The Great Fossil Foil

Grade 3 math · Multiplication, Rounding, Addition, Subtraction, Division · Reading level grades 3-4

Detective: _____ **Date:** _____

Someone snuck into Cretaceous Valley Research Park and swapped the rare T-Rex skeleton with a plastic replica! Examine the clue files to catch the bandit.

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 Dino Bandit is _____

Possible suspects

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

NAME	DINO HABITAT	RESCUE GEAR	STANCE	CAP COLOR	SNACK BAIT
Dr Mary Anning	Velociraptor Track	Rope Launcher	Right Handed	Red Cap	Fern Crunch
Excavator Ed	Triceratops Fence	Digging Claw	Left Handed	Green Cap	Fern Crunch
Tracker Sam	Velociraptor Track	Radar Map	Left Handed	Green Cap	Berry Chew
Dr Phil Currie	Stegosaurus Pen	Digging Claw	Left Handed	Green Cap	Fern Crunch
Ranger Rick	Stegosaurus Pen	Laser Scope	Right Handed	Red Cap	Berry Chew
Dr Jack Horner	Stegosaurus Pen	Digging Claw	Left Handed	Red Cap	Berry Chew
Dr Xu Xing	Stegosaurus Pen	Laser Scope	Left Handed	Yellow Cap	Melon Slice
Dr Paul Sereno	Velociraptor Track	Laser Scope	Left Handed	Yellow Cap	Berry Chew
Prof Richard Owen	Triceratops Fence	Tracker Pad	Left Handed	Green Cap	Berry Chew
Dr Gideon Mantell	Stegosaurus Pen	Laser Scope	Right Handed	Green Cap	Melon Slice
Dr Luis Chiappe	Triceratops Fence	Rope Launcher	Left Handed	Yellow Cap	Melon Slice
Dr Karen Chin	Ankylosaurus Zone	Digging Claw	Right Handed	Red Cap	Melon Slice
Dr Angela Milner	Velociraptor Track	Digging Claw	Right Handed	Red Cap	Berry Chew
Fossil Fiona	Stegosaurus Pen	Radar Map	Right Handed	Red Cap	Melon Slice
Dino Dave	Ankylosaurus Zone	Rope Launcher	Left Handed	Red Cap	Berry Chew
Dr Roy Chapman	Triceratops Fence	Rope Launcher	Right Handed	Red Cap	Berry Chew
Dino Dan	Ankylosaurus Zone	Radar Map	Right Handed	Red Cap	Berry Chew
Scout Harper	Velociraptor Track	Tracker Pad	Right Handed	Red Cap	Fern Crunch
Dr Bob Bakker	Velociraptor Track	Digging Claw	Right Handed	Yellow Cap	Berry Chew
Professor Rex	Stegosaurus Pen	Radar Map	Right Handed	Red Cap	Berry Chew
Dr Nizar Ibrahim	T Rex Area	Digging Claw	Left Handed	Yellow Cap	Berry Chew

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CLUE 1 Multiplication facts (1-12)

> Ranger Sam found rows of fossil crates stacked outside the camp and multiplied the rows to get the total.

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

T																			
36	40	18	66	132	18	28	60	144	3	11	70	70	28	11	132	45	32	18	66
		T																	
132	32	36	30	66	18	28	70	28	66	18	84	66	49	32	8	18			

9 × 4 = ☐ → T

4 × 2 = ☐ → P

12 × 11 = ☐ → N

10 × 7 = ☐ → L

1 × 11 = ☐ → I

4 × 7 = ☐ → A

2 × 9 = ☐ → E

7 × 7 = ☐ → C

1 × 3 = ☐ → V

5 × 9 = ☐ → D

6 × 5 = ☐ → U

12 × 7 = ☐ → R

12 × 12 = ☐ → Y

4 × 8 = ☐ → O

5 × 8 = ☐ → H

12 × 5 = ☐ → K

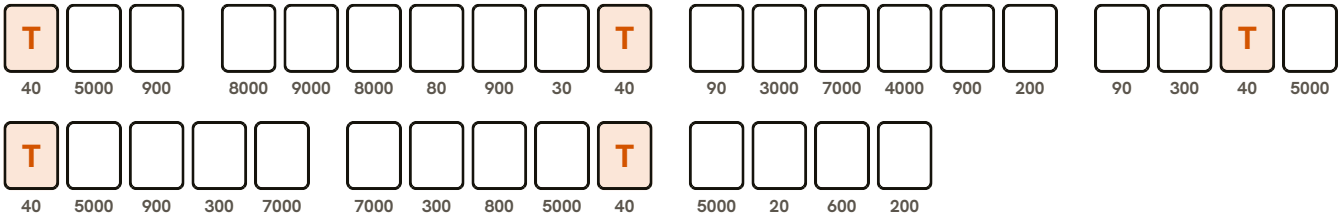
6 × 11 = ☐ → S

Scratch space:

CLUE 2 Rounding

The dig site radar scanner only gives rounded estimates of distance to nearby targets.

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



Round 42 to the nearest ten ☐ → T

Round 9,203 to the nearest thousand ☐ → U

Round 3,041 to the nearest thousand ☐ → O

Round 4,891 to the nearest thousand ☐ → H

Round 931 to the nearest hundred ☐ → E

Round 341 to the nearest hundred ☐ → I

Round 29 to the nearest ten ☐ → C

Round 8,136 to the nearest thousand ☐ → S

Round 813 to the nearest hundred ☐ → G

Round 77 to the nearest ten ☐ → P

Round 597 to the nearest hundred ☐ → N

Round 86 to the nearest ten ☐ → W

Round 3,765 to the nearest thousand ☐ → K

Round 239 to the nearest hundred ☐ → D

Round 6,874 to the nearest thousand ☐ → R

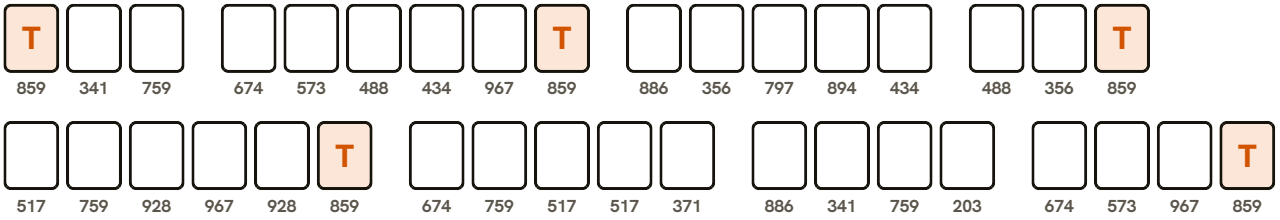
Round 24 to the nearest ten ☐ → A

Scratch space:

CLUE 3 Addition

Fossil Fiona tallied up all the extra bone fragments found along the mud trail.

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



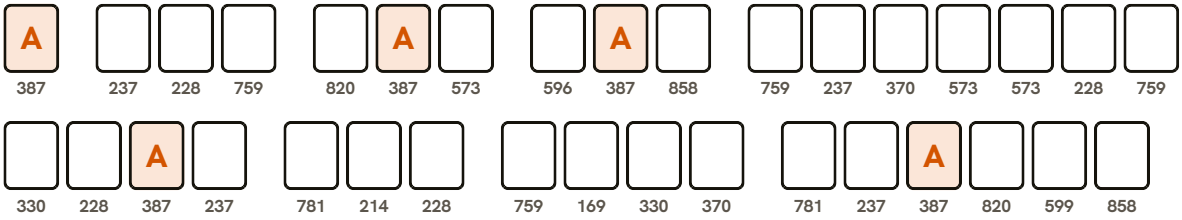
402 + 457 = ☐ → T	546 + 348 = ☐ → L	562 + 405 = ☐ → I
210 + 363 = ☐ → A	170 + 201 = ☐ → Y	398 + 530 = ☐ → S
405 + 269 = ☐ → B	124 + 79 = ☐ → W	339 + 420 = ☐ → E
269 + 219 = ☐ → N	143 + 198 = ☐ → H	180 + 337 = ☐ → R
143 + 291 = ☐ → D	617 + 269 = ☐ → C	530 + 267 = ☐ → U
207 + 149 = ☐ → O		

Scratch space:

CLUE 4 Subtraction

Tracker Sam subtracted the stolen tools from the camp supply list to see what was missing.

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



755 - 368 = ☐ → A

1001 - 181 = ☐ → C

560 - 332 = ☐ → E

818 - 37 = ☐ → T

401 - 71 = ☐ → N

862 - 266 = ☐ → W

942 - 183 = ☐ → D

895 - 322 = ☐ → P

357 - 143 = ☐ → H

503 - 133 = ☐ → O

281 - 44 = ☐ → R

320 - 151 = ☐ → I

984 - 126 = ☐ → S

837 - 238 = ☐ → K

Scratch space:

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

> The team split the mystery footprints into equal search zones for each ranger.

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:

16 ÷ 8 = ☐	24 ÷ 8 = ☐	120 ÷ 12 = ☐	88 ÷ 11 = ☐	96 ÷ 8 = ☐
88 ÷ 8 = ☐	63 ÷ 7 = ☐	28 ÷ 4 = ☐	40 ÷ 8 = ☐	44 ÷ 11 = ☐
48 ÷ 8 = ☐				

Step 2 - cross out the sentence with each answer:

1. The villain marched past the Triceratops fence, then scaled the gate with a rope launcher.
2. The villain swung past the Stegosaurus pen, then checked the path with a radar map.
3. The villain dashed past the Velociraptor paddock, then scraped the dirt with a digging claw.
4. The villain dashed past the Velociraptor paddock, then checked the path with a radar map.
5. The villain swung past the Stegosaurus pen, then scaled the gate with a rope launcher.
6. The villain marched past the Triceratops fence, then aimed around with a laser scope.
7. The villain stamped past the T-Rex habitat, then scraped the dirt with a digging claw.
8. The villain stamped past the T-Rex habitat, then scanned the mud with a tracker pad.
9. The villain stamped past the T-Rex habitat, then aimed around with a laser scope.
10. The villain crawled past the Ankylosaurus exhibit, then checked the path with a radar map.
11. The villain marched past the Triceratops fence, then scanned the mud with a tracker pad.
12. The villain crawled past the Ankylosaurus exhibit, then scanned the mud with a tracker pad.

TEACHER / PARENT

Answer Key

The Great Fossil Foil

Culprit: Dr Roy Chapman

Triceratops Fence · Rope Launcher · Right Handed · Red Cap · Berry Chew

Trail: Start 21 → Clue 1 17 → Clue 2 9 → Clue 3 5 → Clue 4 4 → Clue 5 1

Clue 1 (Multiplication facts (1-12)): "THE SNEAKY VILLAIN DOES NOT USE A LASER SCOPE"

9 × 4 = 36 (T) · 4 × 2 = 8 (P) · 12 × 11 = 132 (N) · 10 × 7 = 70 (L) · 1 × 11 = 11 (I) · 4 × 7 = 28 (A) · 2 × 9 = 18 (E) · 7 × 7 = 49 (C) · 1 × 3 = 3 (V) · 5 × 9 = 45 (D) · 6 × 5 = 30 (U) · 12 × 7 = 84 (R) · 12 × 12 = 144 (Y) · 4 × 8 = 32 (O) · 5 × 8 = 40 (H) · 12 × 5 = 60 (K) · 6 × 11 = 66 (S)

Clue 2 (Rounding): "THE SUSPECT WORKED WITH THEIR RIGHT HAND"

Round 42 to the nearest ten = 40 (T) · Round 9,203 to the nearest thousand = 9000 (U) · Round 3,041 to the nearest thousand = 3000 (O) · Round 4,891 to the nearest thousand = 5000 (H) · Round 931 to the nearest hundred = 900 (E) · Round 341 to the nearest hundred = 300 (I) · Round 29 to the nearest ten = 30 (C) · Round 8,136 to the nearest thousand = 8000 (S) · Round 813 to the nearest hundred = 800 (G) · Round 77 to the nearest ten = 80 (P) · Round 597 to the nearest hundred = 600 (N) · Round 86 to the nearest ten = 90 (W) · Round 3,765 to the nearest thousand = 4000 (K) · Round 239 to the nearest hundred = 200 (D) · Round 6,874 to the nearest thousand = 7000 (R) · Round 24 to the nearest ten = 20 (A)

Clue 3 (Addition): "THE BANDIT COULD NOT RESIST BERRY CHEW BAIT"

402 + 457 = 859 (T) · 546 + 348 = 894 (L) · 562 + 405 = 967 (I) · 210 + 363 = 573 (A) · 170 + 201 = 371 (Y) · 398 + 530 = 928 (S) · 405 + 269 = 674 (B) · 124 + 79 = 203 (W) · 339 + 420 = 759 (E) · 269 + 219 = 488 (N) · 143 + 198 = 341 (H) · 180 + 337 = 517 (R) · 143 + 291 = 434 (D) · 617 + 269 = 886 (C) · 530 + 267 = 797 (U) · 207 + 149 = 356 (O)

Clue 4 (Subtraction): "A RED CAP WAS DROPPED NEAR THE DINO TRACKS"

755 - 368 = 387 (A) · 1001 - 181 = 820 (C) · 560 - 332 = 228 (E) · 818 - 37 = 781 (T) · 401 - 71 = 330 (N) · 862 - 266 = 596 (W) · 942 - 183 = 759 (D) · 895 - 322 = 573 (P) · 357 - 143 = 214 (H) · 503 - 133 = 370 (O) · 281 - 44 = 237 (R) · 320 - 151 = 169 (I) · 984 - 126 = 858 (S) · 837 - 238 = 599 (K)

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

16 ÷ 8 = 2 · 24 ÷ 8 = 3 · 120 ÷ 12 = 10 · 88 ÷ 11 = 8 · 96 ÷ 8 = 12 · 88 ÷ 8 = 11 · 63 ÷ 7 = 9 · 28 ÷ 4 = 7 · 40 ÷ 8 = 5 · 44 ÷ 11 = 4 · 48 ÷ 8 = 6