



The Great Fossil Caper

Grade 2 math · Addition, Word problems, Place value, Subtraction, Missing addends · Reading level grades 3-4

Detective: _____ **Date:** _____

A sneaky rogue wrangler has broken into the Dino Valley Research Station! They snatched the rare golden T-Rex egg right out of the nursery incubator. Chief Paleontologist Dr. Bones needs your help to track down the thief before the prehistoric egg hatches!

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 rogue dino-wrangler is _____

Possible suspects

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

NAME	DINO MOUNT	SPECIAL TOOL	WRITING HAND	HAT COLOR	FAVORITE TREAT
Steggy Stone	Pterodactyl	night vision goggles	left handed	bright red helmet	maple dino oatmeal
Peggy Pegomastax	Pterodactyl	gps map tracker	left handed	bright red helmet	maple dino oatmeal
Gerry Geode	Ankylosaurus	thermal heat scanner	right handed	khaki bucket hat	crunchy rock candy
Clay Canyon	Ankylosaurus	sonic dino whistle	right handed	safari explorer cap	maple dino oatmeal
Sammy Spino	Ankylosaurus	laser fossil brush	left handed	bright red helmet	crunchy rock candy
Fiona Fern	Pterodactyl	laser fossil brush	left handed	khaki bucket hat	crunchy rock candy
Ian Malcolm	Pterodactyl	laser fossil brush	right handed	safari explorer cap	crunchy rock candy
Marnie Mud	Pterodactyl	night vision goggles	left handed	bright red helmet	crunchy rock candy
Daisy Digger	Stegosaurus	thermal heat scanner	left handed	bright red helmet	maple dino oatmeal
Toby Trex	Ankylosaurus	laser fossil brush	right handed	bright red helmet	crunchy rock candy
Rocky Ridge	Velociraptor	laser fossil brush	right handed	bright red helmet	crunchy rock candy
Mary Anning	Velociraptor	night vision goggles	left handed	bright red helmet	maple dino oatmeal
Val Raptor	Ankylosaurus	sonic dino whistle	left handed	safari explorer cap	maple dino oatmeal
Penny Fossil	Triceratops	sonic dino whistle	left handed	khaki bucket hat	crunchy rock candy
Jack Horner	Stegosaurus	thermal heat scanner	right handed	khaki bucket hat	fizzy swamp soda
Owen Raptor	Ankylosaurus	thermal heat scanner	left handed	safari explorer cap	maple dino oatmeal
Alan Grant	Velociraptor	gps map tracker	left handed	bright red helmet	maple dino oatmeal
Barney Bones	Stegosaurus	sonic dino whistle	left handed	bright red helmet	crunchy rock candy
Ellie Sattler	Pterodactyl	laser fossil brush	right handed	khaki bucket hat	fizzy swamp soda
Roy Andrews	Pterodactyl	laser fossil brush	right handed	bright red helmet	maple dino oatmeal
Dino Dan	Velociraptor	sonic dino whistle	left handed	khaki bucket hat	maple dino oatmeal

CLUE 1 Addition

To find which way the suspect ran, we must count the fossil tracks in the dirt. Let's add the footprints together to get our first clue!

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

T			T										T				
27	95	34	27	95	49	34	77	40	50	86	98	29	27	95	34		
T										T							
27	95	34	59	51	50	40	95	34	50	27	29	86	50	56	56	34	59

$17 + 10 = \square \rightarrow$ T	$12 + 28 = \square \rightarrow$ L	$48 + 29 = \square \rightarrow$ F
$39 + 20 = \square \rightarrow$ R	$19 + 10 = \square \rightarrow$ S	$18 + 16 = \square \rightarrow$ E
$35 + 16 = \square \rightarrow$ M	$18 + 31 = \square \rightarrow$ I	$15 + 35 = \square \rightarrow$ A
$32 + 66 = \square \rightarrow$ K	$25 + 61 = \square \rightarrow$ C	$37 + 19 = \square \rightarrow$ N
$59 + 36 = \square \rightarrow$ H		

Scratch space:

CLUE 2

Word problems

The suspect swiped some tools from our main supply tent. Solve this math word problem to see how many gear items are missing!

Solve each problem, then write its letter in the boxes to fill in the missing word.

A witness saw the villain was L D D .

6 30 7 34 19 32 24 30

Ranger found 2 tracking badges yesterday and 4 more today. How many tracking badges in all?

Answer: → L

There were 13 dino bones. 6 were used up. How many dino bones are left?

Answer: → F

Ranger lined up 8 rows of 4 tracking badges. How many tracking badges in all?

Answer: → A

Ranger lined up 6 rows of 4 fossil brushes. How many fossil brushes in all?

Answer: → N

Ranger found 19 dino bones yesterday and 11 more today. How many dino bones in all?

Answer: → E

There were 28 dino treats. 9 were used up. How many dino treats are left?

Answer: → H

There were 40 water canteens. 6 were used up. How many water canteens are left?

Answer: → T

Scratch space:

CLUE 3 Place value

The security lock has a glowing digital screen. Read the digit in each place value column to crack the secret keypad code!

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

W																		
32	52	11	76	38	87	68	21	88	61	20	20	52	68	62	13	88	20	52
68	61	87	76	76	13	43	62	52	13	20								

What number has 3 tens and 2 ones? → **W**

What number has 2 tens and 1 one? → **S**

What number has 4 tens and 3 ones? → **T**

What number has 5 tens and 2 ones? → **E**

What number has 3 tens and 8 ones? → **U**

What number has 7 tens and 6 ones? → **O**

What number has 6 tens and 8 ones? → **D**

What number has 8 tens and 8 ones? → **P**

What number has 8 tens and 7 ones? → **N**

What number has 2 tens and 0 ones? → **L**

What number has 6 tens and 2 ones? → **M**

What number has 6 tens and 1 one? → **I**

What number has 1 ten and 3 ones? → **A**

What number has 1 ten and 1 one? → **F**

Scratch space:

CLUE 4 Subtraction

We had a full basket of clean brushes, but the sneaky thief tossed some into the mud. Subtract the remaining ones to see how many they ruined!

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

A																			
30	59	42	24	26	12	16	42	29	46	12	29	63	65	29	16	83	30	39	
63	29	20	16	59	29	12	24	38	46										

$68 - 38 = \square \rightarrow$ A	$55 - 9 = \square \rightarrow$ D	$68 - 5 = \square \rightarrow$ L
$64 - 38 = \square \rightarrow$ G	$89 - 6 = \square \rightarrow$ W	$40 - 11 = \square \rightarrow$ E
$49 - 10 = \square \rightarrow$ S	$35 - 23 = \square \rightarrow$ H	$51 - 35 = \square \rightarrow$ T
$48 - 10 = \square \rightarrow$ N	$78 - 19 = \square \rightarrow$ B	$48 - 6 = \square \rightarrow$ R
$42 - 18 = \square \rightarrow$ I	$51 - 31 = \square \rightarrow$ F	$74 - 9 = \square \rightarrow$ M

Scratch space:

CLUE 5**Missing addends - the last clue**

Our heavy fossil scale needs to balance perfectly. Find the missing number to match the total weight and open the heavy iron vault!

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:

$1 + \underline{\quad} = 8$

$7 + \underline{\quad} = 15$

$6 + \underline{\quad} = 17$

$10 + \underline{\quad} = 15$

$10 + \underline{\quad} = 16$

$1 + \underline{\quad} = 4$

$5 + \underline{\quad} = 17$

$3 + \underline{\quad} = 4$

$2 + \underline{\quad} = 4$

$7 + \underline{\quad} = 17$

$8 + \underline{\quad} = 17$

Step 2 - cross out the sentence with each answer:

1. The villain lumbers away on a stegosaurus, then checks the escape route on a gps map tracker.
2. The villain lumbers away on a stegosaurus, then cleans the tracks with a laser fossil brush.
3. The villain soars off on a pterodactyl, then hides their warm tracks from the thermal scanner.
4. The villain dashes off on a velociraptor, then sneaks through the dark using night vision goggles.
5. The villain soars off on a pterodactyl, then quiets the wild baby dinos with a sonic whistle.
6. The villain rides away on a triceratops, then hides their warm tracks from the thermal scanner.
7. The villain soars off on a pterodactyl, then checks the escape route on a gps map tracker.
8. The villain soars off on a pterodactyl, then sneaks through the dark using night vision goggles.
9. The villain stomps away on an ankylosaurus, then cleans the tracks with a laser fossil brush.
10. The villain rides away on a triceratops, then cleans the tracks with a laser fossil brush.
11. The villain dashes off on a velociraptor, then checks the escape route on a gps map tracker.
12. The villain lumbers away on a stegosaurus, then quiets the wild baby dinos with a sonic whistle.

Answer Key

The Great Fossil Caper

Culprit: Mary Anning

Velociraptor · night vision goggles · left handed · bright red helmet · maple dino oatmeal

Trail: Start 21 → Clue 1 17 → Clue 2 11 → Clue 3 6 → Clue 4 4 → Clue 5 1

Clue 1 (Addition): "THE THIEF LACKS THE THERMAL HEAT SCANNER"

$17 + 10 = 27$ (T) · $12 + 28 = 40$ (L) · $48 + 29 = 77$ (F) · $39 + 20 = 59$ (R) · $19 + 10 = 29$ (S) · $18 + 16 = 34$ (E) · $35 + 16 = 51$ (M) · $18 + 31 = 49$ (I) · $15 + 35 = 50$ (A) · $32 + 66 = 98$ (K) · $25 + 61 = 86$ (C) · $37 + 19 = 56$ (N) · $59 + 36 = 95$ (H)

Clue 2 (Word problems): "LEFT HANDED"

Ranger found 2 tracking badges yesterday and 4 more today. How many tracking badges in all? = 6 (L) · There were 13 dino bones. 6 were used up. How many dino bones are left? = 7 (F) · Ranger lined up 8 rows of 4 tracking badges. How many tracking badges in all? = 32 (A) · Ranger lined up 6 rows of 4 fossil brushes. How many fossil brushes in all? = 24 (N) · Ranger found 19 dino bones yesterday and 11 more today. How many dino bones in all? = 30 (E) · There were 28 dino treats. 9 were used up. How many dino treats are left? = 19 (H) · There were 40 water canteens. 6 were used up. How many water canteens are left? = 34 (T)

Clue 3 (Place value): "WE FOUND SPILLED MAPLE DINO OATMEAL"

What number has 3 tens and 2 ones? = 32 (W) · What number has 2 tens and 1 one? = 21 (S) · What number has 4 tens and 3 ones? = 43 (T) · What number has 5 tens and 2 ones? = 52 (E) · What number has 3 tens and 8 ones? = 38 (U) · What number has 7 tens and 6 ones? = 76 (O) · What number has 6 tens and 8 ones? = 68 (D) · What number has 8 tens and 8 ones? = 88 (P) · What number has 8 tens and 7 ones? = 87 (N) · What number has 2 tens and 0 ones? = 20 (L) · What number has 6 tens and 2 ones? = 62 (M) · What number has 6 tens and 1 one? = 61 (I) · What number has 1 ten and 3 ones? = 13 (A) · What number has 1 ten and 1 one? = 11 (F)

Clue 4 (Subtraction): "A BRIGHT RED HELMET WAS LEFT BEHIND"

$68 - 38 = 30$ (A) · $55 - 9 = 46$ (D) · $68 - 5 = 63$ (L) · $64 - 38 = 26$ (G) · $89 - 6 = 83$ (W) · $40 - 11 = 29$ (E) · $49 - 10 = 39$ (S) · $35 - 23 = 12$ (H) · $51 - 35 = 16$ (T) · $48 - 10 = 38$ (N) · $78 - 19 = 59$ (B) · $48 - 6 = 42$ (R) · $42 - 18 = 24$ (I) · $51 - 31 = 20$ (F) · $74 - 9 = 65$ (M)

Clue 5 (Missing addends): surviving statement is box 4 → Mary Anning

$1 + \underline{\quad} = 8 = 7$ · $7 + \underline{\quad} = 15 = 8$ · $6 + \underline{\quad} = 17 = 11$ · $10 + \underline{\quad} = 15 = 5$ · $10 + \underline{\quad} = 16 = 6$ · $1 + \underline{\quad} = 4 = 3$ · $5 + \underline{\quad} = 17 = 12$ · $3 + \underline{\quad} = 4 = 1$ · $2 + \underline{\quad} = 4 = 2$ · $7 + \underline{\quad} = 17 = 10$ · $8 + \underline{\quad} = 17 = 9$