



The Mystery of the Blocky Fossil

Grade 2 math · Addition, Subtraction, Skip counting, Place value, Missing addends · Reading level grades 1-2

Detective: _____ Date: _____

A sneaky thief broke into the Dino-Cat Museum. They stole the famous Fossil Fish. The museum is made of pixel blocks and dinosaur nests. Can you help us find the thief and save the fossil?

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 the Pixel Cat-Thief is _____

Possible suspects

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

NAME	DINO SKILL	MINECRAFT TOOL	DIGGER HAND	COAT COLOR	FEAR
Steve	tames pixel triceratops	brews speed potions	right-pawed digger	black pixel coat	fears squeaky mice
Felix	rides a giant raptor	heals with raw salmon	left-pawed digger	shiny green scales	runs from raw fish
Blocky Bob	crafts obsidian walls	brews speed potions	right-pawed digger	black pixel coat	fears squeaky mice
Blue	digs with diamond picks	wears diamond boots	right-pawed digger	black pixel coat	runs from raw fish
Dino Dan	crafts obsidian walls	heals with raw salmon	left-pawed digger	shiny green scales	runs from raw fish
Slick Steve	tames pixel triceratops	brews speed potions	left-pawed digger	orange tabby fur	runs from raw fish
Raptor Ryan	tames pixel triceratops	wears diamond boots	right-pawed digger	black pixel coat	fears squeaky mice
Dino Dave	tames pixel triceratops	summons iron golems	left-pawed digger	black pixel coat	fears squeaky mice
Yoshi	spawns tamed ocelots	brews speed potions	left-pawed digger	shiny green scales	runs from raw fish
Pixel Pete	rides a giant raptor	heals with raw salmon	left-pawed digger	black pixel coat	fears squeaky mice
Barney	tames pixel triceratops	brews speed potions	right-pawed digger	shiny green scales	runs from raw fish
Rexy	spawns tamed ocelots	summons iron golems	left-pawed digger	orange tabby fur	runs from raw fish
Creeper Cat	tames pixel triceratops	wears diamond boots	left-pawed digger	shiny green scales	runs from raw fish
Meowth	rides a giant raptor	wears diamond boots	left-pawed digger	shiny green scales	runs from raw fish
Trixie	rides a giant raptor	brews speed potions	right-pawed digger	shiny green scales	runs from raw fish
Tabby Tim	digs with diamond picks	summons iron golems	left-pawed digger	shiny green scales	fears squeaky mice
Sylvester	crafts obsidian walls	heals with raw salmon	left-pawed digger	shiny green scales	fears squeaky mice
DanTDM	digs with diamond picks	heals with raw salmon	right-pawed digger	shiny green scales	runs from raw fish
Minecraft Sam	digs with diamond picks	heals with raw salmon	left-pawed digger	shiny green scales	runs from raw fish
Tom Cat	digs with diamond picks	wears diamond boots	right-pawed digger	black pixel coat	hates bucket of water
Pusheen	digs with diamond picks	throws splash potions	left-pawed digger	black pixel coat	fears squeaky mice

CLUE 1 Addition

We need to count the stray pixel blocks left on the grass. Add the blocks together to clear the path to the first clue.

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

T			T											T				
66	80	83	66	80	34	83	52	41	88	83	70	79	88	66	40	83	84	54
											T							
41	34	84	68	88	79	41	69	88	88	66	70							

$19 + 47 = \square \rightarrow$ T	$43 + 27 = \square \rightarrow$ S	$30 + 58 = \square \rightarrow$ O
$17 + 17 = \square \rightarrow$ I	$29 + 55 = \square \rightarrow$ A	$45 + 34 = \square \rightarrow$ N
$26 + 26 = \square \rightarrow$ F	$37 + 43 = \square \rightarrow$ H	$43 + 25 = \square \rightarrow$ M
$44 + 25 = \square \rightarrow$ B	$19 + 35 = \square \rightarrow$ R	$21 + 19 = \square \rightarrow$ W
$39 + 44 = \square \rightarrow$ E	$22 + 19 = \square \rightarrow$ D	

Scratch space:

CLUE 2
Subtraction

Some dinosaur eggs were moved from the nest. Subtract the missing eggs to find how many are safe. This will show us the second clue.

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

T 17	40	87	T 17	40	75	87	34	68	87	34	T 17	20	61	68	86
68	87	34	T 17	65	18	24	65	63	75	61	T 17	72			

$39 - 22 = \square \rightarrow \text{T}$

$87 - 24 = \square \rightarrow \text{R}$

$23 - 3 = \square \rightarrow \text{O}$

$89 - 17 = \square \rightarrow \text{S}$

$86 - 11 = \square \rightarrow \text{I}$

$46 - 28 = \square \rightarrow \text{A}$

$86 - 25 = \square \rightarrow \text{N}$

$69 - 1 = \square \rightarrow \text{L}$

$32 - 8 = \square \rightarrow \text{W}$

$57 - 17 = \square \rightarrow \text{H}$

$67 - 2 = \square \rightarrow \text{P}$

$97 - 11 = \square \rightarrow \text{Y}$

$71 - 37 = \square \rightarrow \text{F}$

$116 - 29 = \square \rightarrow \text{E}$

Scratch space:

CLUE 3 Skip counting

The blocky cat ran along the stone path. Skip count by twos on the lit blocks to track the prints and find the third clue.

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

T			T													
27	15	26	27	15	50	26	130	110	70	40	14	15	26	40	14	26
10	15	55	14	26	100	110	70	14	130	50	10	15				

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, __, 30, 33 → **T**

Skip-count by 10s. Fill the blank: 10, 20, 30, 40, __, 60, 70 → **I**

Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, __, 45, 50 → **N**

Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, __, 110, 120 → **D**

Skip-count by 5s. Fill the blank: 5, 10, __, 20, 25 → **H**

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

Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 65, __, 75, 80 → **A**

Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, __, 120, 130 → **R**

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

Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, __, 140, 150 → **F**

Skip-count by 2s. Fill the blank: 2, 4, 6, 8, __, 12, 14 → **S**

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

Scratch space:

CLUE 4 Place value

The museum chest has blocks of ten and single blocks. Group them by tens and ones to unlock the fourth clue.

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

S											S					S				
25	61	50	64	76	52	96	78	78	64	25	16	12	62	78	25	97	78	96	78	
62	78	21	30	50	64	30	61	78	31	74	41									

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

What number has 3 tens and 1 one? → **M**

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

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

What number has 9 tens and 7 ones? → **W**

What number has 6 tens and 4 ones? → **N**

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

What number has 4 tens and 1 one? → **D**

What number has 3 tens and 0 ones? → **T**

What number has 9 tens and 6 ones? → **R**

What number has 1 ten and 2 ones? → **A**

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

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

What number has 5 tens and 0 ones? → **I**

What number has 1 ten and 6 ones? → **C**

What number has 7 tens and 4 ones? → **U**

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

Scratch space:

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

We have some fish in the box but we need more to fill it. Find the missing number of fish to get the final clue.

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:

$8 + \underline{\quad} = 16$

$5 + \underline{\quad} = 10$

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

$4 + \underline{\quad} = 5$

$4 + \underline{\quad} = 11$

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

$2 + \underline{\quad} = 13$

$3 + \underline{\quad} = 9$

$7 + \underline{\quad} = 11$

$2 + \underline{\quad} = 11$

$4 + \underline{\quad} = 6$

Step 2 - cross out the sentence with each answer:

1. The villain rode a raptor through the museum, then left blue diamond boot prints.
2. The villain rode a raptor through the museum, then threw a splash potion.
3. The villain rode a raptor through the museum, then built a giant iron golem.
4. The villain called a big triceratops, then drank a fast speed potion.
5. The villain rode a raptor through the museum, then ate a raw salmon block.
6. The villain spawned ten ocelots, then left blue diamond boot prints.
7. The villain called a big triceratops, then threw a splash potion.
8. The villain built an obsidian wall, then ate a raw salmon block.
9. The villain dug down with a diamond pick, then drank a fast speed potion.
10. The villain dug down with a diamond pick, then ate a raw salmon block.
11. The villain dug down with a diamond pick, then threw a splash potion.
12. The villain spawned ten ocelots, then drank a fast speed potion.

Answer Key

The Mystery of the Blocky Fossil

Culprit: Minecraft Sam

digs with diamond picks · heals with raw salmon · left-pawed digger · shiny green scales · runs from raw fish

Trail: Start 21 → Clue 1 16 → Clue 2 11 → Clue 3 6 → Clue 4 4 → Clue 5 1

Clue 1 (Addition): "THE THIEF DOES NOT WEAR DIAMOND BOOTS"

$19 + 47 = 66$ (T) · $43 + 27 = 70$ (S) · $30 + 58 = 88$ (O) · $17 + 17 = 34$ (I) · $29 + 55 = 84$ (A) · $45 + 34 = 79$ (N) · $26 + 26 = 52$ (F) · $37 + 43 = 80$ (H) · $43 + 25 = 68$ (M) · $44 + 25 = 69$ (B) · $19 + 35 = 54$ (R) · $21 + 19 = 40$ (W) · $39 + 44 = 83$ (E) · $22 + 19 = 41$ (D)

Clue 2 (Subtraction): "THE THIEF LEFT ONLY LEFT PAW PRINTS"

$39 - 22 = 17$ (T) · $87 - 24 = 63$ (R) · $23 - 3 = 20$ (O) · $89 - 17 = 72$ (S) · $86 - 11 = 75$ (I) · $46 - 28 = 18$ (A) · $86 - 25 = 61$ (N) · $69 - 1 = 68$ (L) · $32 - 8 = 24$ (W) · $57 - 17 = 40$ (H) · $67 - 2 = 65$ (P) · $97 - 11 = 86$ (Y) · $71 - 37 = 34$ (F) · $116 - 29 = 87$ (E)

Clue 3 (Skip counting): "THE THIEF RAN WHEN WE SHOWED RAW FISH"

Skip-count by 3s. Fill the blank: 3, 6, 9, 12, 15, 18, 21, 24, __, 30, 33 = 27 (T) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, __, 60, 70 = 50 (I) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, __, 45, 50 = 40 (N) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, __, 110, 120 = 100 (D) · Skip-count by 5s. Fill the blank: 5, 10, __, 20, 25 = 15 (H) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, __, 60, 65 = 55 (O) · Skip-count by 5s. Fill the blank: 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 65, __, 75, 80 = 70 (A) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, __, 120, 130 = 110 (R) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, __, 16, 18 = 14 (W) · Skip-count by 10s. Fill the blank: 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, __, 140, 150 = 130 (F) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, __, 12, 14 = 10 (S) · Skip-count by 2s. Fill the blank: 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, __, 28, 30 = 26 (E)

Clue 4 (Place value): "SHINY GREEN SCALES WERE LEFT IN THE MUD"

What number has 2 tens and 5 ones? = 25 (S) · What number has 3 tens and 1 one? = 31 (M) · What number has 6 tens and 1 one? = 61 (H) · What number has 7 tens and 8 ones? = 78 (E) · What number has 9 tens and 7 ones? = 97 (W) · What number has 6 tens and 4 ones? = 64 (N) · What number has 2 tens and 1 one? = 21 (F) · What number has 4 tens and 1 one? = 41 (D) · What number has 3 tens and 0 ones? = 30 (T) · What number has 9 tens and 6 ones? = 96 (R) · What number has 1 ten and 2 ones? = 12 (A) · What number has 5 tens and 2 ones? = 52 (G) · What number has 7 tens and 6 ones? = 76 (Y) · What number has 5 tens and 0 ones? = 50 (I) · What number has 1 ten and 6 ones? = 16 (C) · What number has 7 tens and 4 ones? = 74 (U) · What number has 6 tens and 2 ones? = 62 (L)

Clue 5 (Missing addends): surviving statement is box 10 → Minecraft Sam

$8 + \underline{\quad} = 16 = 8$ · $5 + \underline{\quad} = 10 = 5$ · $5 + \underline{\quad} = 17 = 12$ · $4 + \underline{\quad} = 5 = 1$ · $4 + \underline{\quad} = 11 = 7$ · $1 + \underline{\quad} = 4 = 3$ · $2 + \underline{\quad} = 13 = 11$ · $3 + \underline{\quad} = 9 = 6$ · $7 + \underline{\quad} = 11 = 4$ · $2 + \underline{\quad} = 11 = 9$ · $4 + \underline{\quad} = 6 = 2$