The Mystery of the Fossil Ridge Saboteur

Grade 3 math · Multiplication, Rounding, Addition, Subtraction, Division · Reading level grades 7-9

Detective: _____ **Date:** _____

Chaos struck the Cretaceous Basin Field Station when a rare Tyrannosaurus skull was tampered with right before the public unveiling. The culprit left behind clues across the dig site. Help Detective Vance decode the evidence and track down the suspect!

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 Saboteur is _____

Possible suspects

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

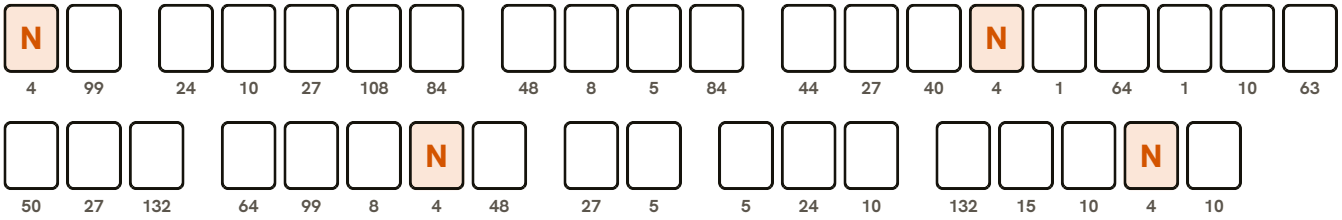
NAME	EXCAVATION TOOL	FIELD GEAR	WATCH WRIST	HAT COLOR	PHOBIA
Dr. Dong Zhiming	Pneumatic Hammer	Thermal Imaging Visor	Left Wrist Watch	Olive Bucket Hat	Fear Of Dust Storms
Dr. Lindsay Zanno	Diamond Tip Scraper	Gps Survey Drone	Left Wrist Watch	Olive Bucket Hat	Fear Of Loud Noises
Dr. Barnum Brown	Laser Mapping Scanner	Gps Survey Drone	Right Wrist Watch	Olive Bucket Hat	Fear Of Dust Storms
Dr. Paul Sereno	Pneumatic Hammer	Gps Survey Drone	Left Wrist Watch	Brown Leather Cap	Fear Of Loud Noises
Dr. Kenneth Carpenter	Precision Air Scribe	Hydraulic Sample Pack	Right Wrist Watch	Khaki Fedora	Fear Of Dust Storms
Dr. Jack Horner	Sonic Rock Chisel	Hydraulic Sample Pack	Right Wrist Watch	Khaki Fedora	Fear Of Dust Storms
Dr. Ellie Sattler	Laser Mapping Scanner	Thermal Imaging Visor	Left Wrist Watch	Khaki Fedora	Fear Of Dust Storms
Roy Chapman Andrews	Diamond Tip Scraper	Thermal Imaging Visor	Left Wrist Watch	Khaki Fedora	Fear Of Loud Noises
Prof. Othniel Marsh	Sonic Rock Chisel	Hydraulic Sample Pack	Right Wrist Watch	Olive Bucket Hat	Fear Of Dust Storms
Dr. Edward Cope	Laser Mapping Scanner	Hydraulic Sample Pack	Left Wrist Watch	Brown Leather Cap	Fear Of Loud Noises
Dr. Robert Bakker	Pneumatic Hammer	Hydraulic Sample Pack	Left Wrist Watch	Khaki Fedora	Fear Of Dust Storms
Dr. Patricia Vickers	Diamond Tip Scraper	Thermal Imaging Visor	Right Wrist Watch	Olive Bucket Hat	Fear Of Heights
Dr. Xu Xing	Sonic Rock Chisel	Hydraulic Sample Pack	Left Wrist Watch	Khaki Fedora	Fear Of Dust Storms
Dr. Angela Milner	Precision Air Scribe	Seismic Ground Sensor	Left Wrist Watch	Khaki Fedora	Fear Of Dust Storms
Dr. Mary Anning	Sonic Rock Chisel	Hydraulic Sample Pack	Left Wrist Watch	Brown Leather Cap	Fear Of Dust Storms
Dr. Nizar Ibrahim	Pneumatic Hammer	Thermal Imaging Visor	Left Wrist Watch	Khaki Fedora	Fear Of Loud Noises
Dr. Alan Grant	Sonic Rock Chisel	Heavy Duty Magnifier	Left Wrist Watch	Khaki Fedora	Fear Of Dust Storms
Dr. Rodolfo Coria	Laser Mapping Scanner	Thermal Imaging Visor	Left Wrist Watch	Olive Bucket Hat	Fear Of Heights
Dr. Thomas Holtz	Diamond Tip Scraper	Gps Survey Drone	Right Wrist Watch	Khaki Fedora	Fear Of Dust Storms
Dr. Kristina Curry	Sonic Rock Chisel	Thermal Imaging Visor	Left Wrist Watch	Khaki Fedora	Fear Of Loud Noises
Dr. Anusuya Chinsamy	Precision Air Scribe	Seismic Ground Sensor	Left Wrist Watch	Brown Leather Cap	Fear Of Dust Storms

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CLUE 1 Multiplication facts (1-12)

At the quarry grid, researchers organized bone fragments into equal rows to compute total fossil yields.

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



2 × 2 = ☐ → N

8 × 5 = ☐ → G

9 × 12 = ☐ → V

11 × 9 = ☐ → O

1 × 5 = ☐ → T

9 × 7 = ☐ → R

4 × 2 = ☐ → U

5 × 3 = ☐ → C

8 × 8 = ☐ → F

4 × 11 = ☐ → M

12 × 7 = ☐ → Y

8 × 6 = ☐ → D

2 × 12 = ☐ → H

3 × 9 = ☐ → A

12 × 11 = ☐ → S

10 × 5 = ☐ → W

1 × 1 = ☐ → I

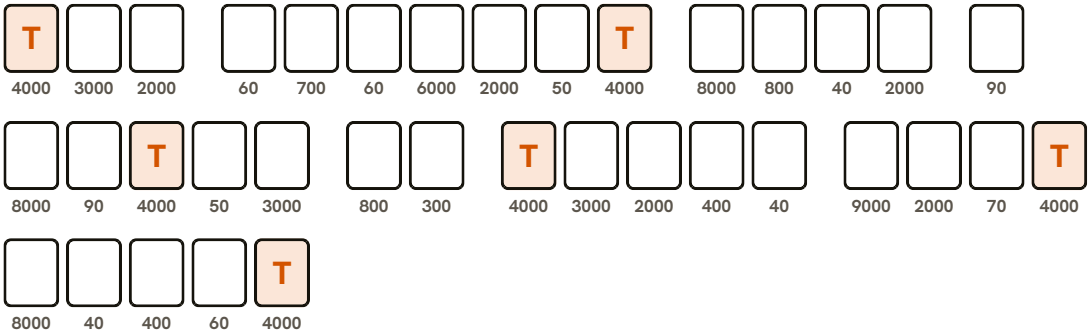
1 × 10 = ☐ → E

Scratch space:

CLUE 2 Rounding

The digital station readout showed approximate sediment depth figures rounded to the nearest ten.

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



Round 3,951 to the nearest thousand ☐ → T

Round 6,118 to the nearest thousand ☐ → P

Round 397 to the nearest hundred ☐ → I

Round 8,449 to the nearest thousand ☐ → W

Round 3,291 to the nearest thousand ☐ → H

Round 67 to the nearest ten ☐ → F

Round 326 to the nearest hundred ☐ → N

Round 744 to the nearest hundred ☐ → U

Round 94 to the nearest ten ☐ → A

Round 2,469 to the nearest thousand ☐ → E

Round 39 to the nearest ten ☐ → R

Round 49 to the nearest ten ☐ → C

Round 9,490 to the nearest thousand ☐ → L

Round 64 to the nearest ten ☐ → S

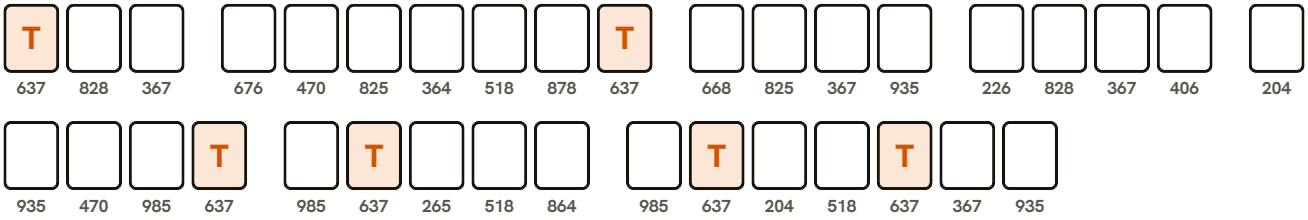
Round 763 to the nearest hundred ☐ → O

Scratch space:

CLUE 3 Addition

The field lab technician tallied all newly cataloged specimen bags brought in from the North Trench.

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



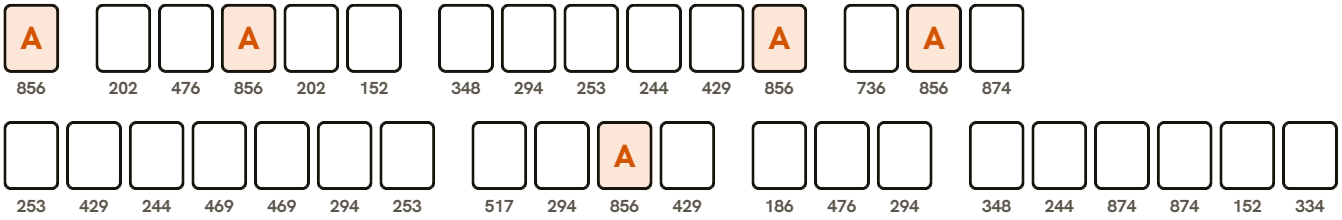
324 + 313 = ☐ → T	115 + 89 = ☐ → A	85 + 141 = ☐ → W
165 + 199 = ☐ → P	433 + 243 = ☐ → C	377 + 608 = ☐ → S
588 + 347 = ☐ → D	154 + 316 = ☐ → U	435 + 443 = ☐ → I
490 + 335 = ☐ → L	219 + 148 = ☐ → E	484 + 344 = ☐ → H
228 + 178 = ☐ → N	184 + 81 = ☐ → O	188 + 330 = ☐ → R
267 + 401 = ☐ → F	268 + 596 = ☐ → M	

Scratch space:

CLUE 4 Subtraction

> Comparing total excavated crates to remaining inventory revealed how many sample boxes were taken.

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



1078 - 222 = ☐ → A	406 - 58 = ☐ → F	811 - 75 = ☐ → W
698 - 181 = ☐ → N	380 - 46 = ☐ → L	899 - 25 = ☐ → S
566 - 272 = ☐ → E	224 - 72 = ☐ → I	556 - 87 = ☐ → P
470 - 284 = ☐ → T	488 - 59 = ☐ → R	429 - 185 = ☐ → O
852 - 376 = ☐ → H	283 - 81 = ☐ → K	569 - 316 = ☐ → D

Scratch space:

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

> The expedition lead split the remaining field supplies equally among the research teams.

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 = ☐ | 50 ÷ 10 = ☐ | 44 ÷ 4 = ☐ | 63 ÷ 7 = ☐ | 21 ÷ 7 = ☐

40 ÷ 10 = ☐ | 120 ÷ 12 = ☐ | 56 ÷ 7 = ☐ | 24 ÷ 4 = ☐ | 8 ÷ 8 = ☐

20 ÷ 10 = ☐

Step 2 - cross out the sentence with each answer:

1. The villain chiseled with a precision air scribe, then scouted the perimeter with a thermal imaging visor.
2. The villain scraped with a diamond tip scraper, then scouted the perimeter with a thermal imaging visor.
3. The villain scraped with a diamond tip scraper, then loaded soil into a hydraulic sample pack.
4. The villain swept a laser mapping scanner over the grid, then loaded soil into a hydraulic sample pack.
5. The villain used a sonic rock chisel to crack the plaster, then loaded soil into a hydraulic sample pack.
6. The villain fired up a pneumatic hammer near the specimen, then monitored vibrations with a seismic ground sensor.
7. The villain swept a laser mapping scanner over the grid, then scouted the perimeter with a thermal imaging visor.
8. The villain swept a laser mapping scanner over the grid, then launched a gps survey drone overhead.
9. The villain scraped with a diamond tip scraper, then launched a gps survey drone overhead.
10. The villain swept a laser mapping scanner over the grid, then inspected the bone structure using a heavy duty magnifier.
11. The villain chiseled with a precision air scribe, then monitored vibrations with a seismic ground sensor.
12. The villain fired up a pneumatic hammer near the specimen, then loaded soil into a hydraulic sample pack.

TEACHER / PARENT

Answer Key

The Mystery of the Fossil Ridge Saboteur

Culprit: Dr. Ellie Sattler

Laser Mapping Scanner · Thermal Imaging Visor · Left Wrist Watch · Khaki Fedora · Fear Of Dust Storms

Trail: Start 21 → Clue 1 20 → Clue 2 14 → Clue 3 7 → Clue 4 4 → Clue 5 1

Clue 1 (Multiplication facts (1-12)): "NO HEAVY DUTY MAGNIFIER WAS FOUND AT THE SCENE"

2 × 2 = 4 (N) · 8 × 5 = 40 (G) · 9 × 12 = 108 (V) · 11 × 9 = 99 (O) · 1 × 5 = 5 (T) · 9 × 7 = 63 (R) · 4 × 2 = 8 (U) · 5 × 3 = 15 (C) · 8 × 8 = 64 (F) · 4 × 11 = 44 (M) · 12 × 7 = 84 (Y) · 8 × 6 = 48 (D) · 2 × 12 = 24 (H) · 3 × 9 = 27 (A) · 12 × 11 = 132 (S) · 10 × 5 = 50 (W) · 1 × 1 = 1 (I) · 1 × 10 = 10 (E)

Clue 2 (Rounding): "THE SUSPECT WORE A WATCH ON THEIR LEFT WRIST"

Round 3,951 to the nearest thousand = 4000 (T) · Round 6,118 to the nearest thousand = 6000 (P) · Round 397 to the nearest hundred = 400 (I) · Round 8,449 to the nearest thousand = 8000 (W) · Round 3,291 to the nearest thousand = 3000 (H) · Round 67 to the nearest ten = 70 (F) · Round 326 to the nearest hundred = 300 (N) · Round 744 to the nearest hundred = 700 (U) · Round 94 to the nearest ten = 90 (A) · Round 2,469 to the nearest thousand = 2000 (E) · Round 39 to the nearest ten = 40 (R) · Round 49 to the nearest ten = 50 (C) · Round 9,490 to the nearest thousand = 9000 (L) · Round 64 to the nearest ten = 60 (S) · Round 763 to the nearest hundred = 800 (O)

Clue 3 (Addition): "THE CULPRIT FLED WHEN A DUST STORM STARTED"

324 + 313 = 637 (T) · 115 + 89 = 204 (A) · 85 + 141 = 226 (W) · 165 + 199 = 364 (P) · 433 + 243 = 676 (C) · 377 + 608 = 985 (S) · 588 + 347 = 935 (D) · 154 + 316 = 470 (U) · 435 + 443 = 878 (I) · 490 + 335 = 825 (L) · 219 + 148 = 367 (E) · 484 + 344 = 828 (H) · 228 + 178 = 406 (N) · 184 + 81 = 265 (O) · 188 + 330 = 518 (R) · 267 + 401 = 668 (F) · 268 + 596 = 864 (M)

Clue 4 (Subtraction): "A KHAKI FEDORA WAS DROPPED NEAR THE FOSSIL"

1078 - 222 = 856 (A) · 406 - 58 = 348 (F) · 811 - 75 = 736 (W) · 698 - 181 = 517 (N) · 380 - 46 = 334 (L) · 899 - 25 = 874 (S) · 566 - 272 = 294 (E) · 224 - 72 = 152 (I) · 556 - 87 = 469 (P) · 470 - 284 = 186 (T) · 488 - 59 = 429 (R) · 429 - 185 = 244 (O) · 852 - 376 = 476 (H) · 283 - 81 = 202 (K) · 569 - 316 = 253 (D)

Clue 5 (Division facts (1-12)): surviving statement is box 7 → Dr. Ellie Sattler

96 ÷ 8 = 12 · 50 ÷ 10 = 5 · 44 ÷ 4 = 11 · 63 ÷ 7 = 9 · 21 ÷ 7 = 3 · 40 ÷ 10 = 4 · 120 ÷ 12 = 10 · 56 ÷ 7 = 8 · 24 ÷ 4 = 6 · 8 ÷ 8 = 1 · 20 ÷ 10 = 2