

WHODUNNIT?

SKILL BUILDERS



Order of Operations
4 Ops - Harder



Whodunnit?

Order of Operations – 4 Operations Harder

Ideal Unit:	Order of Operations	Time Range:	20-40 Minutes	Supplies:	Pencil & Paper
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Common Core Alignment:

This particular activity was mapped to these common core standards. *Whodunnit* activities are ideal as a small group skill practice.

5.NBT.B.7	Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.
5.OA.A.1	Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols.
6.EE.2d	Perform arithmetic operations, including those involving whole number exponents, in the conventional order when there are no parentheses to specify a particular order (Order of Operations).

General Procedures:

A.) Give students a *Whodunnit Worksheet*. Students will need to solve the 10 problems about the topic. Each correct answer will result in a clue. Students will check off the Players, Last Known Whereabouts and Methods that are accounted for. The one remaining from each column is the correct solution. In this case it should be:

“Dr. Alpha used chemical poisoning in the library.”

B.) Print out the “Clues” and cut them out. I suggest you laminate them for future use. Spread them in different locations in the classroom and turn the students loose. Have teams of 2-3 circulate and attempt to figure out the clues. Once they think they have all the pieces, they can come to you to check their answer. If they are wrong, let them figure it out 😊

An alternative “Clue 10” is provided in the event you want a different result for different class periods.



Whodunnit?



Name: _____

Six contestants on a reality TV show were stunned to find their lowest scoring colleague was "injured." They must figure out the crime before the bell rings. The question is *Whodunnit?* And how... The Player, Last Known Whereabouts and Method that are left unaccounted for -- is the solution.

1.

2.

3.

4.

5.

6.

7.

8.

9.

10.

Who is the "Criminal"?

(The three boxes left unchecked will reveal the crime. If you cannot figure it out, you may be next.)

The Players

Dr. Alpha	<input type="checkbox"/>
Miss Beta	<input type="checkbox"/>
Mrs. Gamma	<input type="checkbox"/>
Professor Delta	<input type="checkbox"/>
Mr. Epsilon	<input type="checkbox"/>
Coach Omega	<input type="checkbox"/>

The Last Known Whereabouts

Atrium	<input type="checkbox"/>
Gym	<input type="checkbox"/>
Kitchen	<input type="checkbox"/>
Library	<input type="checkbox"/>
Movie Theater	<input type="checkbox"/>
Pool	<input type="checkbox"/>

The Method

Chemical Poisoning	<input type="checkbox"/>
Cougar Attack	<input type="checkbox"/>
Electrocution	<input type="checkbox"/>
Fallen Object	<input type="checkbox"/>
Stubbed Toe	<input type="checkbox"/>
Venomous Bite	<input type="checkbox"/>

???

Clue #1

W E O D U N N I I ?

$$(6 - 2) \times 4$$

- 2 Mrs. Gamma was reading the newspaper in the library.
- 3 The victim did not stub a toe.
- 16 A venomous snake did not bite the victim.
- 12 Coach Omega was meditating in the atrium.

W E O D U N N I I ?

Clue #2

$$15 - 2 \times 10 \div 4$$

- 10 Miss Beta was watching a comedy in the theater.
- 8 The victim did not have a venomous bite.
- 20 Professor Delta was cleaning out the pool.
- 15 The injury was not because of a fallen object.

???

???

Clue #3

W E O D U N N I I ?

$$30 - (8 + 5) \times 2$$

- 14 Dr. Alpha was listening to music by the pool.
- 4 Professor Delta was playing handball in the gym.
- 24 The victim's toe was not stubbed.
- 40 A venomous snake did not bite the victim.

W E O D U N N I I ?

Clue #4

$$(17 - 3) - (3 + 4)$$

- 7 Coach Omega was sipping tea by the pool.
- 21 The victim did not stub a toe.
- 13 Miss Beta was painting the atrium.
- 10 The victim was not crushed by a fallen object.

???

???

Clue #5

W E O D U N N I I ?

$$[5 + (4 - 1)] - 6$$

4	A cougar attack was not the cause of the injury.
2	Mrs. Gamma was making lunch in the kitchen.
6	The victim did not stub a toe.
9	Professor Delta was swimming in the pool.



W E O D U N N I I ?

Clue #6

$$12 - 9 \div 9 - (12 - 1)$$

24	Mr. Epsilon was playing cards in the atrium.
12	The victim was not mauled by a cougar.
9	Miss Beta was looking up recipes in the kitchen.
0	The injury was not from a fallen object.

???

???

Clue #7

W E O D U N N I I ?

$$4 \times 6 - 16 \div 8 + 1$$

- | | |
|----|---|
| 10 | Coach Omega was lifting weights in the gym. |
| 4 | The victim was not mauled by a cougar. |
| 23 | The victim did not stub a toe. |
| 36 | Miss Beta was reading in the library. |

W E O D U N N I I ?

Clue #8

$$(5 - 1) \div (24 \div 6)$$

- | | |
|----|---|
| 0 | Miss Beta was practicing yoga in the gym. |
| 12 | The victim did not have a venomous bite. |
| 1 | The victim was not electrocuted. |
| 24 | Professor Delta was changing a light bulb in the kitchen. |

???

???

Clue #9

W E O D U N N I I ?

$$70 \div (7 \times 5) - 1 + 27$$

- | | |
|----|--|
| 16 | Dr. Alpha was drinking coffee in the atrium. |
| 56 | The victim was not chemically poisoned. |
| 28 | A cougar attack was not the cause of the injury. |
| 3 | Mr. Epsilon was writing poetry in the library. |

W E O D U N N I I ?

Clue #10

$$\frac{9 - (2 + 3)}{2}$$

- | | |
|----|---|
| 2 | Mr. Epsilon was playing the guitar in the atrium. |
| 4 | Dr. Alpha was organizing books in the library. |
| 8 | The victim was not chemically poisoned. |
| 16 | A cougar attack was the cause of the injury. |

???

???

Alternate Ending

W E O D U N N O O ?

"Mr. Epsilon used chemical poisoning in the atrium".

W E O D U N N O O ?

Clue #10

$$\frac{9 - (2 + 3)}{2}$$

- | | |
|----|---|
| 2 | Dr. Alpha was organizing books in the library. |
| 4 | Mr. Epsilon was playing the guitar in the atrium. |
| 8 | The victim was not chemically poisoned. |
| 16 | A cougar attack was the cause of the injury. |

???