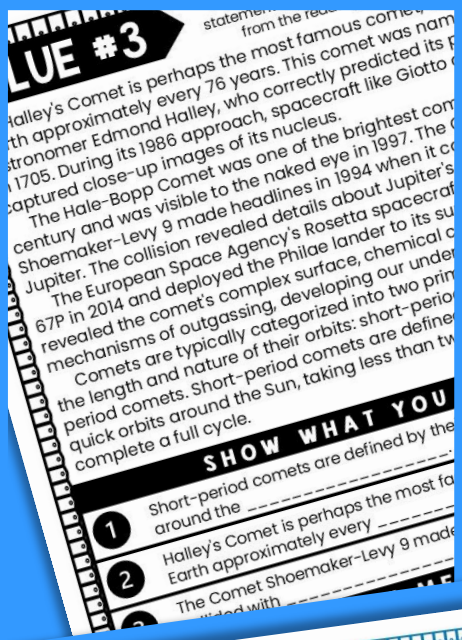
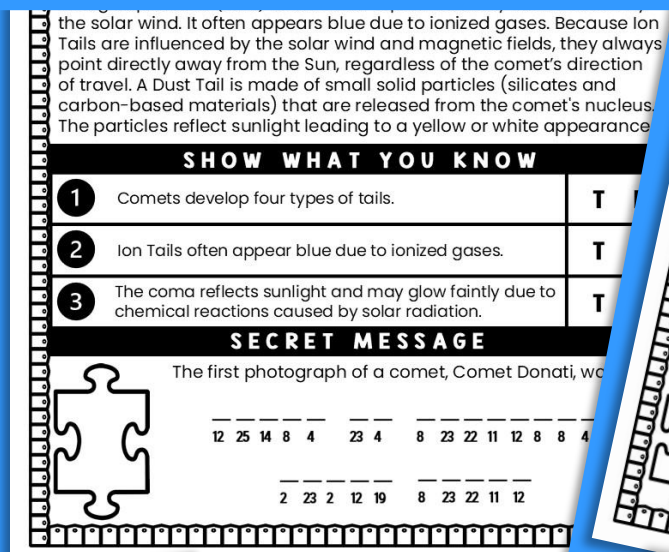
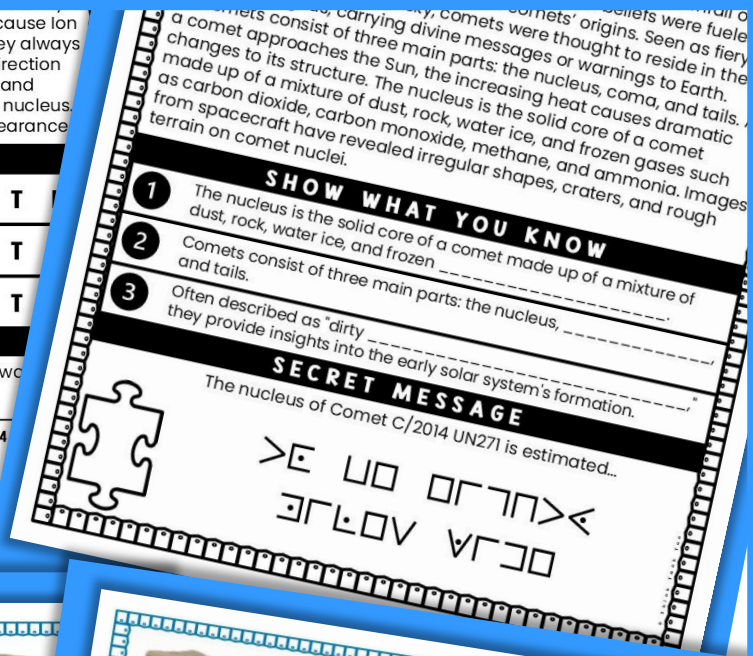
COMETS

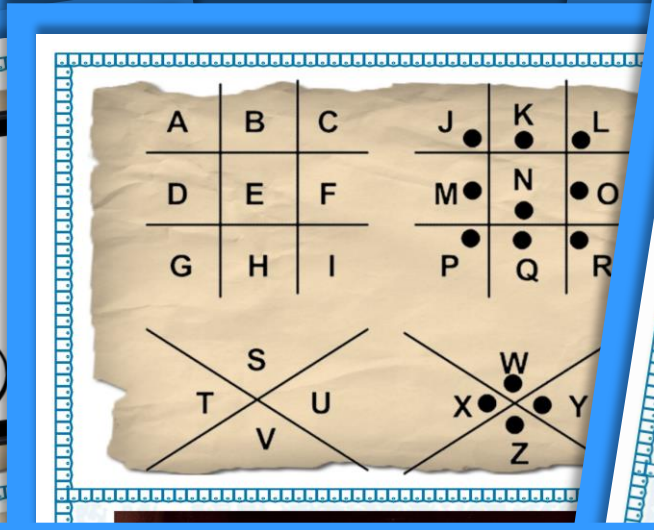
ESCAPE ROOM

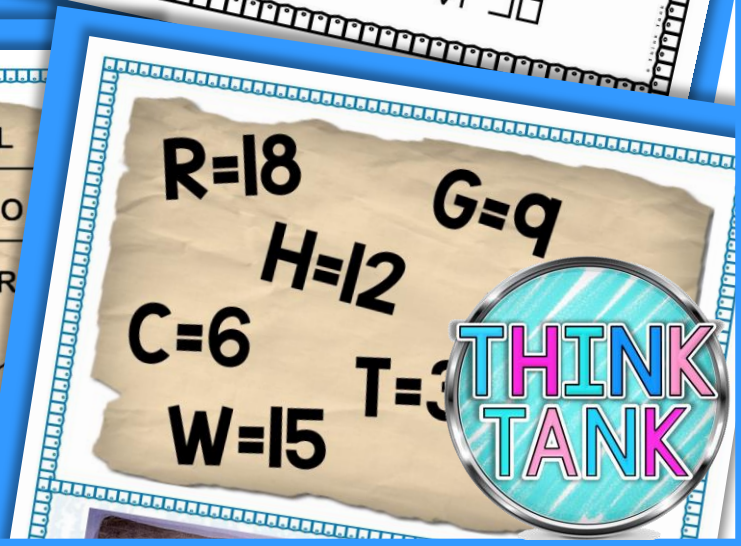








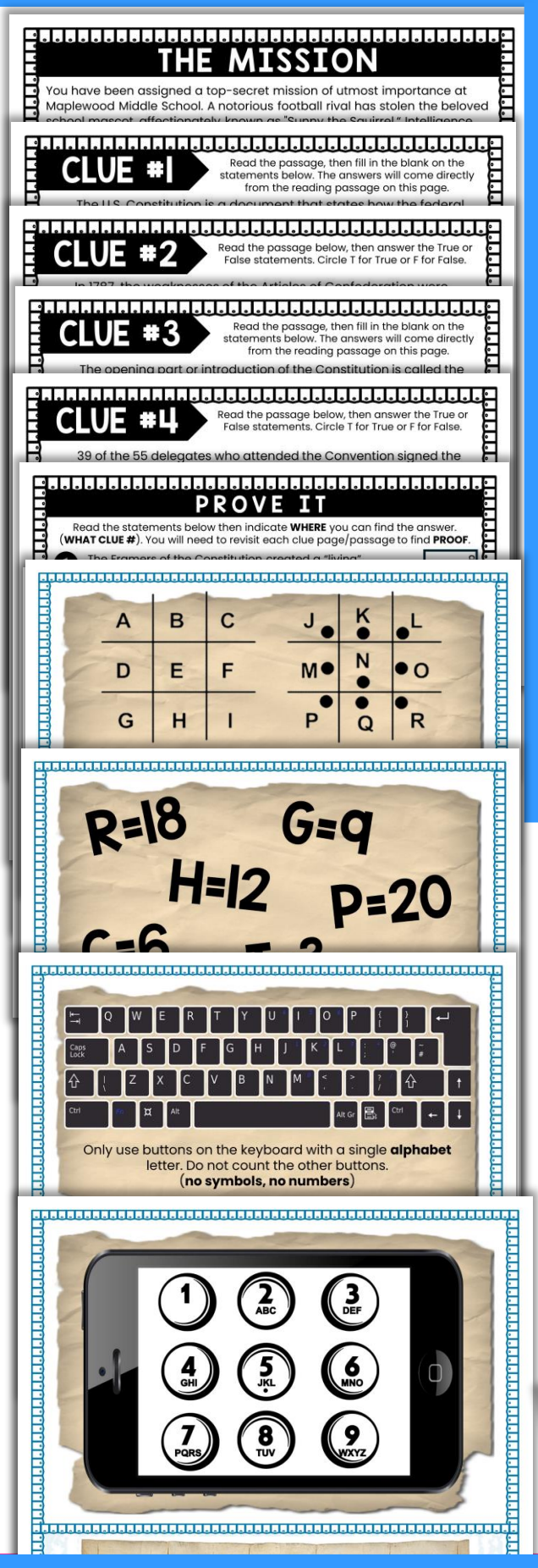


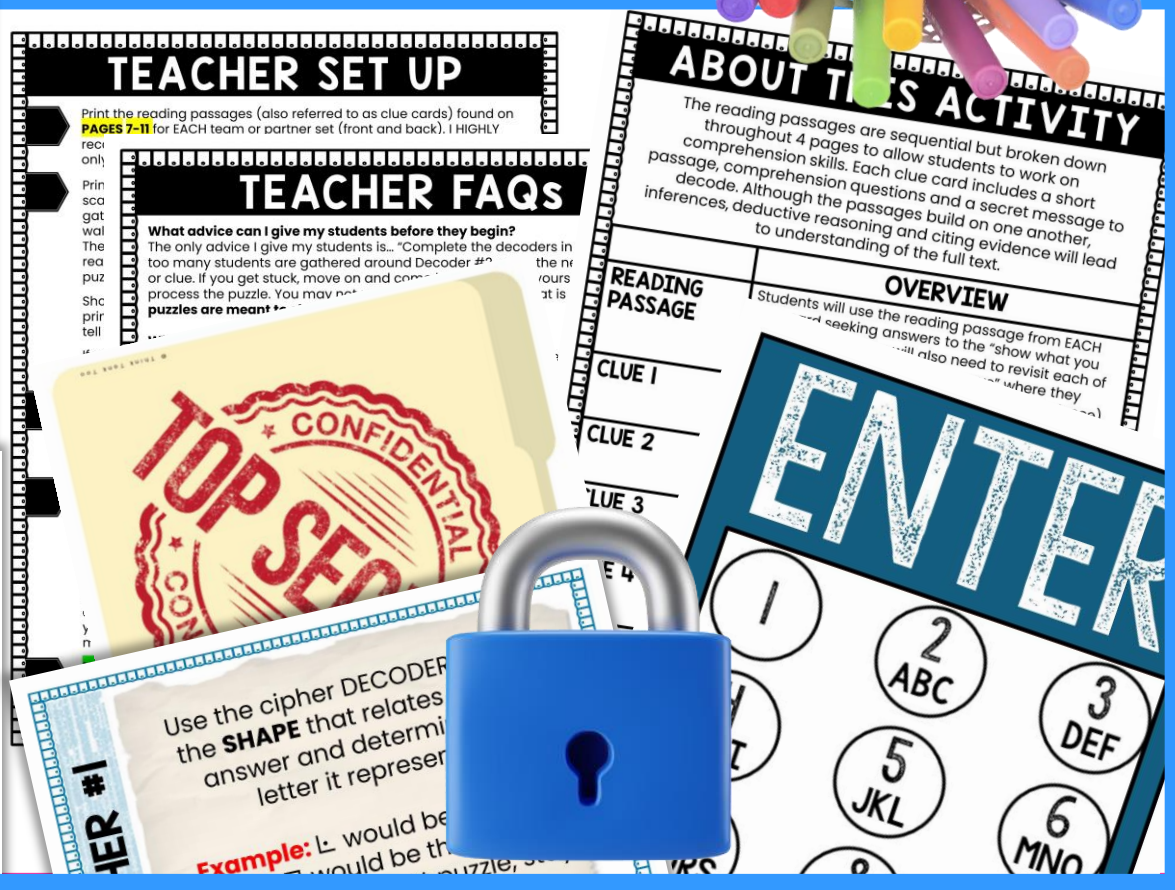


WHAT'S INCLUDED?

- 4 SHORT READING PASSAGES
- 4 PUZZLE DECODERS (UNLABELED)
- 4 PUZZLE DECODERS (LABELED)
- 18 COMPREHENSION QUESTIONS
- TEACHER SET UP
- STUDENT DIRECTIONS
- HINT CARDS
- FAQS
- ANSWER KEY
- PROP SIGNS







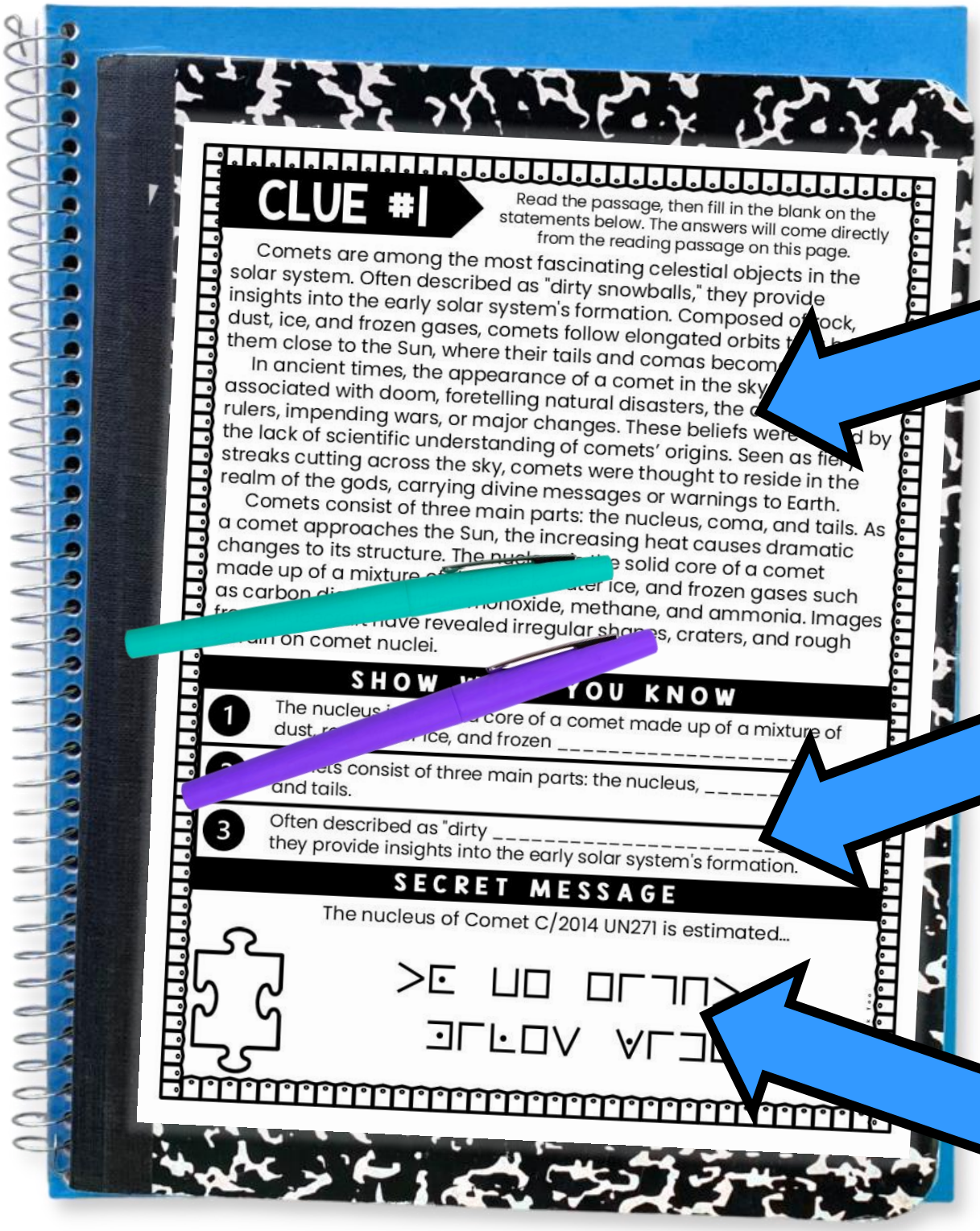
4 CLUE CARDS


CLUE #1
Read the passage, then
statements below. The answers
from the reading passage on this
Comets are among the most fascinating celestial objects in the solar system. Often described as "dirty snowballs," they provide insights into the early solar system's formation. Composed of rock, dust, ice, and frozen gases, comets follow elongated orbits that bring them close to the Sun, where their tails and comas become visible.
In ancient times, the appearance of a comet in the sky was often associated with doom, foretelling natural disasters, the downfall of rulers, impending wars, or major
beliefs were fueled by
ns. Seen as fiery
streaks cutting across the sk
o reside in the
realm of the gods, carrying
gs to Earth.
Comets consist of t
ma, and tails. As
a comet approaches
ses dramatic
changes to its struct
f a comet
made up of a mixtu
en gases such
as carbon dioxide,
monia. Images
from spacecraft h
, and rough
terrain on comet
SHOW WHAT YOU KNOW
of a mixture of
_____.
_____,
_____,
_____."
1 The nuc
dust, ro
2 Comets consist o
and tails.
3 Often described as "dirty _____
they provide insights into the early solar system's formation.
SECRET MESSAGE
The nucleus of Comet C/2014 UN271 is estimated...
CLUE #2
Read the passage below, then
False statements. Circle T for True or
When a comet approaches the Sun, the heat causes sublimation - frozen gases turning directly into vapor. This process releases gas and dust, forming a bright, glowing cloud around the nucleus called the coma. The coma reflects sunlight and may glow faintly due to chemical reactions caused by solar radiation.
A comet's tail is formed
a state of matter wh
are so intensely heated
electrons, becor
electrically charged. A
to the Sun, sola
and radiation pressur
sed materials
stream away fro
Comets deve
is composed
charged partic
away from the
the solar wind
zed gases. Bec
Tails are influ
tic fields, the
point direct
e comet's di
of travel. A
les (silicates
carbon-b
n the comet's
The partic
or white appe
KNOW
1 Comets dev
2 Ion Tails often appear blue due
ized gases.
3 The coma reflects sunlight and may glow faintly due to chemical reactions caused by solar radiation.
SECRET MESSAGE
The first photograph of a comet, Comet Donati,
12 25 14 8 4 _ _ _ _ _ 23 4 _ _ _ 8 23 22 11 12 8 8
_ _ _ _ _ 2 23 2 12 19 _ _ _ 8 23 22 11 12
CLUE #3
ey's Comet is perh
approximately eve
nomer Edmond Hal
05. During its 1986 ap
ptured close-up imag
The Hale-Bopp Come
entury and was visible
Shoemaker-Levy 9 mad
Jupiter. The collision reve
The European Space A
67P in 2014 and deployed
revealed the comet's co
mechanisms of outgass
Comets are typically
the length and nature of
period comets. Short-pe
quick orbits around the s
complete a full cycle.
SHOW WHAT YOU KNOW
1 Short-period comets are defined by their relatively quick orbits around the _____.
2 Halley's Comet is perhaps the most famous comet, visible from Earth approximately every _____ years.
3 The Comet Shoemaker-Levy 9 made headlines in 1994 when it collided with _____.
SECRET MESSAGE
In 1997, the Hale-Bopp Comet was visible to the naked eye...
2-4 1-9 1-4
1-5 2-6 1-5 1-3 1-3 3-6
2-6 2-2
SHOW WHAT YOU KNOW
T
T
1 The Oort Cloud is located between 2,000 and 100,000 astronomical units (AU) from the Sun.
2 The Kuiper Belt is a region beyond Mercury's orbit but before the orbit of Venus.
3 Long-period comets have unusual and elongated orbits.
SECRET MESSAGE
Halley's Comet was last seen in 1986 and will retur
8 9 666
8 44 666 88 7777 2 66
7777 444 99 8 999 666

4 DECODERS


D E P
G H I
W Y
X Z
S U
T V
FIRST X-RAY IMAGE OF A COMET
Comet Hyakutake · C/1996 B2
ROSAT HRI
March 27, 1996
Sun
nucleus
comet motion
10 arcmin
55 000 km
C. Lisse, M. Mumma, NASA GSFC
K. Dennerl, J. Schmitt, J. Englhauser, MPE
F=2
G=22
N=4
Babylonian observation of Halley's comet
Only use buttons on the keyboard with a single alphabet letter. Do not count the other buttons.
(no symbols, no numbers)
3-5 = B
6 MNO
5 JKL
4 GHI
9 WXYZ
8 TUV
7 PQRS
Oort Cloud
α-Centauri
AC +79 3888
Heliopause
Termination Shock
1,000,000
100,000
10,000
Dust tail
Gas tail

READ & THINK



READ THE PASSAGE

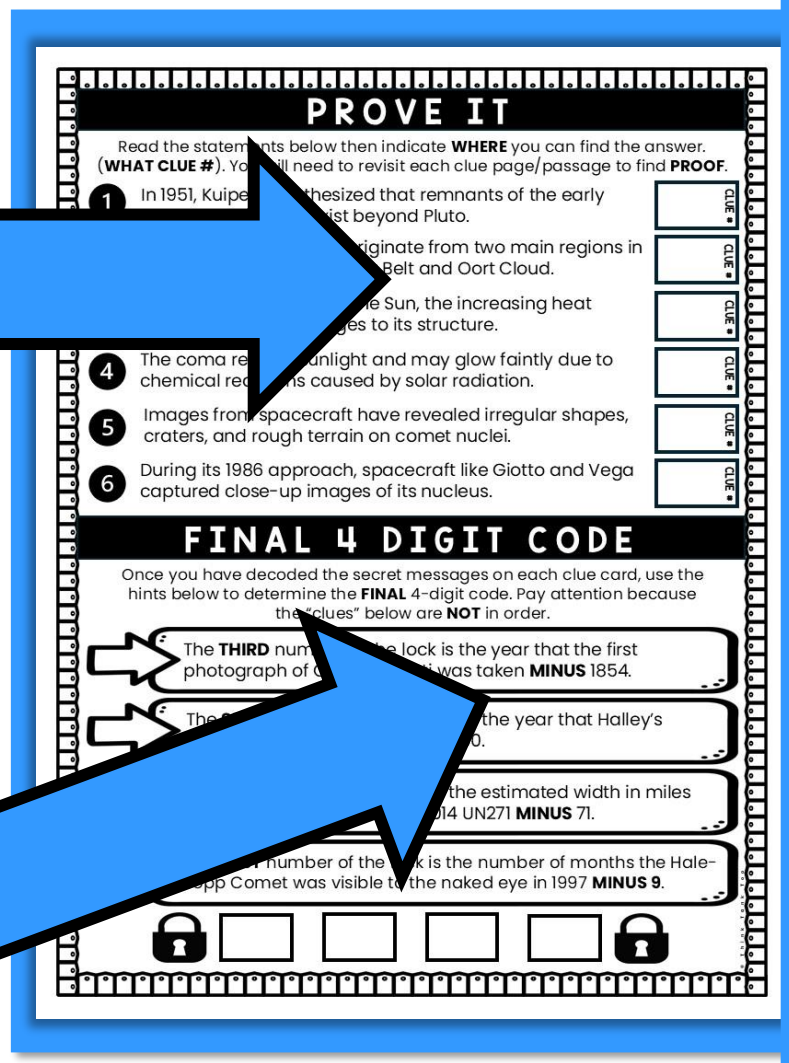
SHOW WHAT YOU KNOW

DECODE THE MESSAGE

FINAL CODE

CITING TEXT EVIDENCE

Students will read the final code statements then PROVE WHERE they found the answer (CLUE #). This will ensure that students read and revisit the reading passages multiple times seeking text evidence.



CRITICAL THINKING

Students will use critical thinking skills to decode the secret messages. They will then use the information revealed in the message to determine the final 4-digit code.



HOW IT WORKS







ENGAGING READING COMPREHENSION PRACTICE!

1. There are 4 clue cards and 4 puzzle decoders. Each clue card includes a short reading passage, questions to check for understanding, and a secret message to decode.

2. Students will work in pairs (or individually) and race to complete all 4 clue cards. A friendly competition always increases engagement. As students progress through the escape room, they will earn "clues" to determine the final 4-digit code. The final code is also a puzzle!



PRINT & GO



ABOUT THIS ACTIVITY

The reading passages are sequential but broken down throughout 4 pages to allow students to work on comprehension skills. Each clue card includes a short passage, comprehension questions and a secret message to decode. Although the passages build on one another, inferences, deductive reasoning and citing evidence will lead to understanding of the full text.

	OVERVIEW
READING PASSAGE	Students will use the reading passage from EACH clue card seeking answers to the "show what you know" portion. They will also need to revisit each of the 4 clue card passages to "prove" where they found the answer for the final code (text evidence)
CLUE 1	Students will read the passage, answer 3 fill in the blank questions, and reveal a secret message using a puzzle decoder.
CLUE 2	Students will read the passage, answer 3 True False questions, and reveal a secret message using a puzzle decoder.
CLUE 3	Students will read the passage, answer 3 fill in the blank questions, and reveal a secret message using a puzzle decoder.
CLUE 4	Students will read the passage, answer 3 True or False questions, and reveal a secret message using a puzzle decoder.
FINAL CODE	As students progress through the escape room, they will decode "clues" to determine the final 4-digit code. The final code is also a puzzle! In order to "escape" students must present correct answers for EVERY question as well as the decoded secret messages and final 4-digit code.

© Think Tank Too





BENEFITS

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

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



USE FOR



ANTICIPATORY SETS

UNIT REVIEW

EARLY FINISHERS

STATIONS

REWARD ACTIVITY

SUB PLANS

COLLABORATION

ENRICHMENT

GALLERY WALK