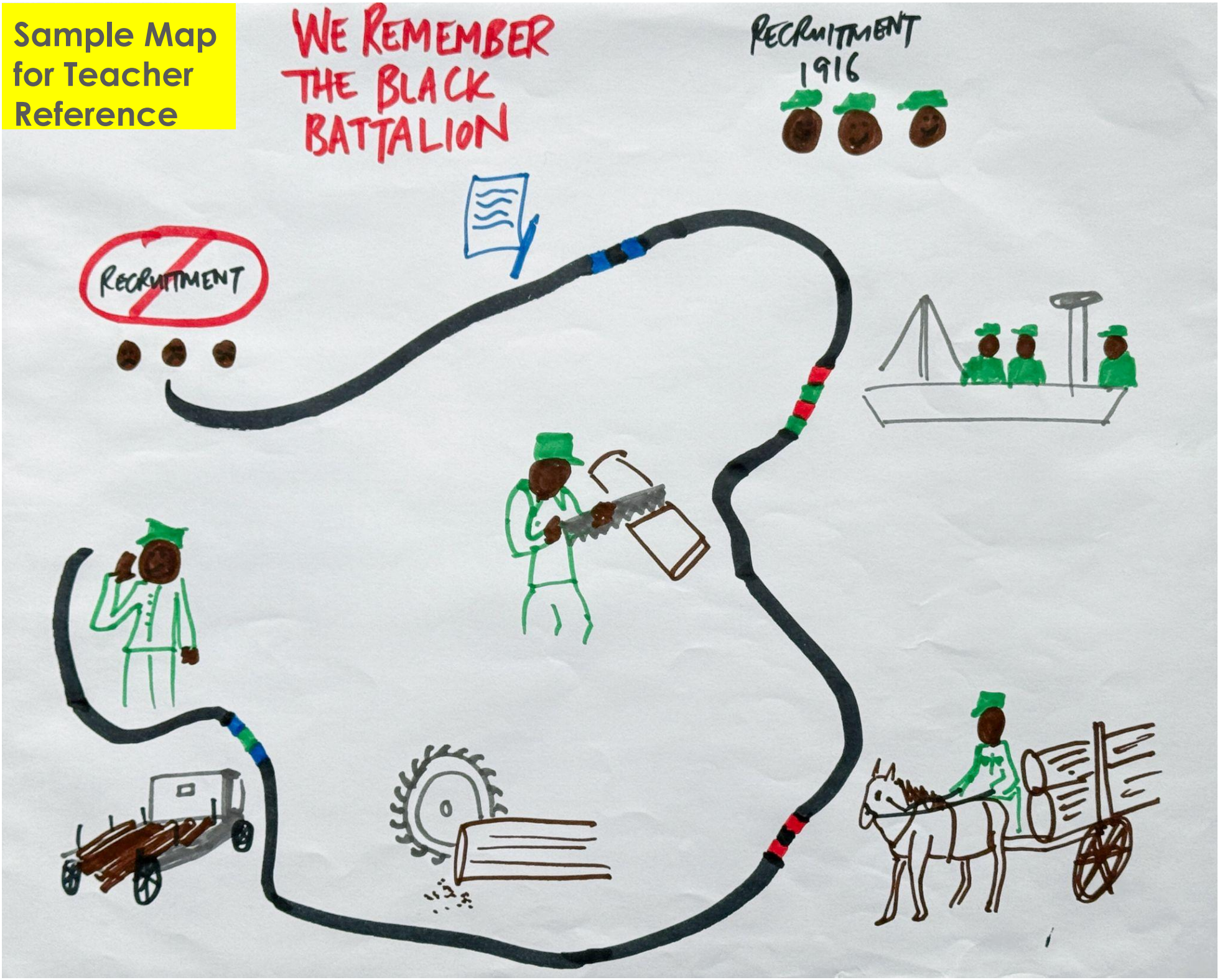
No. 2 Black Battalion's path for railway ties:

Learning Activity 2

This second learning activity for Grades 1-3 using Serena Virk's *We Remember The Black Battalion* picture book reinforces the events of the story using STEAM skills to creatively engage and deepen your student's comprehension. Students will retell the story by drawing pictures to represent the main events and then create and code a path for an Ozobot robot to follow as they orally recall the contributions of the No. 2 Black Construction Battalion. A sample map has been included to show the main events a student might include: recruitment denied, protesting and petitioning, recruitment to form the No.2 Black Construction Battalion, travelling overseas, cutting wood, transporting logs to a mill, milling wood into lumber, transporting lumber to be used for trenches, walkways and railway ties, and finally pride in serving their country.

This learning activity can provide an excellent opportunity for you to gain an assessment of your student's learning in Math (Algebra and Spatial Sense), Science (STEM), Language (Reading Comprehension, and Oral and Non-Verbal Communication).

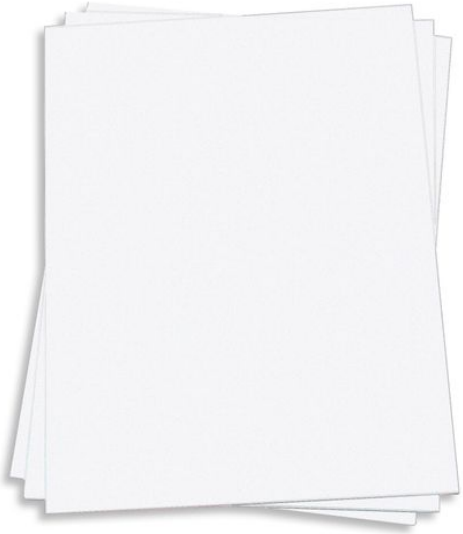
Sample Map for Teacher Reference

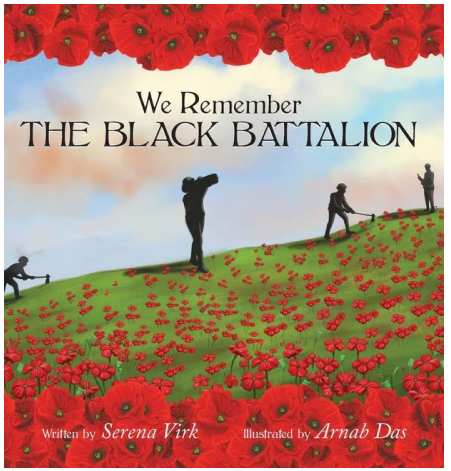


CODING

Retell of *We Remember the Black Battalion* using Ozobot

WHAT YOU'LL NEED





OZOBOT CODES

Speed

Short Super Slow	Slow	Cruise	Fast	Turbo	Nitro Boost
R G B	R BK R	G BK G	B BK B	B G B	B G R

Direction & Special Moves

Left at Intersection	Straight at Intersection	Right at Intersection	Line Switch Left	Line Switch Straight	Line Switch Right
G BK R	B BK R	B R G	G R G	G B G	R G R

U-Turn	U-Turn (line end)	Tornado	Zigzag	Spin	Backwalk
B R B	B R	R G R G	B BK G R	G R G R	R G BK B

Timers

Pause (3 sec.)	Timer on (30 sec. to stop)	Timer off
R B R	R BK B G	G B BK R

Wins/Exits

Win/Exit (Play Again)	Win/Exit (Game Over)
G B	G R

Counters

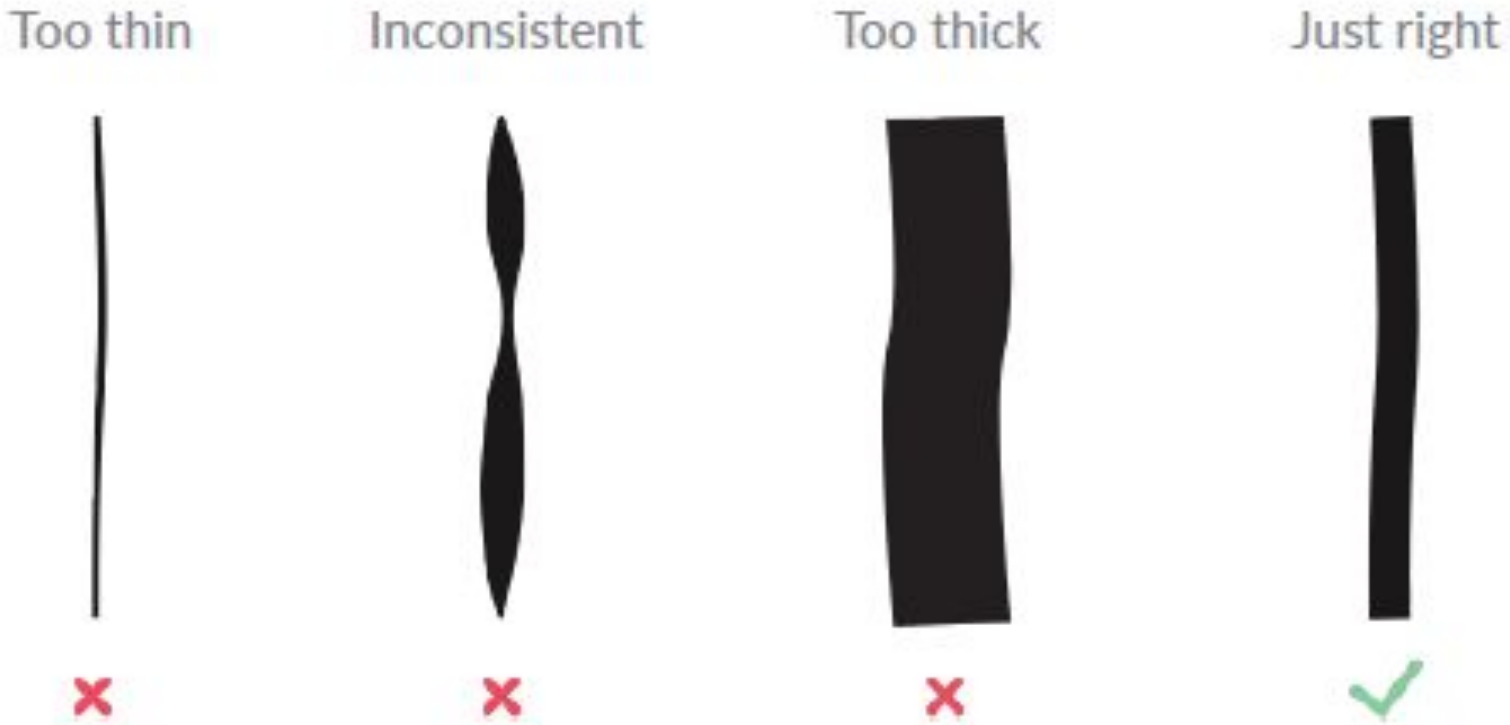
See reverse for definitions

Enable X-ing Counter	Enable Turn Counter	Enable Path Color Counter	Enable Point Counter	Point +1	Point -1
G R B G	R B G B	R G B R	R B R G	R B G	G B R

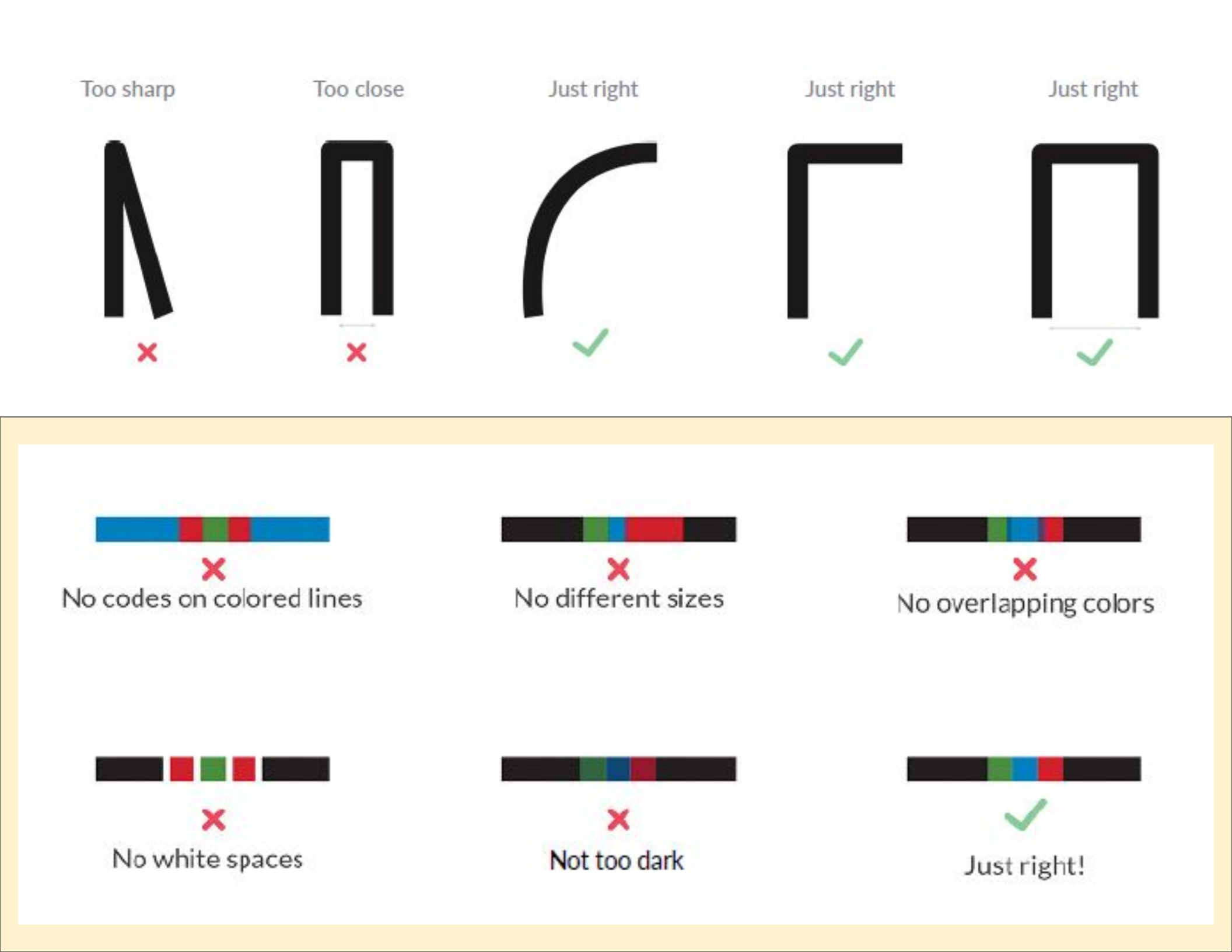
https://files.ozobot.com/stem-education/ozobot-color-codes.pdf

TIPS FOR OZOBOT

- The path MUST be done with black marker.
- Use the thick part of your marker to create the path.
- No gaps in the path.
- The code cannot be on a bend, it must be on a straight line



Too sharp
Too close
Just right
Just right
Just right


No codes on colored lines
No different sizes
No overlapping colors
No white spaces
Not too dark
Just right!

To be projected during lesson.

LEARNING ACTIVITY

Reread or listen to *We Remember the Black Battalion* again.

Retell the story in as much detail as possible by drawing a map of the main events. Imagine you are telling the story to someone who has never heard the story before.

Connect the main events on your map using a black path that Ozobot will travel to get from one event to the next. Embed some fun codes as Ozobot travels the path.

Share your work orally by telling the story of *We Remember the Black Battalion*. As Ozobot travels to each event on your path, share about the No. 2 Black Construction Battalion's important contributions to WWI.