The Great Fossil Caper

Grade 4 math · Multiplication, Skip counting, Fractions of a number, Rounding, Division · Reading level grades 3-4

Detective: _____ **Date:** _____

A rare glowing T-rex tooth has disappeared from the camp vault! The Dino Dig Squad needs your help analyzing clues to catch the robber before they escape the canyon.

1. Solve each math problem. The answer is a number, and the letter beside it is what that number stands for.
2. In the clue boxes, write that letter in every box showing the same number, then read the secret clue.
3. Use each clue to cross suspects off the list. The one suspect left at the end is the culprit!

My answer: the Fossil Thief is _____

Possible suspects

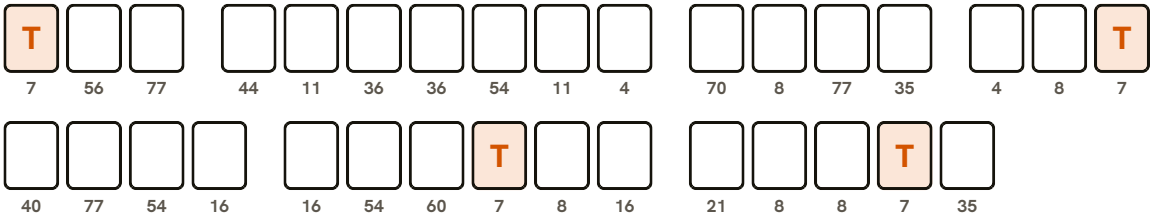
Cross off a row as each clue rules it out. The one left at the end is the culprit.

NAME	DIG TOOL	DINO GEAR	ACCESSORY	HAT STYLE	DISTRACTION
Explorer Ian	Roar Amplifier	Pterodactyl Glider	Handheld Compass	Green Sun Visor	Loud Whistle
Tracker Zia	Track Finder	Stego Shield	Field Goggles	Red Safari Cap	Loud Whistle
Ranger Tim	Bone Scanner	T-Rex Grabber	Field Goggles	Green Sun Visor	Loud Whistle
Scientist Paul	Plasma Chisel	T-Rex Grabber	Field Goggles	Green Sun Visor	Flashlight Beam
Ranger Sue	Bone Scanner	T-Rex Grabber	Handheld Compass	Red Safari Cap	Flashlight Beam
Professor Roy	Bone Scanner	Tricera Helmet	Handheld Compass	Green Sun Visor	Loud Whistle
Scientist Sereno	Amber Laser	T-Rex Grabber	Handheld Compass	Green Sun Visor	Loud Whistle
Scout Alan	Amber Laser	Tricera Helmet	Field Goggles	Green Sun Visor	Squeaky Toy
Ranger Owen	Bone Scanner	Pterodactyl Glider	Field Goggles	Blue Feather Fedora	Flashlight Beam
Ranger Maisie	Bone Scanner	Stego Shield	Handheld Compass	Blue Feather Fedora	Squeaky Toy
Tracker Claire	Track Finder	Tricera Helmet	Handheld Compass	Green Sun Visor	Squeaky Toy
Explorer Wu	Amber Laser	Stego Shield	Handheld Compass	Blue Feather Fedora	Loud Whistle
Ranger Ellie	Plasma Chisel	Stego Shield	Handheld Compass	Red Safari Cap	Loud Whistle
Dr Barnum	Bone Scanner	Pterodactyl Glider	Field Goggles	Blue Feather Fedora	Squeaky Toy
Ranger Mary	Bone Scanner	Stego Shield	Handheld Compass	Red Safari Cap	Flashlight Beam
Professor Franklin	Plasma Chisel	Tricera Helmet	Handheld Compass	Green Sun Visor	Squeaky Toy
Scout Lex	Track Finder	Raptor Boots	Field Goggles	Blue Feather Fedora	Loud Whistle
Dr Norell	Bone Scanner	Pterodactyl Glider	Handheld Compass	Green Sun Visor	Loud Whistle
Dr Gideon	Track Finder	Stego Shield	Handheld Compass	Red Safari Cap	Loud Whistle
Tracker Jack	Track Finder	Stego Shield	Handheld Compass	Green Sun Visor	Squeaky Toy
Professor Horner	Bone Scanner	Raptor Boots	Handheld Compass	Green Sun Visor	Loud Whistle

CLUE 1 Multiplication facts (1-12)

> We found equal rows of fossil supply crates packed inside the camp shed.

Solve each problem, then write its letter in every clue box that shows the same number.



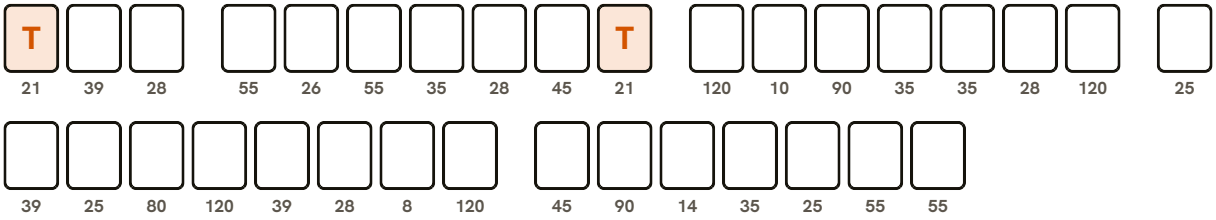
1 × 7 = ☐ → T	1 × 11 = ☐ → I	12 × 5 = ☐ → P	
11 × 7 = ☐ → E	7 × 3 = ☐ → B	5 × 8 = ☐ → W	
7 × 10 = ☐ → D	6 × 6 = ☐ → L	1 × 4 = ☐ → N	5 × 7 = ☐ → S
1 × 8 = ☐ → O	7 × 8 = ☐ → H	6 × 9 = ☐ → A	11 × 4 = ☐ → V
2 × 8 = ☐ → R			

Scratch space:

CLUE 2 Skip counting

> Tracks trail along the canyon mud in steady repeated sets.

Solve each problem, then write its letter in every clue box that shows the same number.



Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, ___, 24, 27 ☐ → **T**

Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, ___, 28, 30 ☐ → **U**

Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, ___, 60, 65 ☐ → **S**

Skip-count by 2s. Fill the blank: 2, 4, 6, 8, ___, 12, 14 ☐ → **R**

Skip-count by 5s. Fill the blank: 5, 10, 15, 20, ___, 30, 35 ☐ → **A**

Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, ___, 30, 32 ☐ → **E**

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, ___, 42, 45 ☐ → **H**

Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, ___, 90, 100 ☐ → **N**

Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, ___, 16, 18 ☐ → **M**

Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, ___, 50, 55 ☐ → **C**

Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, ___, 40, 45 ☐ → **P**

Skip-count by 2s. Fill the blank: 2, 4, 6, ___, 10, 12 ☐ → **L**

Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, ___, 130, 140 ☐ → **D**

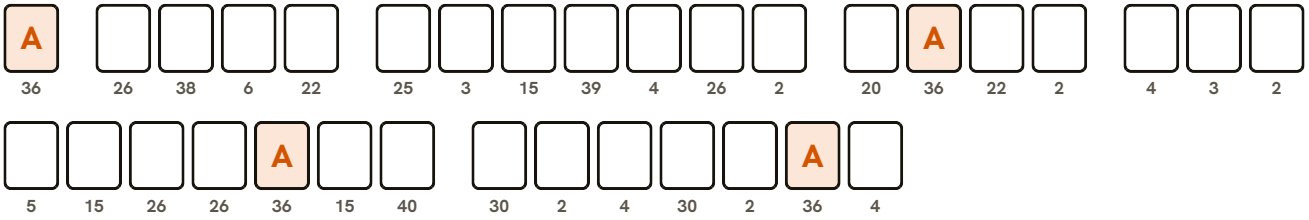
Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, ___, 100, 110 ☐ → O

Scratch space:

CLUE 3 Fractions of a number

> Only a fractional portion of the bone sample tray was taken.

Solve each problem, then write its letter in every clue box that shows the same number.



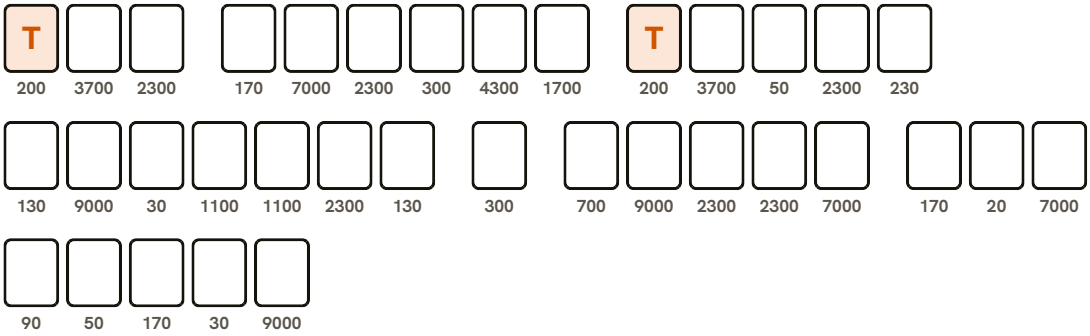
2/5 of 90 = ☐ → A	4/8 of 4 = ☐ → E	3/6 of 80 = ☐ → N
1/2 of 30 = ☐ → I	1/4 of 120 = ☐ → R	5/6 of 6 = ☐ → V
2/4 of 6 = ☐ → H	2/3 of 6 = ☐ → T	6/10 of 65 = ☐ → S
2/8 of 88 = ☐ → D	2/10 of 100 = ☐ → M	3/6 of 76 = ☐ → O
5/10 of 52 = ☐ → L	5/8 of 40 = ☐ → W	1/10 of 60 = ☐ → U

Scratch space:

CLUE 4 Rounding

The dig site radar readout only displays rounded numbers.

Solve each problem, then write its letter in every clue box that shows the same number.



Round 228 to the nearest hundred ☐ → T

Round 46 to the nearest ten ☐ → I

Round 1,667 to the nearest hundred ☐ → Y

Round 34 to the nearest ten ☐ → O

Round 2,261 to the nearest hundred ☐ → E

Round 8,912 to the nearest thousand ☐ → R

Round 132 to the nearest ten ☐ → D

Round 3,742 to the nearest hundred ☐ → H

Round 4,326 to the nearest hundred ☐ → K

Round 90 to the nearest ten ☐ → V

Round 24 to the nearest ten ☐ → U

Round 6,518 to the nearest thousand ☐ → N

Round 253 to the nearest hundred ☐ → A

Round 1,147 to the nearest hundred ☐ → P

Round 726 to the nearest hundred ☐ → G

Round 232 to the nearest ten ☐ → F

Round 173 to the nearest ten ☐ → S

Scratch space:

CLUE 5 Division facts (1-12) - the last clue

> The team divided the fossil fragments evenly among sample bags.

First solve each problem. Then find each answer in the numbered list below and cross that sentence out. One sentence will be left - that is exactly what the villain did!

Step 1 - solve these:

96 ÷ 8 = ☐ | 32 ÷ 4 = ☐ | 6 ÷ 2 = ☐ | 63 ÷ 9 = ☐ | 110 ÷ 11 = ☐

5 ÷ 1 = ☐ | 5 ÷ 5 = ☐ | 81 ÷ 9 = ☐ | 16 ÷ 4 = ☐ | 88 ÷ 8 = ☐

30 ÷ 5 = ☐

Step 2 - cross out the sentence with each answer:

1. The villain amplified a dino roar, then zipped away in raptor boots.
2. The villain scanned the fossil dig site, then bashed the wooden gate.
3. The villain scanned the fossil dig site, then glided over the ravine.
4. The villain chiseled out the glowing amber, then glided over the ravine.
5. The villain amplified a dino roar, then bashed the wooden gate.
6. The villain scanned the fossil dig site, then blocked the path with a stego shield.
7. The villain tracked footprints down the canyon, then zipped away in raptor boots.
8. The villain zapped the stone wall, then snatched the skull with a t rex grabber.
9. The villain tracked footprints down the canyon, then bashed the wooden gate.
10. The villain zapped the stone wall, then blocked the path with a stego shield.
11. The villain tracked footprints down the canyon, then glided over the ravine.
12. The villain amplified a dino roar, then glided over the ravine.

TEACHER / PARENT

Answer Key

The Great Fossil Caper

Culprit: Professor Roy

Bone Scanner · Tricera Helmet · Handheld Compass · Green Sun Visor · Loud Whistle

Trail: Start 21 → Clue 1 19 → Clue 2 13 → Clue 3 7 → Clue 4 4 → Clue 5 1

Clue 1 (Multiplication facts (1-12)): "THE VILLAIN DOES NOT WEAR RAPTOR BOOTS"

1 × 7 = 7 (T) · 1 × 11 = 11 (I) · 12 × 5 = 60 (P) · 11 × 7 = 77 (E) · 7 × 3 = 21 (B) · 5 × 8 = 40 (W) · 7 × 10 = 70 (D) · 6 × 6 = 36 (L) · 1 × 4 = 4 (N) · 5 × 7 = 35 (S) · 1 × 8 = 8 (O) · 7 × 8 = 56 (H) · 6 × 9 = 54 (A) · 11 × 4 = 44 (V) · 2 × 8 = 16 (R)

Clue 2 (Skip counting): "THE SUSPECT DROPPED A HANDHELD COMPASS"

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, ___, 24, 27 = 21 (T) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, ___, 28, 30 = 26 (U) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, ___, 60, 65 = 55 (S) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, ___, 12, 14 = 10 (R) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, ___, 30, 35 = 25 (A) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, ___, 30, 32 = 28 (E) · Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, ___, 42, 45 = 39 (H) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, ___, 90, 100 = 80 (N) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, ___, 16, 18 = 14 (M) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, ___, 50, 55 = 45 (C) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, ___, 40, 45 = 35 (P) · Skip-count by 2s. Fill the blank: 2, 4, 6, ___, 10, 12 = 8 (L) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, ___, 130, 140 = 120 (D) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, ___, 100, 110 = 90 (O)

Clue 3 (Fractions of a number): "A LOUD WHISTLE MADE THE VILLAIN RETREAT"

2/5 of 90 = 36 (A) · 4/8 of 4 = 2 (E) · 3/6 of 80 = 40 (N) · 1/2 of 30 = 15 (I) · 1/4 of 120 = 30 (R) · 5/6 of 6 = 5 (V) · 2/4 of 6 = 3 (H) · 2/3 of 6 = 4 (T) · 6/10 of 65 = 39 (S) · 2/8 of 88 = 22 (D) · 2/10 of 100 = 20 (M) · 3/6 of 76 = 38 (O) · 5/10 of 52 = 26 (L) · 5/8 of 40 = 25 (W) · 1/10 of 60 = 6 (U)

Clue 4 (Rounding): "THE SNEAKY THIEF DROPPED A GREEN SUN VISOR"

Round 228 to the nearest hundred = 200 (T) · Round 46 to the nearest ten = 50 (I) · Round 1,667 to the nearest hundred = 1700 (Y) · Round 34 to the nearest ten = 30 (O) · Round 2,261 to the nearest hundred = 2300 (E) · Round 8,912 to the nearest thousand = 9000 (R) · Round 132 to the nearest ten = 130 (D) · Round 3,742 to the nearest hundred = 3700 (H) · Round 4,326 to the nearest hundred = 4300 (K) · Round 90 to the nearest ten = 90 (V) · Round 24 to the nearest ten = 20 (U) · Round 6,518 to the nearest thousand = 7000 (N) · Round 253 to the nearest hundred = 300 (A) · Round 1,147 to the nearest hundred = 1100 (P) · Round 726 to the nearest hundred = 700 (G) · Round 232 to the nearest ten = 230 (F) · Round 173 to the nearest ten = 170 (S)

Clue 5 (Division facts (1-12)): surviving statement is box 2 → Professor Roy

96 ÷ 8 = 12 · 32 ÷ 4 = 8 · 6 ÷ 2 = 3 · 63 ÷ 9 = 7 · 110 ÷ 11 = 10 · 5 ÷ 1 = 5 · 5 ÷ 5 = 1 · 81 ÷ 9 = 9 · 16 ÷ 4 = 4 · 88 ÷ 8 = 11 · 30 ÷ 5 = 6