Worksheet - Model predictions of fast plant crosses on computer

Your name: _____

Group member names: _____

_____

_____

_____

Directions: You have developed your model of inheritance to explain how leaf and stem color is inherited in fast plants. Using your model your group is now ready to predict the outcome of the crosses listed below. For each cross, the computer will show 64 offspring. Thus, of those 64, you will need to state how many would have which colored stems and leaves.

Predictions for each trait alone:

Cross	Leaf color (must total 64)	Stem color (must total 64)
P1 X P1	Green =_____ Yellow = _____	Purple =_____ Green = _____
P2 X P2	Green =_____ Yellow = _____	Purple =_____ Green = _____
P1 X P2	**Green =_____ Yellow = _____** *Class data = 100% = 0%*	**Purple =_____ Green = _____** *Class data = 100% = 0%*
F1 X F1	**Green =_____ Yellow = _____** *Class data = 1344 = 452*	**Purple =_____ Green = _____** *Class data = 1212 = 545*
P1 X F1	Green =_____ Yellow = _____	Purple =_____ Green = _____
P2 X F1	Green =_____ Yellow = _____	Purple =_____ Green = _____

Predictions for <u>both</u> traits at once:

Cross	Green Leaves & Purple Stems	Green Leaves & Green Stems	Yellow Leaves & Purple Stems	Yellow Leaves & Green Stems
P1 X P1				
P2 X P2				
P1 X P2 *Class data →*	*100%*	*0%*	*0%*	*0%*
F1 X F1 *Class data →*	*881*	*415*	*325*	*121*
P1 X F1				
P2 X F1				

Challenge crosses

Are all green leafed purple stemmed F2 plants the same? Try crossing 5 different green leafed purple stemmed F2 plants with a **P2** plant. What does the outcome of these crosses tell you about how some F2 plants that **look** the same might not actually be the same "inside"?

Cross	Green Leaves & Purple Stems	Green Leaves & Green Stems	Yellow Leaves & Purple Stems	Yellow Leaves & Green Stems
F2 X P2				
F2 X P2				
F2 X P2				
F2 X P2				
F2 X P2				