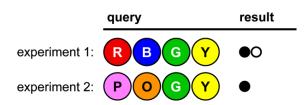
Supporting Information

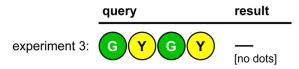
PLoS Biology: "Using the Game of Mastermind to Teach, Practice, and Discuss Scientific Reasoning Skills," by Amy R. Strom & Scott Barolo.

Text S2: An Annotated Sample Game



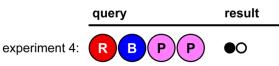
Conclusions:

i. All colors have been tested and only three dots have been given in total; therefore at least one color is repeated in the code.



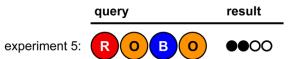
Conclusions:

- *ii.* The code has no GREEN or YELLOW.
- *iii.* Therefore, the code has both RED and BLUE, and either PINK or ORANGE (but not both).
- *iv.* Based on experiment 1, either RED is in first position and BLUE is in third or fourth, or BLUE is in second and RED is in third or fourth.
- *v.* Based on experiment 2, either PINK is in first position or ORANGE is in second.



Conclusions:

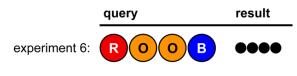
- vi. The code has no PINK. The code contains only RED, BLUE, and ORANGE.
- *vii.* Following conclusion *v*, ORANGE must be in second position.
- *viii.* If ORANGE is in second position, BLUE can't be. Following conclusion *iv*, RED must therefore be in first. The only codes consistent with these data are ROBB, ROBO, ROBR, ROOB, and RORB.



Conclusions:

ix. ORANGE is repeated.

x. BLUE must be in fourth position. Only one possible code remains.



(Codemaker gets 6 points.)