Classroom Innovation

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During the factoring unit of Intermediate Algebra (MAT1033), I like to play a game of Clue with the students. They get 18 factoring problems which they must work on independently to solve. Each answer will correspond to one suspect, weapon, or room, so if that answer appears, that person/item/room is eliminated. At the end, a single suspect, weapon, and room remains and that's the solution to the murder! Once a student believes they have the answer, they bring up their sheet and show me. If they get it right, they get a few bonus points on their test. Usually, I give them about 10-15 minutes max to complete it.

Name: _____

Someone tried to murder your professor!! Your job is to find out who did it, with what and where! Factor each problem. Once you finish, turn it in to your professor, to see the suspect, weapon, and location list. Find each answer on the list. Eliminate that suspect, location, or weapon to find out who the dastardly villain is that attempted murder!

1. $4x^2 - 25$
2. $6x^2 - 5x - 21$
3. $16x^2 + 56x + 49$
4. $2x^2 - 11x + 5$
5. $14x^2 + 11x - 15$
6. $2x^2 + 32x + 128$
7. $5x^2 - 25x + 30$
8. $x^2 - 4x + 24$
9. $5x^2 - 30x + 25$
10. $12x^2 - 27x - 27$
11. $18x^2 - 29x + 3$
12. $9x^2 - 16$
13. $9x^2 - 24x + 16$
14. $20x^2 - 44x + 21$
15. $x^2 + 3x - 18$
16. $2x^2 + 16x + 32$
17. $x^2 + 2x + 1$
18. $x^2 - 1$

SUSPECTS	
Mr. Green	$(x+1)(x-1)$
Prof. Plum	$(x+11)(x-1)$
Coln. Mustard	$2(x+8)^2$
Mrs. Peacock	$(2x+5)(2x-5)$
Miss Scarlet	$(3x-4)(3x+4)$
Mrs. White	*not factorable*

WEAPONS	
Candlestick	$(3x-4)^2$
Knife	$(3x-7)(2x+3)$
Lead Pipe	$5(x-1)(x-5)$
Revolver	$(x-5)(2x-1)$
Rope	$(x+6)(x-8)$
Wrench	$2(x+4)^2$

ROOMS	
Conservatory	$(7x-5)(2x+3)$
Lounge	$(x+1)^2$
Kitchen	$(x-9)(x-8)$
Library	$3(x-3)(4x+3)$
Hall	$(x-3)(x+6)$
Study	$5(x-2)(x-3)$
Ballroom	$(9x-1)(2x-3)$
Dining Room	$(10x-7)(2x-3)$
Billiard Room	$(4x+7)^2$