Combining Like Terms Uno

Number of players: 3 to 6 students (I believe groups of 4 works best.)

Goal: To develop a better understanding of what like terms are, (and to get rid of all your cards before anyone else does.)

The Play:

- Deal out 5 (to 7) cards to each player.
- The remaining cards should be placed facedown to form the "draw" pile.
- Turn over the top card of the draw pile to begin the "discard" pile.
- The person to the left of the dealer gets to go first.
- Each player in turn attempts to play one card from his or her hand by matching color or a like term of the top card on the discard pile.
- If they cannot match the card in the discard pile they pick one card from the draw pile and their turn ends.
- If the student has 2 cards that are like terms and the same color they can play them together, but they must say what the terms add to (ex. they can put down a yellow 5yx and a yellow −xy on the same turn.)
- When the student has one card left, they must announce it by saying "UNO". If they are caught not saying UNO, then they have to pick up 2 cards.
- The game is over when a student is out of cards. At this point they should call the teacher over. The teacher then deals 6 cards from the discard pile and has everyone in this group simplify the term on a piece of paper.

Specialty cards:

- Skip – the student can play a "skip" card if it matches the color of the card in the discard pile. In this case the next player is skipped.
- Draw two - the student can play a "draw two" card if it matches the color of the card in the discard pile. The next player then has to take two cards from the draw pile and their turn is over (see house rules).
- Wild term – when a student plays a wild card they must name the ***term*** (not color) the next player must match.
- Wild term draw two – when a student plays this wild card they must name the ***term*** (not color) the next player must match. The next play then has to take two cards from the draw pile.
- Reverse – (optional) the student can play a "reverse" card if it matches one of the colors on the card in the discard pile. In this case the direction of play changes.

House rules: as a class, decide if a player that draws one or more cards can then play a card.

Combining Like Terms Uno – Making the cards

If you have access to a **color copier**:

Print the faces of the cards on white card stock.

Then print on the back of each page one of the **4** pages with words (this will make it harder to see through the cards, there are **4** different backings so that you can tell one set of cards from another.)

If you have to use a **black and white copier**:

You will need **6** colors of card stock (**3** sheets each). Print the first **3** sheets in the same color, then the next **3** sheets in the next color, etc.

Print one of the pages of words on the back of each sheet. Use a different numbered back page for each different deck you print. (The words will make it harder to see through the cards and the different back pages will make it easier to sort the decks in case the cards get mixed up.)

There are four levels for the game:

- Level **1** uses the cards that contain the terms: 1, x, x^2, y, y^2, xy, and xm
- Level **2** uses the cards that contain the terms: 1, x, x^2, y, y^2, xy, and xy^2
- Level **3** uses the cards that contain the terms: 1, x, x^2, y, xy, xy^2 and x^2y
- Level **4** uses the cards that contain the terms: 1, x, x^2, xy, xy^2, x^2y and x^2y^2

I have also included some blank cards so you can add or change the terms being used.

This lesson was adapted and modified from: "Playing Uno - The combine like terms version", by Tara Maynard
https://sites.google.com/site/ipadsinmiddleschoolmath/home/blog-1/blog-2013-2014/playinguno-thecombineliketermsversion

This version was created by Lea Gaslowitz at Front Porch Math.
https://www.frontporchmath.com/topics/algebra/playing-with-variables/combining-like-terms-video/

-4	9	x	15x
1y	10y	-4xy	2xy

$2xn$	$6xn$	$-2x^2$	$10x^2$
$-2y^2$	$-8y^2$	$5x^2y$	$-5x^2y$

$4xy^2$

$4xy^2$

$-5xy^2$

$-5xy^2$

$\frac{1}{2}x^2y^2$

$\frac{1}{2}x^2y^2$

$-4x^2y^2$

$-4x^2y^2$

Skip

Skip

Wild Term

Wild Term

12	-1	$-5x$	$-1x$
$-y$	$9y$	$6x^2$	$8x^2$

$12y^2$

$12y^2$

$3y^2$

$3y^2$

$4xy$

$4xy$

$3yx$

$3xy$

xn

xn

$4xn$

$4xn$

$6x^2y$

$6x^2y$

$4xxy$

$4x^2y$

$10xy^2$

$10xy^2$

$2xy^2$

$2xy^2$

$8x^2y^2$

$8x^2y^2$

$2xxyy$

$2xxyy$

Draw two

Draw two

Wild Term

Wild Term

3	4	$3x$	$-2x$
$3y$	$12y$	$3x^2$	$-6x^2$

$9y^2$	$-5y^2$	$9xy$	xy
$-5xn$	$11nx$	$7x^2y$	$-xxy$

$-xy^2$	$7xy^2$	$-9x^2y^2$	$-5x^2y^2$
Draw two	Reverse		

10	1	$5x$	$-4x$
$-3y$	$-8y$	x^2	$-5x^2$

$11y^2$	$5y^2$	$-2yx$	$-3xy$
$11y^2$	$5y^2$	$-2yx$	$-3xy$
$8xn$	$15xn$	$10x^2y$	xxy
$8xn$	$15xn$	$10x^2y$	xxy

$6xy^2$ $6xy^2$	$3xy^2$ $3xy^2$	$4x^2y^2$ $4x^2y^2$	$-5x^2y^2$ $-5x^2y^2$
Draw two Draw two	Reverse Reverse		

6	-3	$8x$	$2x$
$7y$	$-2y$	$2x^2$	$-3x^2$

$4y^2$	$-y^2$	$8yx$	$11xy$
$4y^2$	$-y^2$	$8xy$	$11yx$
$-2xn$	$-3xn$	$\frac{1}{2}x^2y$	$8x^2y$
$-2xn$	$-3xn$	$\frac{1}{2}x^2y$	$8x^2y$

xy^2

xy^2

$5xy^2$

$5xy^2$

x^2y^2

x^2y^2

$-2x^2y^2$

$-2x^2y^2$

Skip

Skip

Wild Term
Draw 2

Wild Term
Draw 2

-6	8	$4x$	$11x$
$2y$	$-5y$	$\frac{1}{2}x^2$	$-x^2$

y^2	$-4y^2$	$5yx$	$-xy$
$3xn$	$-1xn$	$2xxy$	$4x^2y$

$10xy^2$

$10xy^2$

$2xy^2$

$2xy^2$

$8x^2y^2$

$8x^2y^2$

$2xxyy$

$2xxyy$

Skip

Skip

Wild Term
Draw 2

Wild Term
Draw 2