



6th Grade Math

Absolute Value & Negative Numbers Digital Escape Room

Dr. Pole's Emergency Instructions

all of my assistants. You know how forgetful I am, and I appreciate your patience in working with me. In case of emergency, please use the tools below to help you. I get so wrapped up in my work, that I tend to forget important passwords and places I have hidden things. As a result, I leave myself notes around my office to help me remember how to access and unlock the secret location where my research is stored. If you find my notes, the tools below will make sense.

Sincerely,
Dr. Pole

Office Door Code:
PENGUIN

Step 1: Access the hall where my office is. This can be done by scanning the QR code or by using a URL known to my highest level assistants.

Step 2: Use the door code to enter my office.

Keep it Secure!

Find the Points, Find the Combination

Nesting Locations

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Interactive

Note: Only letters fill the blanks. The location of the research data must remain secure.

U A T I C O Y N L H E D R V M

-4 -2 0 2 4 6 8

2) -3 |0| 0 -D -N |-3| -(-5)

-V (-5) -L (-5) |G|








Standards

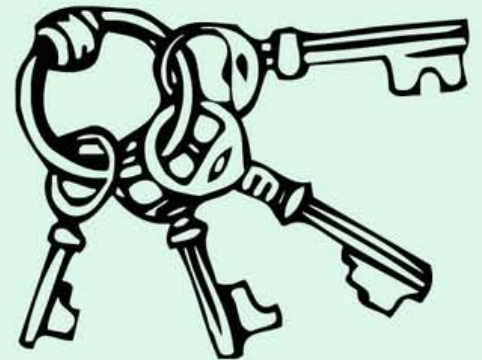
6.NS.C.6, 6.NS.C.6a, 6.NS.C.6b,
6.NS.C.6c, 6.NS.C.7, 6.NS.C.7a,
6.NS.C.7b, 6.NS.C.7c, 6.NS.C.7d,
6.NS.C.8

6th Grade Math Skills

Plotting points in all four quadrants and
determining distance between points, inequalities
with absolute value & negative numbers, & much
more!

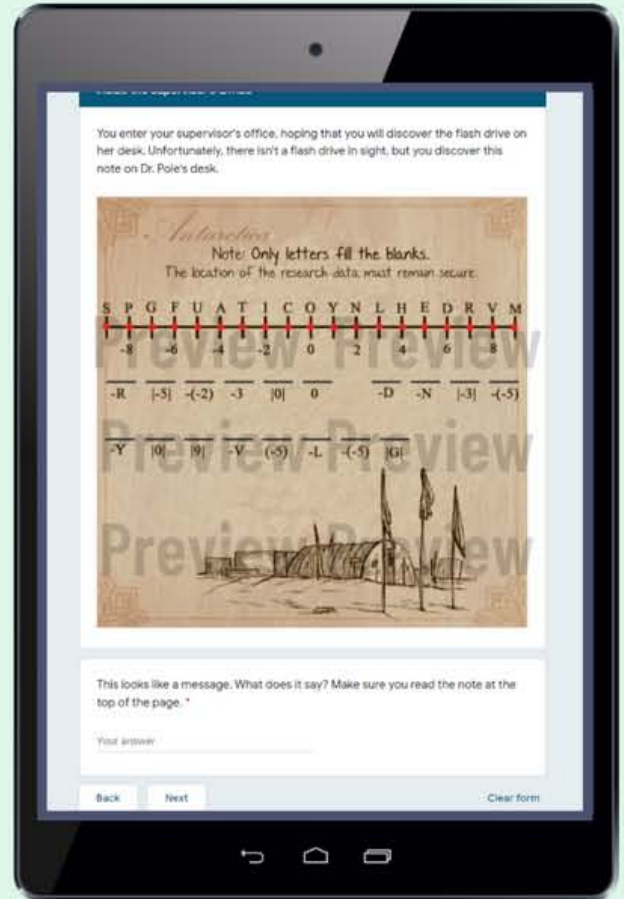
Fast Facts

-  No prep, click & go! *Optional pages to print
-  Escape Time ~45 (varies by group)
-  Recommended to complete in pairs or small groups
-  Requires internet connected device
-  Self-Checking
-  Virtual or in-person
-  Five Engaging Puzzles



How it Works:

- The escape room is automated by a Google Form™ (Google™ accounts are not required).
- Use the quick start link to click & go, or create a copy of the form to save to your drive (the teacher must have a Google Account to save a copy).
- Students only progress through the puzzles when correct answers are entered.
- The form provides hints if students enter incorrect answers.



Puzzle Preview

Students input answers into the Google Form & progress when correct answers are entered.

Antarctica

Note: Five characters using three symbols >, <, =
The location of the research data must remain secure.

Record High Temperatures in °F at the Gentoo Nesting Site A

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
14°	10°	-21°	-27°	-32°	-36°	-45°	-48°	-31°	-10°	2°	18°


May's High Temperature July's High Temperature

The absolute value of the temperature in February The absolute value of the

October's High Temperature

The absolute value of the temperature in December

0° March's High



Research Notes:

The gentoo penguin has been able to adapt much better than other penguin species to the changing climate in Antarctica.



I have been tracking four nesting sites. I plot them on a coordinate plane. The origin represents the research center. The x-axis represents how many kilometers west or east of the research center the nesting site is, and the y-axis tracks the distance north or south.

- Nesting site A is located 6 km east and 3 km south of the research facility
- Nesting site B is located at (-3, -3)
- Nesting site C is located 3 km east and 5 km north of the research facility
- Nesting site D is located at (6, 5)

These nesting locations determine the three-digit combination to my desk drawer.

Digit 1: Distance between nesting sites A and D.
C and D.
A and B.

Antarctica

Note: Only letters fill the blanks.
The location of the research data must remain secure.

S P G F U A T I C O Y N L H E D R V M

-8 -6 -4 -2 0 2 4 6 8

-R | -5 | -(-2) | -3 | |0| | 0 | -D | -N | |-3| | -(-5)

-Y | |0| | |9| | -V | (-5) | -L | -(-5) | |G|

How to Open the Safe:

- Push each letter once to unlock the lock.
- Figure out where each letter goes on the number line.
- Push the buttons in order from least to greatest.

$|A| = B$
 $E > -1$ but $E < |-1|$
 $-C > B$
 $|F| > D$ but $F < D$

Puzzle Preview

Scientists measure elevation based on sea level. Sea level is at 0 feet. Distances below sea level are written using negative numbers. Distances above sea level are written as positive numbers. A Gentoo penguin is hunting prey at a depth of 651 feet below sea level. The bottom of the iceberg it is hunting near is at -640 feet. The top of the iceberg is 124 feet above sea level. Which of these is farthest from sea level?



- A: The top of the iceberg.
- B: The bottom of the iceberg.
- C: The Gentoo penguin.

The Gentoo penguin is still hunting prey at a depth of 651 feet below sea level. The bottom of the iceberg it is hunting near is at -640 feet. The top of the iceberg is 124 feet above sea level. Which of these has the highest elevation?



- A: The top of the iceberg.
- B: The bottom of the iceberg.

0 degrees is the freezing point of water in Celsius. Temperatures below 0°C are written as negative numbers. The high temperatures for three days are written below. Which day was the warmest?



- A: Monday -29°C
- B: Tuesday -25°C
- C: Wednesday -30°C

The number of chicks that hatch from year to year in three different colonies is written as a positive number. A decrease in the number of chicks is written as a negative number. Use the chart below to answer which colony had the least change (smallest absolute value) in the number of chicks.

Colony Name	Chick Hatchings
A	-47
B	+51
C	-17

- Colony A
- Colony B
- Colony C

Optional Printable Pages

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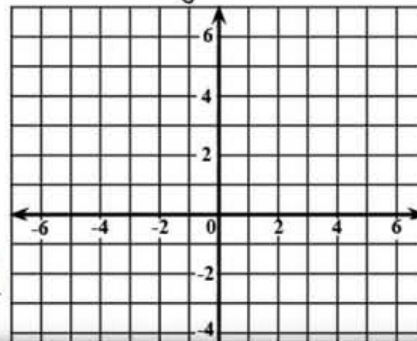
Office Door Code:
PENGUIN

Step 2: Use the door code to enter my office.

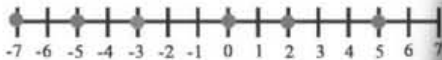
Keep it Secure!



Nesting Locations



Find the Points, Find the Combination



The Great CLASSROOM ESCAPE

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Puzzle Helper Page

I ESCAPED ANTARCTICA!

The Great CLASSROOM ESCAPE

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Success Signs

You May Also Like

The Great CLASSROOM ESCAPE
OPERATION SAVE THE ROCKET LAUNCH
 Evaluating Expressions Word Problems

PIN Digit 4
 How much space is left?

The expression $e^3 - 8d$ gives the number of cubic feet of storage space that remain in a cube-shaped container that the rocket is taking to the space station. How much space is left in the container if $e = 3$ and $d = 24$?

EASY TO IMPLEMENT!

MISSION CONTROL CENTER

Four digit PIN? Where is there a four digit pin?

Click four random numbers and see what happens.

Go back out into the hallway. Maybe the mission control team has been released and

6TH GRADE CONTENT 6.EE.A.2 6.EE.A.2A 6.EE.A.2C
DIGITAL ESCAPE ROOM!

The Great CLASSROOM ESCAPE
SIXTH GRADE MATH
 Digital Escape Room Bundle

EASY TO IMPLEMENT

6.G.A.1

The Great CLASSROOM ESCAPE
Operation Restore Order

6.EE.A.1

TOP SECRET
 NAME: Osa, Key
 KNOWN ALREADY: Chase

WANTED FOR:
 You are in possession of sensitive data concerning the location of the secret vault. You are to be executed unless you restore the order of operations. You have 10 minutes to solve the puzzles and escape the vault. If you fail, the vault will be destroyed and the data will be lost forever.

METHODS OF OPERATION:
 You have been captured by an evil genius and are being held in a secret vault. You are to be executed unless you restore the order of operations. You have 10 minutes to solve the puzzles and escape the vault. If you fail, the vault will be destroyed and the data will be lost forever.

CONFIDENTIAL

0 4 9
 8 2 0
 3 9

$3^2 + 9 + 3 + 6 = 10$
 $5^2 - 7 + 3 + 6 = 12$
 $4^2 + \frac{1}{4} + 32 + 2 = 4$

Order of Operations with Exponents
DIGITAL ESCAPE ROOM!

The Great CLASSROOM ESCAPE
Area of Polygons

Easy to Implement

POLLY'S PIZZA
 SPECIAL PIZZA TOPPING

DIGITAL OR PRINT ESCAPE ROOM!

6.G.A.1



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