

PLUTO

ESCAPE ROOM

A. Charon
B. Oberon
C. Styx
D. Kerberos

6 In Greek mythology, Pluto is named after what?

A. Hades
B. Jupiter
C. Hercules
D. Valhalla

How many times you used each letter answer (ABCD) to solve the 4-digit code and record it on your answer sheet.

2301	3102
J	N

dwarf planet MINUS 2001.

The FIRST number of the lock is the year Charon was discovered MINUS 1973.

The THIRD number of the lock is the number of Earth hours one day on Pluto lasts MINUS 150.

Once you determine the 4-digit code, decide if the code uses all EVEN #s, all ODD #s or a combination of both.

ALL EVEN	ALL ODD	COMBO
J	K	P

Hydra 5
6
7
8
9

thick
Callisto
2005
Nix
nine

There are ____ known moons that orbit Pluto: Charon, Styx, Nix, Hydra and Kerberos. Styx is the smallest moon of Pluto and was not discovered until 2012. Charon, discovered in 1978, is the largest of the moons and the largest known moon of any dwarf planet. Pluto's furthest moon is ____, and its closest moon is Charon. Charon is named after the minor god of the dead in Greek mythology. Some experts call Pluto and Charon a double planet instead of a planet and its moon. Both Nix and Hydra were discovered by the Hubble Space Telescope in ____.

Pluto spins very slowly, tilted almost on its side. One rotation, or day, takes 153 Earth hours. It takes Pluto 248 Earth years to complete one revolution around the sun. When it's closer to the sun, the atmosphere becomes very ____.

Once you determine the 4-digit code, decide if the code uses all EVEN #s, all ODD #s or a combination of both.

ALL EVEN	ALL ODD	COMBO
B	M	M

STATION 2: PARAGRAPHS

First, number ALL the paragraphs on your reading passage. Then, read each statement below and determine which paragraph NUMBER the statement can be found in. Paragraph numbers MAY be used more than one time or not at all. Use the directions below to reveal the 4-digit code and let the door open.

A Pluto checks off the first two criteria but not the third because it has other objects in its orbit.

B Pluto is smaller than Earth's moon.

C It takes Pluto 248 Earth years to complete one revolution around the sun.

D In 2015, the spacecraft New Horizons was the first to visit Pluto and its moons.

STATION 3: TRUE OR FALSE

Read each statement below and determine if it is true or false. If the statement is true, color the coin on YOUR answer sheet that corresponds with that question. If the statement is false, cross out that coin value. When you are finished add the TOTAL of ALL TRUE coin values to reveal your letter clue. One digit of the code has been provided for you. If the total is 625, a 6 would go in the first box, the 2 in the second box and so on.

A 75	A. Pluto mainly consists of 70 percent rock and 30 percent water ice.	E 100
B 25	B. Of the five dwarf planets, Pluto is the smallest.	F
	C. Pluto checks off the first two criteria of the IAU but not the third.	
	D. Styx is the smallest moon of Pluto.	

PLUTO

Did you know that a 100-pound person on Earth would weigh 370 pounds on Pluto? Pluto, once the ninth planet in the Solar System, is the largest dwarf planet that orbits the sun. It is located in the Kuiper Belt, a region of the solar system beyond Neptune. Pluto was discovered in 1930 by astronomer Clyde Tombaugh. It was named after the Roman god of the underworld. In 2006, the International Astronomical Union (IAU) changed its classification of Pluto. Pluto was considered a planet until then. It has five known moons: Charon, Nix, Hydra, Kerberos, and Styx. Charon is the largest of Pluto's moons. It was discovered by the same person who discovered Pluto. Charon's name is from the Roman god of the underworld's brothers: Jupiter controlled the underworld and Pluto controlled the underworld. Charon is the only other object with a name that starts with the letter C.

THINK TANK

STATIONS ACTIVITY

WHAT'S INCLUDED?

- ✓ READING PASSAGE
- ✓ 5 STATIONS
- ✓ TEACHER GUIDE
- ✓ ANSWER KEY
- ✓ STUDENT DIRECTIONS
- ✓ TEXT MARKING OPTION
- ✓ PROP SIGNS

STATION 1: FILL IN THE BLANK

Use your reading passage to determine the missing words in the paragraph below. Each missing word has a corresponding NUMBER. The 4-digit code for this station will be the NUMBER for each missing word, in the same order in which they appear in the paragraph. Then, record the clue LETTER on your answer sheet.

STATION 2: PARAGRAPHS

First, number ALL the paragraphs on your reading passage. Then, read each statement below and determine which paragraph NUMBER the statement can be found in. Paragraph numbers MAY be used more than one time or not at all. Follow the directions below to reveal the 4-digit code and letter clue.

STATION 3: TRUE OR FALSE

Read each statement below and determine if it is true or false. If the statement is true, color the coin on YOUR answer sheet that corresponds with that question. If the statement is false, cross out that coin value. When you are finished add the TOTAL of ALL TRUE coin values to reveal your letter clue. One digit of the code has been provided for you. If the total is 625, a 6 would go in the first box, the 2 in the second box and so on.

STATION 4: COMBINATION

Use your reading passage to determine the combination to the 4-digit lock for this station. You're going to have to use your critical thinking skills and do a tiny bit of math. Pay attention because the "clues" below are NOT in order. There is room on your answer sheet to do the math.

STATION 5: MULTIPLE CHOICE

Answer each multiple-choice question below. Then, count the number of times you used each letter answer (ABCD) to reveal your 4-digit code. Letters may be used more than once or not at all. If a letter option is not used, put a zero in that box on your answer sheet.

ANSWER RECORDING SHEET

Record your answers for each station on this sheet. Then, use the directions below to determine final 4-digit ALPHA code. Ex: HBDR

STATION CODES

LETTER CLUE

STATION 1	→	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	CODE
-----------	---	----------------------	----------------------	----------------------	----------------------	------

A	B	C	D	E	F	
---	---	---	---	---	---	--

STATION 2	→	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	CODE
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ENTER

1

2

3

TEACHER DIRECTION

- 1 Print the reading passage found on [pages 5-6](#) for EACH (front and back).
- 2 Print the answer recording sheet on [page 12](#) for each student group of students.

RECAP: Print pages 5, 6, and 12 for students.

STATION

5

BLUE

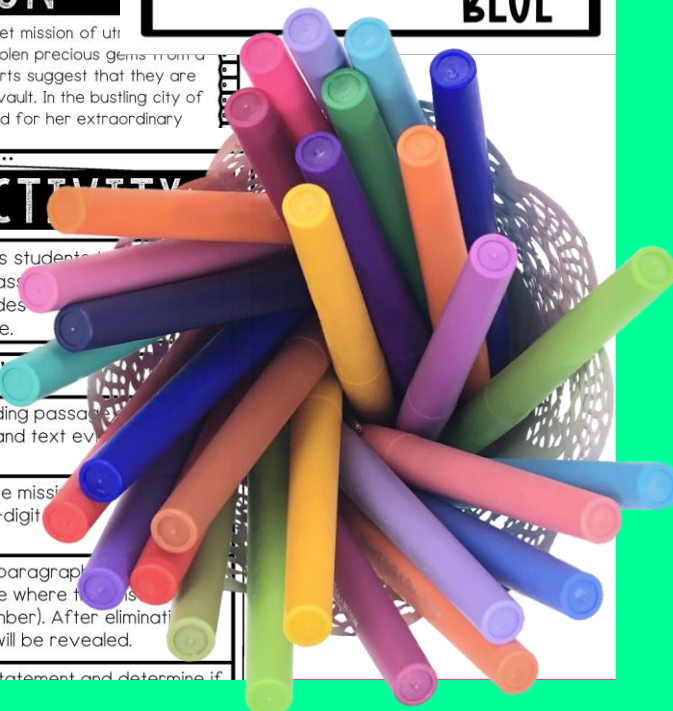
THE MISSION

You have been assigned a top-secret mission of utmost importance. A notorious thief has stolen precious gems from a prominent lady, and intelligence reports suggest that they are hidden in a heavily guarded secret vault. In the bustling city of Oakville, Lady Victoria was renowned for her extraordinary

ABOUT THIS ACTIVITY

The reading passage in this packet allows students to practice their comprehension skills after reading the passage. Students will be searching for evidence. Each station includes a question that will reveal a letter clue.

	OVERVIEW
READING PASSAGE	Students will use the reading passage at each station seeking answers and text evidence.
STATION 1	Students will determine the missing word in the paragraph to reveal a 4-digit code.
STATION 2	Students will number the paragraphs in the reading passage to determine where the missing words can be found (paragraph number). After eliminating the incorrect numbers, a 4-digit code will be revealed.
STATION 3	Students will read each statement and determine if it is true or false.



5 STATIONS

STATION 5: MULTIPLE CHOICE

Answer each multiple-choice question below. Then, count how many times you used each letter answer (ABCD) to reveal the code. Letters may be used more than once or not at all. If an option is not used, put an X in that box on your answer sheet.

1. Which dwarf planet takes the longest time to orbit the sun?
 A. Ceres
 B. Pluto
 C. Makemake
 D. Eris

2. Pluto's thin atmosphere is composed of what gas?
 A. 68%
 B. 78%
 C. 88%
 D. 98%

3. Due to hydrology, what color does Pluto appear?
 A. Reddish
 B. Bluish
 C. Greenish
 D. Yellowish

Count how many times you used each letter answer to determine the 4-digit code and record it on your answer sheet.

ALL EVEN **ALL ODD** **COMBO**

B **H** **M**

ANSWER RECORDING SHEET

Record your answers for each station on this sheet. Then, use the directions below to determine final 4-digit ALPHA code. Ex: HBDR

STATION	STATION CODES	LETTER
STATION 1	→ [] [] [] [] []	[]
STATION 2	→ A B C D E F	[]
STATION 3	→ A B C D E F G H	[]
STATION 4	→ [] [] [] [] []	[]
STATION 5	→ 1 2 3 4 5 6	[]

Do your math in this area:

→ A# [] B# [] C# [] D# []

STATION 4: COMBINATION

Use your reading passage to determine the combination to the 4-digit lock for this station. You're going to have to use your critical thinking skills and do a tiny bit of math. Pay attention because the "clues" below are NOT in order. There is room on your answer sheet to do the math.

1. The LAST number of the lock is the percent of rock that Pluto consists of. M.

2. The SECOND number of the lock is the year the IAU changed Pluto to a dwarf planet.

3. The third number of the lock is the number of days in a year on Pluto.

4. The first number of the lock is the number of dwarf planets.

Once you determine the 4-digit code, decide if the code uses all EVEN #s, all ODD #s or a combination of both.

ALL EVEN **ALL ODD** **COMBO**

STATION 1: FILL IN THE BLANKS

Use your reading passage to determine the missing word in each paragraph below. Each missing word has a corresponding NUMBER. The 4-digit code for this station will be the NUMBER of each missing word in the order in which they appear in the paragraph. The code will be recorded on your answer sheet.

1. In 2019, the first moon of Pluto was discovered. It is the largest of the moons of the planet. Pluto's closest moon is Charon. Charon is named after the Greek mythological figure and Charon is a ferryman who carries souls across the Styx river in the underworld.

2. Pluto's atmosphere is very thin. It is composed of nitrogen, methane, and ethane. Pluto's atmosphere becomes very thin as it moves further from the sun.

3. Pluto's surface is covered in ice. The ice is made of nitrogen, methane, and ethane. Pluto's surface is very dark. It is covered in dark spots. Pluto's surface is very cold. It is the coldest planet in the solar system.

Once you determine the 4-digit code, decide if the code uses all EVEN #s, all ODD #s or a combination of both.

ALL EVEN **ALL ODD** **COMBO**

B **H** **M**

STATION 3: TRUE OR FALSE

Read each statement below and determine if it is true or false. If the statement is true, color the coin on YOUR answer sheet with that question. If the statement is false, cross out that coin. Once you are finished coloring the coins, add up the TRUE coin values to determine the final 4-digit code. One digit of the code will be provided for you. Use the letter clue to determine the other three digits.

A. Pluto is made of rock and ice.
 B. Pluto has five dwarf planets.
 C. Pluto is the largest planet in the solar system.
 D. Pluto was named after the Roman god of the underworld.

After shading the coins on your answer sheet, add up the TRUE statements to get the final total.

300 **350** **400**

G **D** **M**

STATION 2: PARAGRAPHS

First, number ALL the paragraphs on your reading passage. Then, read each statement below and determine which paragraph NUMBER the statement can be found in. Paragraph numbers MAY be used more than once or not at all. Follow the directions below to determine the 4-digit code and letter clue.

A. Pluto checks off the first two criteria for being a dwarf planet because it has two moons and is in orbit around the sun.

B. Pluto is smaller than Earth's moon.

C. It takes Pluto 248 Earth years to complete one revolution around the sun.

D. In 2015, the spacecraft New Horizons was the first to explore Pluto and its moons.

E. Tombaugh discovered Pluto in Flagstaff, Arizona.

F. Astronomers believe the reddish color of Pluto is from hydrocarbon molecules.

1. ELIMINATE the highest and lowest used paragraph numbers and record the remaining 4-digit code on your answer sheet. 2. Decide which paragraph number was NOT used as a CODE answer.

NO 6 **NO 7** **NO 5**

L **C** **W**

STATIONS

ABOUT THIS ACTIVITY


The reading passage in this packet allows students to work on comprehension skills after reading the passage several times searching for evidence. Each station includes a 4-digit code that will reveal a letter clue.

OVERVIEW

READING PASSAGE	Students will use the reading passage at EACH station seeking answers and text evidence.
STATION 1	Students will determine the missing words in the paragraph to reveal a 4-digit code.
STATION 2	Students will number the paragraphs and browse the passage to determine where the answers can be found (paragraph number). After eliminating numbers, a 4-digit code will be revealed.
STATION 3	Students will read each statement and determine if it is true or false. They will then ADD all TRUE values to find the 4-digit code.
STATION 4	Students will do some basic math here, read the passage to find the answers and then determine the 4 digit code.
STATION 5	Students will answer 6 multiple choice questions which lead them to a 4 digit code based on the number of times they used each "ABCD" answer.
TEXT MARKING	OPTIONAL: A color code chart is included in case you want students to mark the text, citing evidence of where they found their answers. (This will increase completion time)

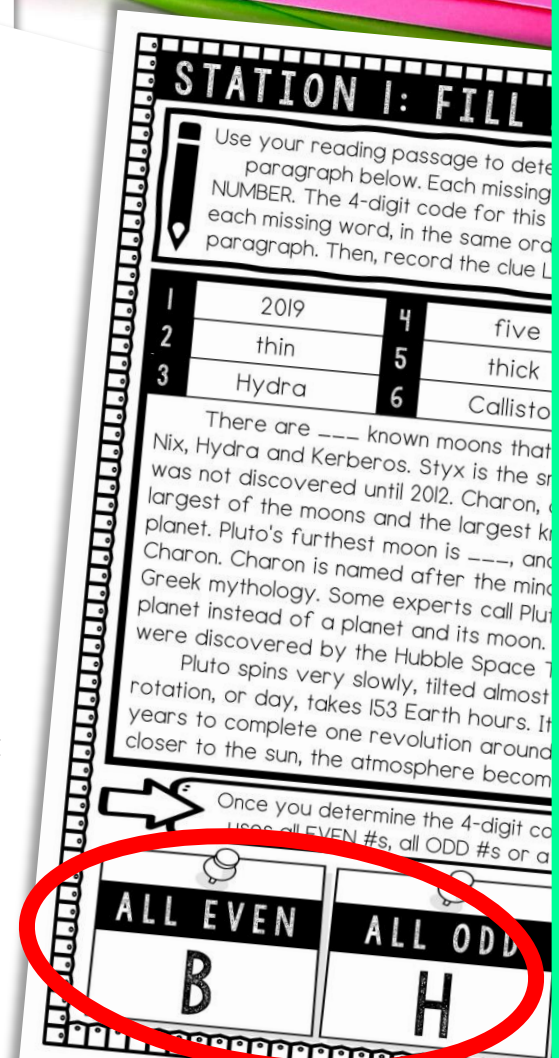
**STUDENTS WILL
USE THE SAME
READING
PASSAGE AT
EACH STATION
SEEKING
ANSWERS AND
TEXT EVIDENCE.**

HOW IT WORKS



ENGAGING READING
COMPREHENSION PRACTICE!

- 1 Students work individually (or in pairs) and visit 5 stations, answer questions, decipher a 4-digit code at each station and grab a "letter" clue for the final alpha code.
- 2 Students will answer the questions (found directly in the passage) on their own recording sheet. Students will have to revisit their reading passage several times at EACH station skimming for answers.



STATION 1: FILL

Use your reading passage to determine the missing word in each paragraph below. Each missing word is represented by a NUMBER. The 4-digit code for this station is _____. Write each missing word, in the same order as the numbers, in the same order as the numbers. Then, record the clue L

1	2019	4	five
2	thin	5	thick
3	Hydra	6	Callisto

There are ____ known moons that orbit Pluto: Nix, Hydra and Kerberos. Styx is the smallest moon. It was not discovered until 2012. Charon is the largest of the moons and the largest known moon of any planet. Pluto's furthest moon is ____, and Charon is the closest. Charon is named after the minor planet in Greek mythology. Some experts call Pluto a dwarf planet instead of a planet and its moon. Charon and Nix were discovered by the Hubble Space Telescope. Pluto spins very slowly, tilted almost vertically. Its rotation, or day, takes 153 Earth hours. It takes 90 years to complete one revolution around the sun. Closer to the sun, the atmosphere becomes thicker.

Once you determine the 4-digit code for this station, use all EVEN #s, all ODD #s or all letters to determine the alpha code.

ALL EVEN	ALL ODD
B	H

BENEFITS

- ✓ STATIONS AND MOVEMENT
- ✓ CLOSE READING
- ✓ COMPREHENSION SKILLS
- ✓ SECRET CODES
- ✓ CITING EVIDENCE
- ✓ CRITICAL THINKING
- ✓ PRINT AND GO
- ✓ ACTIVE LEARNING
- ✓ CROSS-CURRICULAR
- ✓ HIGHLY ENGAGING
- ✓ NO LOCKS NEEDED
- ✓ NO SILLY ENVELOPES TO STUFF
- ✓ NO ODD SHAPES TO CUT OUT



Everything a teacher dreams of wrapped up into one FUN and engaging activity!

USE FOR:



ANTICIPATORY SETS



UNIT REVIEW



EARLY FINISHERS



STATIONS



REWARD ACTIVITY



CENTERS



SUB PLANS



PARTNER WORK



ENRICHMENT

