

Incredible Iditarod Rescue!

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Discipline/Subject: STEAM, Social Studies, Math

Topic: People and Places of the Iditarod

Grade Level: Grades 3-8

Resources/References/Materials Teacher Needs:

- Incredible Iditarod Rescue Escape Challenge Packet
- Wooden Box with Divided Compartments
- Manilla Envelopes (Alternate)
- Five Programmable Locks
- Hasp with Colored Washers for Locks (Alternate)
- Black Light Marker
- Black Light Flashlight
- Online timer (<https://www.online-stopwatch.com/classroom-timers/>)

Lesson Summary:

Students will use facts about mushers, checkpoints, and Iditarod rules to help solve a series of challenges to escape. Students will use problem solving and critical thinking skills to solve five challenges. Students will use teamwork and work together to solve the challenges and move throughout the escape box.

Standards Addressed: (Local, State, or National)

SS.CV.1.3

Describe ways in which interactions among families, workplaces, voluntary organizations, and government benefit communities.

SS.CV.4.3

Describe how people have tried to improve their communities over time.

SS.CV.3.4

Identify core civic virtues (such as honesty, mutual respect, cooperation, and attentiveness to multiple perspectives)

CCSS.MATH.PRACTICE.MP.1

Make sense of problems and persevere in solving them.

CCSS.MATH.PRACTICE.MP.2

Reason abstractly and quantitatively.

CCSS.MATH.PRACTICE.MP.6

Attend to precision.

CCSS.MATH.CONTENT.3.NBT.A.2

Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.

CCSS.MATH.CONTENT.3.OA.D.8

Solve two-step word problems using the four operations.

CCSS.MATH.CONTENT.4.NBT.B.4

Fluently add and subtract multi-digit whole numbers using the standard algorithm.

Learning Objectives:

1. Students will use facts about mushers to solve a challenge.
2. Students will identify national and worldwide locations to solve a challenge.
3. Students will use facts about checkpoints to solve a challenge.
4. Students will solve multiple-step math problems to solve challenges.
5. Students will decode words revealing the required items checked at the finish line.
6. Students will sort puppies into correct litters to solve a challenge.

Assessment:

Challenge #1:

Students have successfully used clues and facts about Iditarod mushers to get the first code and move onto the next challenge.

Challenge #2:

Students have successfully identified each musher's hometown and sorted them by Alaska, Lower 48, and another country to get the second code and move on to the third challenge.

Challenge #3:

Students have successfully identified checkpoint locations for mushers using clues. Students have successfully solved multi-step math problems to get the third code and move on in the escape challenge.

Challenge #4:

Students have successfully calculated drop bag weights for mushers. Students have successfully combined the weights of different musher's drop bags to get a total weight. Students have successfully solved math equations to get the next code.

Challenge #5:

Students have successfully decoded the secret words to identify the required items checked at the finish line. Students have followed clues using letters from the required items to get the next code in the challenge.

Challenge#6:

Students have accurately sorted puppies into their themed litters. Students have successfully added the numbers on the backs of the puppy cards to get the final code of the challenge and escape.

Procedural Activities:

1. Set the stage for the escape challenge by reading the backstory to the class.
2. Discuss the idea of working together on a team and being perseverant to solve a series of challenges and complete the escape mystery.
3. Divide students into small groups. (Or, you can have students work together as a whole class if you don't have multiple boxes with locks).
4. If using small groups, dismiss groups to their working area but instruct them to NOT begin yet.
5. Give students their time limit (60-90 minutes) and use an online timer (projected if possible), so students can have good time management.
6. Once all groups are in place, instruct students to begin. Start the timer at this time.
7. As students are working, roam the room and assist groups as needed. If a group is stuck for an extended amount of time, consider giving them a hint that doesn't give the answer away.
8. If using a hasp with colored washers, students will be coming to you to get their next clues.
9. Optional: As groups escape their escape boxes, take their picture as a group using the props.

Materials Students Need:

- Copy of Task Cards
- Recording Sheet
- Pencils
- Clipboards (optional)
- Scrap Paper (optional)
- Blacklight Flashlight

Technology Used to Enhance Learning:

- Online Timer

Other Information:

- This challenge can be broken apart and completed over a series of six days if needed.
- Locks and boxes aren't necessary to complete this challenge. You can place clues in manila envelopes. As groups solve each challenge, they can show you their four-digit code. If it's correct, you can hand them the following clue.
- If you don't have a multi-compartment box, you can attach all six locks to a hasp and attach it to a box with one latch. Place a different colored washer on each lock. As students get each lock opened, they will bring you the washer as proof of solving the challenge, and you can give them the next clue. You could have some small prize inside the box once students get all the locks off the hasp.

Modifications for Special Learners/Enrichment Opportunities:

- Some of these challenges are quite difficult. Make sure that struggling students are placed on a team with a good leader who can help if needed.