	3 item display																6 item display															
Necessary	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
Color	1		1					1								1					1											
Noun				1		1			1	1								1	1	1												
Color | noun					1												1															
Gender + color							1																							1	1	1
Gender + color | noun											1		1																			
Gender | Gender + Color | noun															1											1	1	1				
Gender + color | color | noun												1																	1			
Gender | color | noun														1											1							
Color + noun		1																				1	1	1								
Redundant																																
Noun	1		1				1	1								1					1								1	1	1	1
color			1			1			1	1								1	1	1												
Full utt					1												1															
Full utt + gender											1	1	1	1	1										1	1	1	1				

Naming convention: {attributes} sufficient {attributes} redundant

Sufficient: all utterances that will sufficiently pick out the target
Redundant: all utterances on top of that which can be used to describe the target, but are not strictly necessary

Sufficient cases:

color sufficient: the target is the only object of that color in the scene, therefore saying only the color uniquely identifies the object

noun sufficient: the target is the only object of that type in the scene, therefore saying only the noun uniquely identifies the object

Gender + color sufficient: the gender and color alone do not pick out the target but together they do
e.g. there are other masculine objects and other blue objects, but the target is the only blue_masc object

Color | noun: either the color or the noun uniquely pick out the target
e.g. the target is a blue plate and the rest of the objects are red cups → saying blue or plate works

Gender + color | noun: either the gender+color pick out the object, or the noun
e.g. the target is a blue masculine plate, the rest of the items are blue feminine cups and a blue masculine knife → saying blue_masc or plate suffices, but the word blue and the masculine gender on their own do not

Gender | gender + color | noun: same as case above, but the object is ALSO the only object of that gender in the scenario
e.g. the target is a blue masculine plate, the rest of the objects are a mix of feminine cups that are blue and red → saying just blue suffices, saying blue_masc suffices, saying just masc suffices, and saying just plate suffices

Gender + color | color | noun: same as the [gender + color | noun] case, but the target is the only one of that color.
e.g. the target is a blue masculine plate, the rest of the items are red feminine cups and red masculine knives → saying just blue suffices, saying just blue_masc suffices, and saying just plate suffices, but saying just Masc does not suffice

Gender | color | noun: hit is just like the [gender + color | color | noun] case, except that there are no other masculine objects

e.g. the target is a blue masculine plate, the rest of the items are red feminine cups (but no masculine knives)
→ saying just blue suffices, saying just masc suffices (therefore it holds vacuously that blue_masc also suffices), and saying just plate suffices

Color + noun: you need to say both the color and noun, saying either does not suffice
e.g. the target is the only blue plate, there are other plates and other blue things

Redundant cases:

color redundant: there are other objects of the same color as the target in the scene
noun redundant: there are other objects of the same type as the target in the scene
Full utt: the full utterances is redundant. Since either color or noun can be used sufficiently, by uttering the [color + noun] utterance, it is ambiguous as to whether it is the noun or the color that is being used redundantly.
Full utt + gender: same as above but includes gender on the color (so gender could be being used redundantly). I don't split this case up further since I don't see a need for it.