The Great Fossil Park Mystery

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

Detective: _____ **Date:** _____

Someone snuck into Palaeo Peak Dig Site and stole the glowing T-Rex skull! The junior detective squad must solve math clues to unmask the culprit.

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 Bone Thief is _____

Possible suspects

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

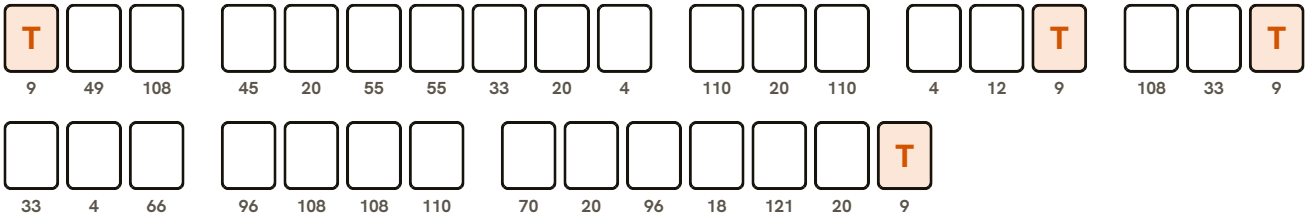
NAME	DIG TOOL	DINO SNACK	STRAP COLOR	CAP STYLE	DISTRACTION
Sierra Quartz	Rock Hammer	Melon Slice	Red Strap	Sun Hat	Squeaky Toy
Sandy Stone	Rock Hammer	Fern Leaf	Blue Strap	Baseball Cap	Loud Whistle
Tracker Tim	Dust Brush	Seed Biscuit	Blue Strap	Pith Helmet	Squeaky Toy
Boulder Bill	Dust Brush	Seed Biscuit	Blue Strap	Baseball Cap	Squeaky Toy
Prof Amber	Magnifier	Seed Biscuit	Blue Strap	Baseball Cap	Squeaky Toy
Cliff Ridge	Sifter	Seed Biscuit	Blue Strap	Sun Hat	Flashlight Beam
Terra Green	Sifter	Melon Slice	Blue Strap	Sun Hat	Squeaky Toy
Penny Dust	Sifter	Melon Slice	Blue Strap	Pith Helmet	Squeaky Toy
Scout Sam	Magnifier	Melon Slice	Blue Strap	Pith Helmet	Squeaky Toy
Pete Clay	Dust Brush	Berry Crunch	Red Strap	Pith Helmet	Squeaky Toy
Canyon Cole	Magnifier	Fern Leaf	Blue Strap	Sun Hat	Squeaky Toy
Digging Dan	Chisel	Fern Leaf	Blue Strap	Pith Helmet	Squeaky Toy
Fossil Frank	Dust Brush	Melon Slice	Blue Strap	Pith Helmet	Squeaky Toy
Flint Spark	Dust Brush	Fern Leaf	Blue Strap	Pith Helmet	Flashlight Beam
Dino Daisy	Rock Hammer	Tree Bark	Red Strap	Pith Helmet	Loud Whistle
Basalt Bob	Magnifier	Seed Biscuit	Red Strap	Sun Hat	Flashlight Beam
Ruby Ridge	Chisel	Melon Slice	Red Strap	Sun Hat	Squeaky Toy
Gravel Greg	Rock Hammer	Seed Biscuit	Blue Strap	Sun Hat	Flashlight Beam
Dr Bone	Chisel	Berry Crunch	Blue Strap	Baseball Cap	Loud Whistle
Maya Mud	Rock Hammer	Fern Leaf	Blue Strap	Pith Helmet	Flashlight Beam
Dr Rex	Sifter	Melon Slice	Red Strap	Sun Hat	Loud Whistle

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CLUE 1 Multiplication facts (1-12)

To find the first footprint trail, count the total fossil teeth arranged in equal rows on the display tray.

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



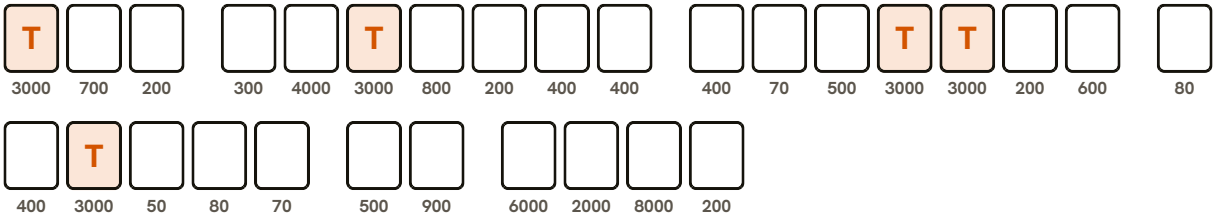
1 × 9 = ☐ → T	10 × 7 = ☐ → B	1 × 12 = ☐ → O
11 × 3 = ☐ → A	3 × 6 = ☐ → C	12 × 8 = ☐ → S
9 × 5 = ☐ → V	7 × 7 = ☐ → H	12 × 9 = ☐ → E
2 × 2 = ☐ → N		
10 × 2 = ☐ → I	11 × 11 = ☐ → U	11 × 5 = ☐ → L
11 × 10 = ☐ → D	11 × 6 = ☐ → Y	

Scratch space:

CLUE 2 Rounding

The dig site radar shows fuzzy distance numbers. Round the distance to the nearest ten to decode the direction.

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



Round 2,772 to the nearest thousand ☐ → T

Round 171 to the nearest hundred ☐ → E

Round 48 to the nearest ten ☐ → R

Round 346 to the nearest hundred ☐ → W

Round 582 to the nearest hundred ☐ → D

Round 881 to the nearest hundred ☐ → F

Round 8,243 to the nearest thousand ☐ → U

Round 744 to the nearest hundred ☐ → H

Round 384 to the nearest hundred ☐ → S

Round 4,373 to the nearest thousand ☐ → I

Round 83 to the nearest ten ☐ → A

Round 5,987 to the nearest thousand ☐ → B

Round 2,466 to the nearest thousand ☐ → L

Round 491 to the nearest hundred ☐ → O

Round 74 to the nearest ten ☐ → P

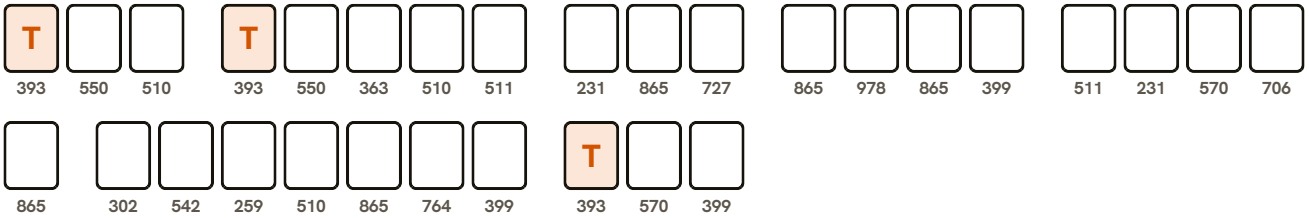
Round 848 to the nearest hundred ☐ → N

Scratch space:

CLUE 3 Addition

Tally up all the amber stones collected in the morning and afternoon to open the supply crate.

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



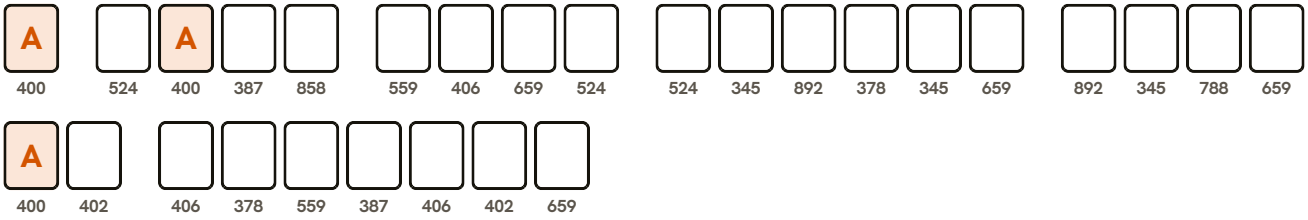
154 + 239 = ☐ → T	241 + 465 = ☐ → M	298 + 272 = ☐ → O
211 + 188 = ☐ → Y	324 + 440 = ☐ → K	331 + 180 = ☐ → F
338 + 172 = ☐ → E	108 + 123 = ☐ → R	309 + 241 = ☐ → H
109 + 193 = ☐ → S	418 + 309 = ☐ → N	382 + 596 = ☐ → W
477 + 388 = ☐ → A	224 + 318 = ☐ → Q	172 + 87 = ☐ → U
131 + 232 = ☐ → I		

Scratch space:

CLUE 4 Subtraction

Subtract the damaged camp shovels from the original total to reveal the hidden code on the locker.

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



714 - 314 = ☐ → A

643 - 265 = ☐ → M

428 - 22 = ☐ → I

723 - 321 = ☐ → N

745 - 186 = ☐ → P

1016 - 357 = ☐ → T

1128 - 340 = ☐ → F

875 - 351 = ☐ → H

1056 - 198 = ☐ → D

651 - 306 = ☐ → E

1245 - 353 = ☐ → L

419 - 32 = ☐ → R

Scratch space:

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

> Split the heavy bone sample jars equally among the team packs to unlock the main research lab.

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:

24 ÷ 2 = ☐	11 ÷ 11 = ☐	16 ÷ 4 = ☐	84 ÷ 12 = ☐	36 ÷ 4 = ☐
12 ÷ 6 = ☐	42 ÷ 7 = ☐	132 ÷ 12 = ☐	80 ÷ 8 = ☐	40 ÷ 5 = ☐
12 ÷ 4 = ☐				

Step 2 - cross out the sentence with each answer:

1. The villain scraped the mud with a chisel, then munching a fresh fern leaf.
2. The villain sifted the gravel with a mesh screen, then nibbling a baked seed biscuit.
3. The villain chipped the stone with a rock hammer, then eating a big melon slice.
4. The villain inspected the bone with a magnifier, then eating a big melon slice.
5. The villain swept the dust with a brush, then eating a big melon slice.
6. The villain inspected the bone with a magnifier, then munching a fresh fern leaf.
7. The villain scraped the mud with a chisel, then chewing on a piece of tree bark.
8. The villain scraped the mud with a chisel, then nibbling a baked seed biscuit.
9. The villain chipped the stone with a rock hammer, then munching a fresh fern leaf.
10. The villain scraped the mud with a chisel, then eating a big melon slice.
11. The villain chipped the stone with a rock hammer, then crunching a sweet berry snack.
12. The villain sifted the gravel with a mesh screen, then eating a big melon slice.

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TEACHER / PARENT

Answer Key

The Great Fossil Park Mystery

Culprit: Fossil Frank

Dust Brush · Melon Slice · Blue Strap · Pith Helmet · Squeaky Toy

Trail: Start 21 → Clue 1 15 → Clue 2 10 → Clue 3 6 → Clue 4 4 → Clue 5 1

Clue 1 (Multiplication facts (1-12)): "THE VILLAIN DID NOT EAT ANY SEED BISCUIT"

1 × 9 = 9 (T) · 10 × 7 = 70 (B) · 1 × 12 = 12 (O) · 11 × 3 = 33 (A) · 3 × 6 = 18 (C) · 12 × 8 = 96 (S) · 9 × 5 = 45 (V) · 7 × 7 = 49 (H) · 12 × 9 = 108 (E) · 2 × 2 = 4 (N) · 10 × 2 = 20 (I) · 11 × 11 = 121 (U) · 11 × 5 = 55 (L) · 11 × 10 = 110 (D) · 11 × 6 = 66 (Y)

Clue 2 (Rounding): "THE WITNESS SPOTTED A STRAP OF BLUE"

Round 2,772 to the nearest thousand = 3000 (T) · Round 171 to the nearest hundred = 200 (E) · Round 48 to the nearest ten = 50 (R) · Round 346 to the nearest hundred = 300 (W) · Round 582 to the nearest hundred = 600 (D) · Round 881 to the nearest hundred = 900 (F) · Round 8,243 to the nearest thousand = 8000 (U) · Round 744 to the nearest hundred = 700 (H) · Round 384 to the nearest hundred = 400 (S) · Round 4,373 to the nearest thousand = 4000 (I) · Round 83 to the nearest ten = 80 (A) · Round 5,987 to the nearest thousand = 6000 (B) · Round 2,466 to the nearest thousand = 2000 (L) · Round 491 to the nearest hundred = 500 (O) · Round 74 to the nearest ten = 70 (P) · Round 848 to the nearest hundred = 800 (N)

Clue 3 (Addition): "THE THIEF RAN AWAY FROM A SQUEAKY TOY"

154 + 239 = 393 (T) · 241 + 465 = 706 (M) · 298 + 272 = 570 (O) · 211 + 188 = 399 (Y) · 324 + 440 = 764 (K) · 331 + 180 = 511 (F) · 338 + 172 = 510 (E) · 108 + 123 = 231 (R) · 309 + 241 = 550 (H) · 109 + 193 = 302 (S) · 418 + 309 = 727 (N) · 382 + 596 = 978 (W) · 477 + 388 = 865 (A) · 224 + 318 = 542 (Q) · 172 + 87 = 259 (U) · 131 + 232 = 363 (I)

Clue 4 (Subtraction): "A HARD PITH HELMET LEFT AN IMPRINT"

714 - 314 = 400 (A) · 643 - 265 = 378 (M) · 428 - 22 = 406 (I) · 723 - 321 = 402 (N) · 745 - 186 = 559 (P) · 1016 - 357 = 659 (T) · 1128 - 340 = 788 (F) · 875 - 351 = 524 (H) · 1056 - 198 = 858 (D) · 651 - 306 = 345 (E) · 1245 - 353 = 892 (L) · 419 - 32 = 387 (R)

Clue 5 (Division facts (1-12)): surviving statement is box 5 → Fossil Frank

24 ÷ 2 = 12 · 11 ÷ 11 = 1 · 16 ÷ 4 = 4 · 84 ÷ 12 = 7 · 36 ÷ 4 = 9 · 12 ÷ 6 = 2 · 42 ÷ 7 = 6 · 132 ÷ 12 = 11 · 80 ÷ 8 = 10 · 40 ÷ 5 = 8 · 12 ÷ 4 = 3