Organic Chemistry

Brick by Brick

Part 5

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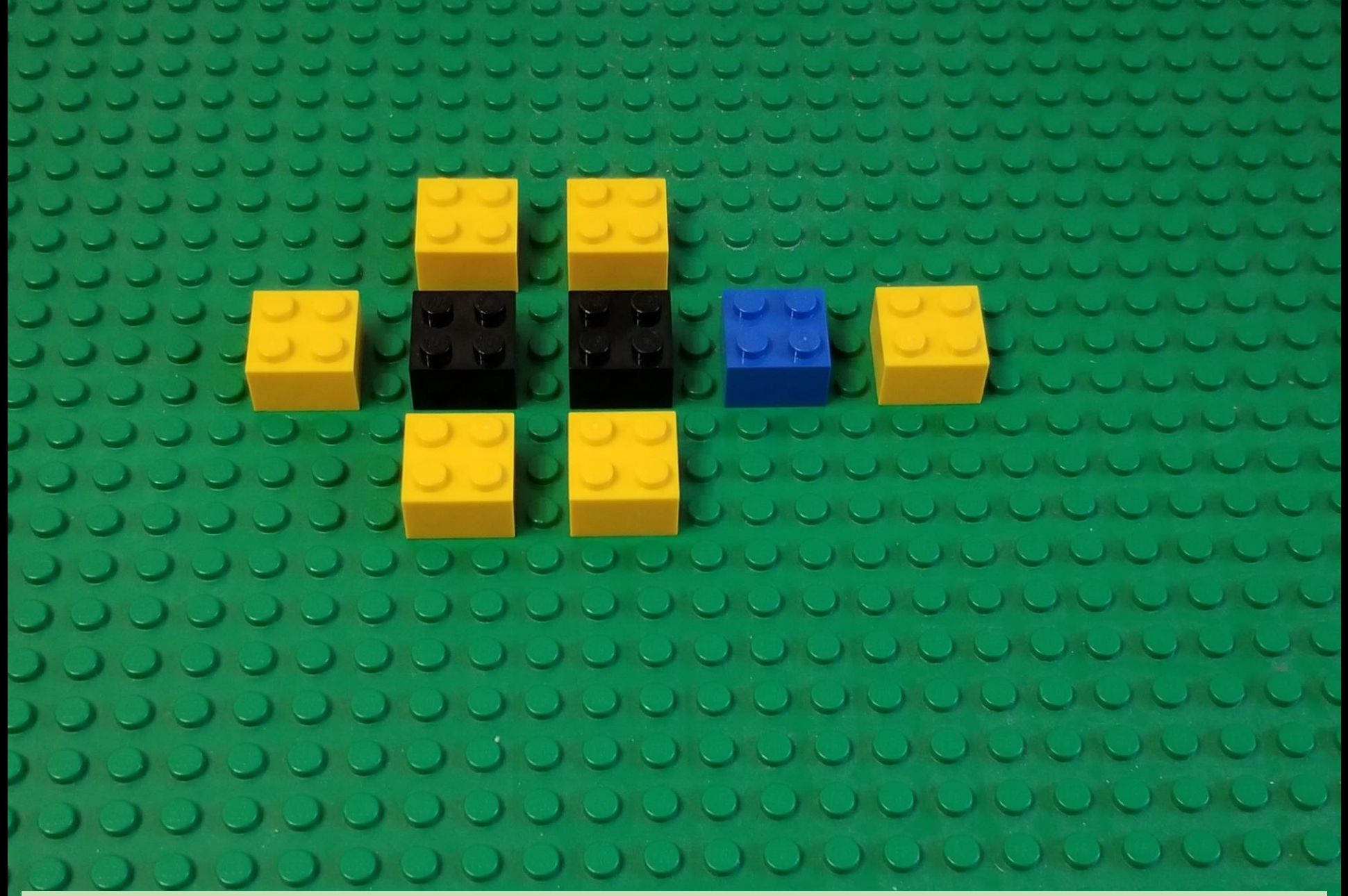
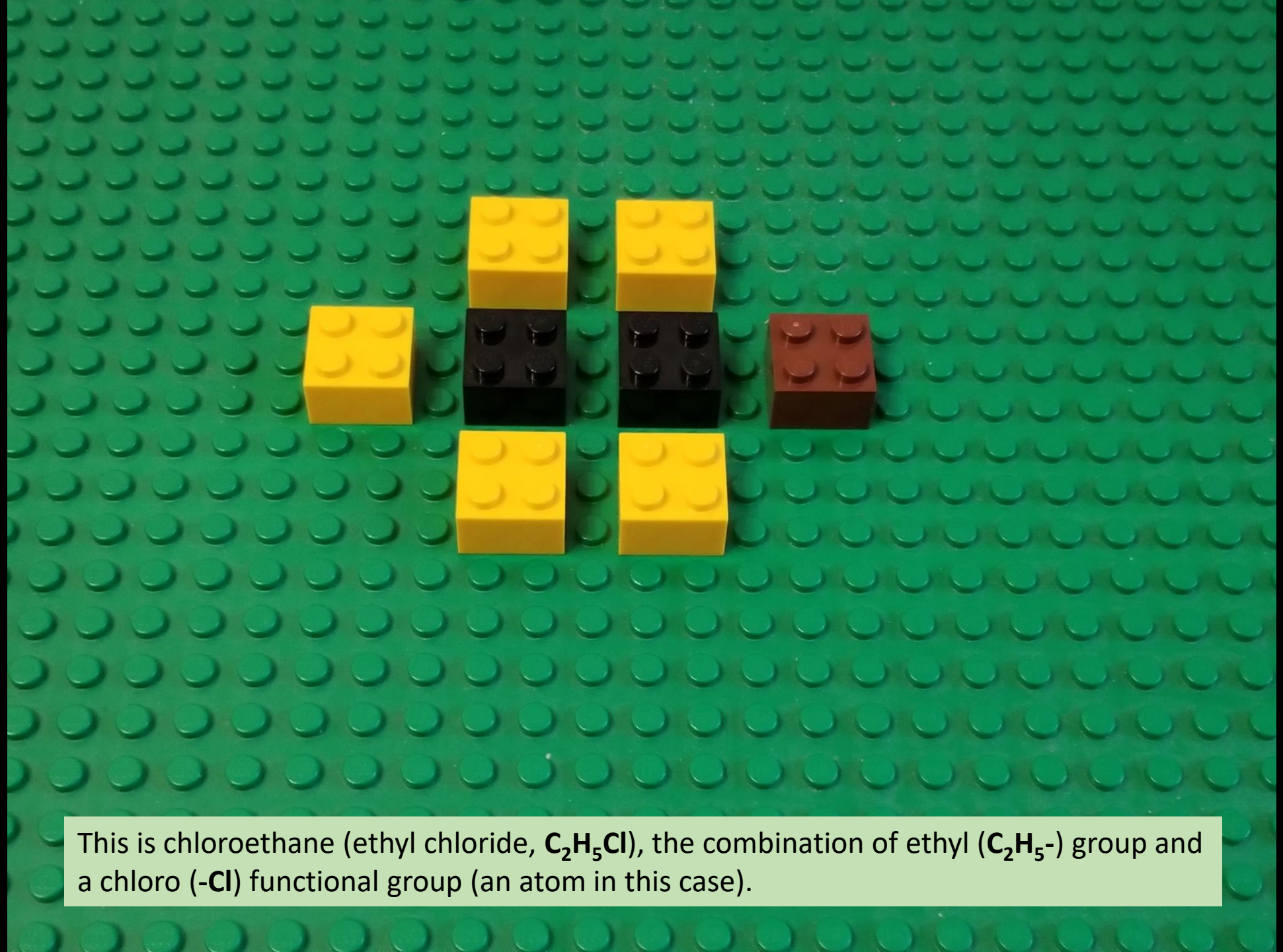
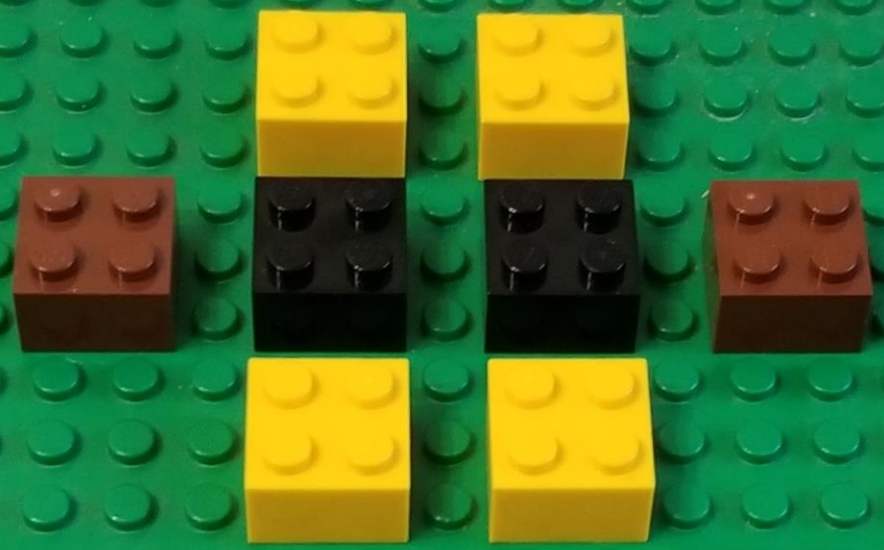


Let’s now consider functional derivatives of ethane. One of them is alcohol (ethanol, **C_2H_5OH**), the combination of ethyl (**C_2H_5-**) group and hydroxyl (**-OH**) functional group.

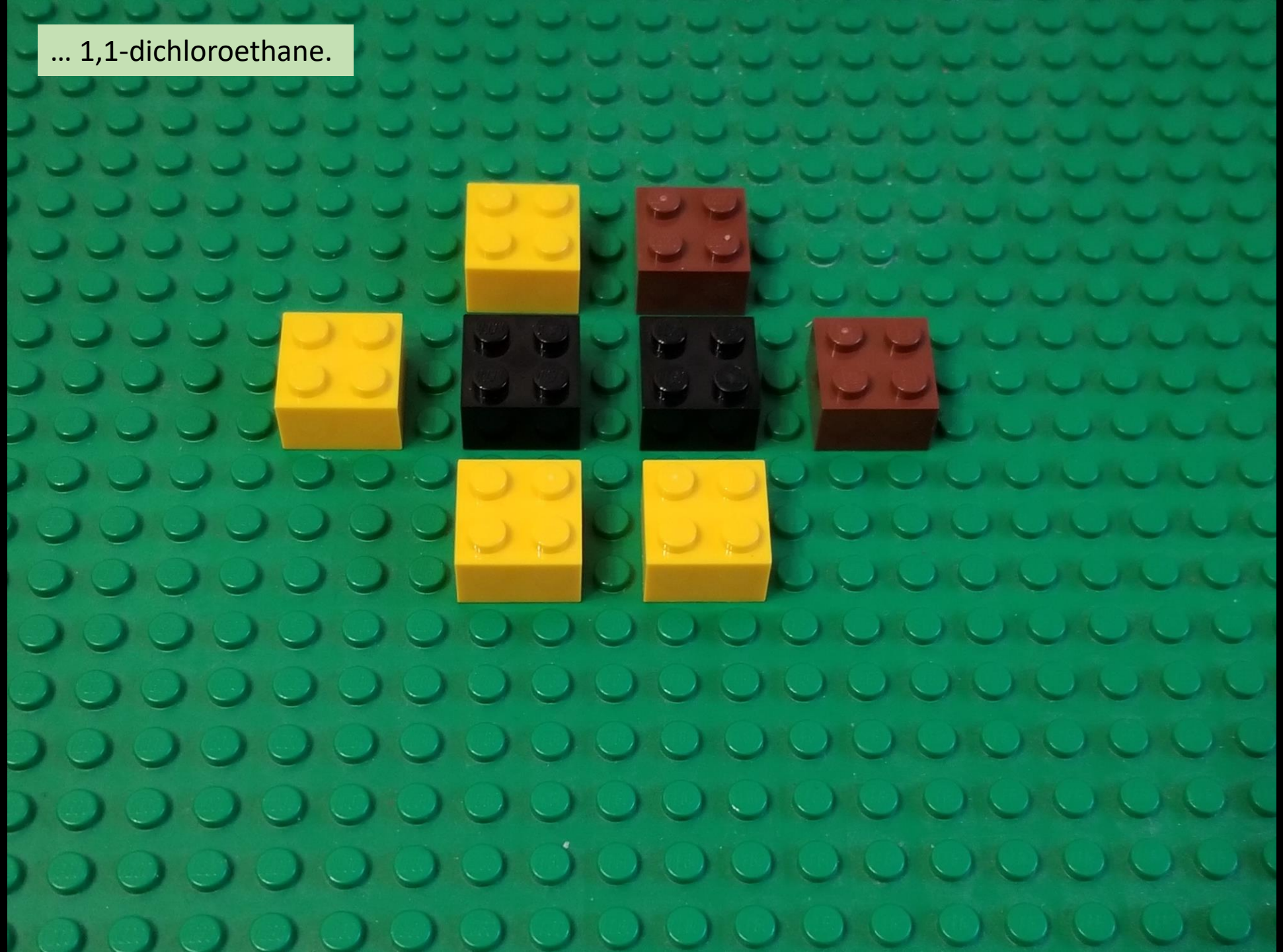


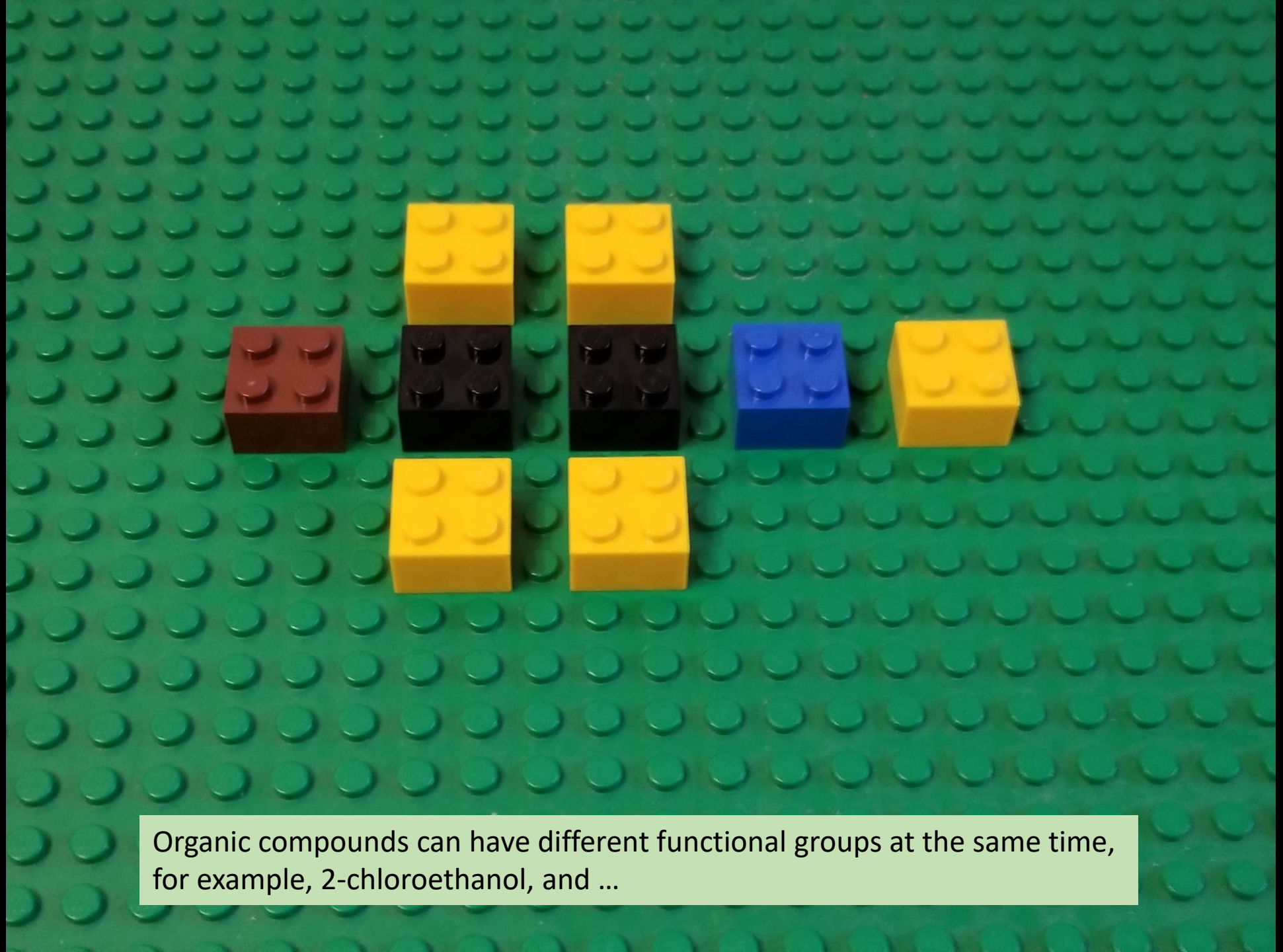
This is chloroethane (ethyl chloride, **C_2H_5Cl**), the combination of ethyl (**C_2H_5-**) group and a chloro (**-Cl**) functional group (an atom in this case).



If we replace different hydrogen atoms in chloroethane, we get different isomers of dichloroethane: 1,2-dichloroethane and …

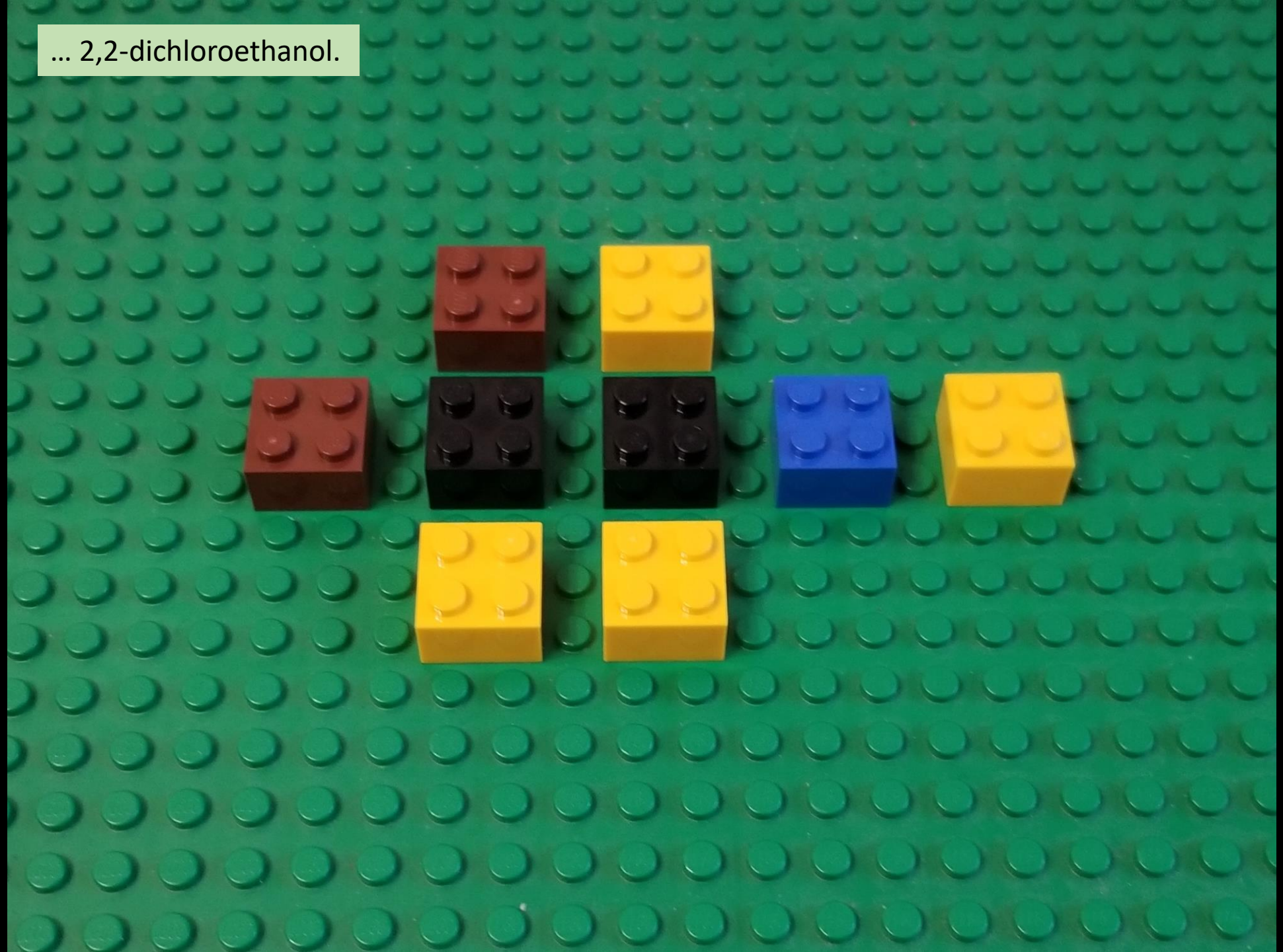
… 1,1-dichloroethane.

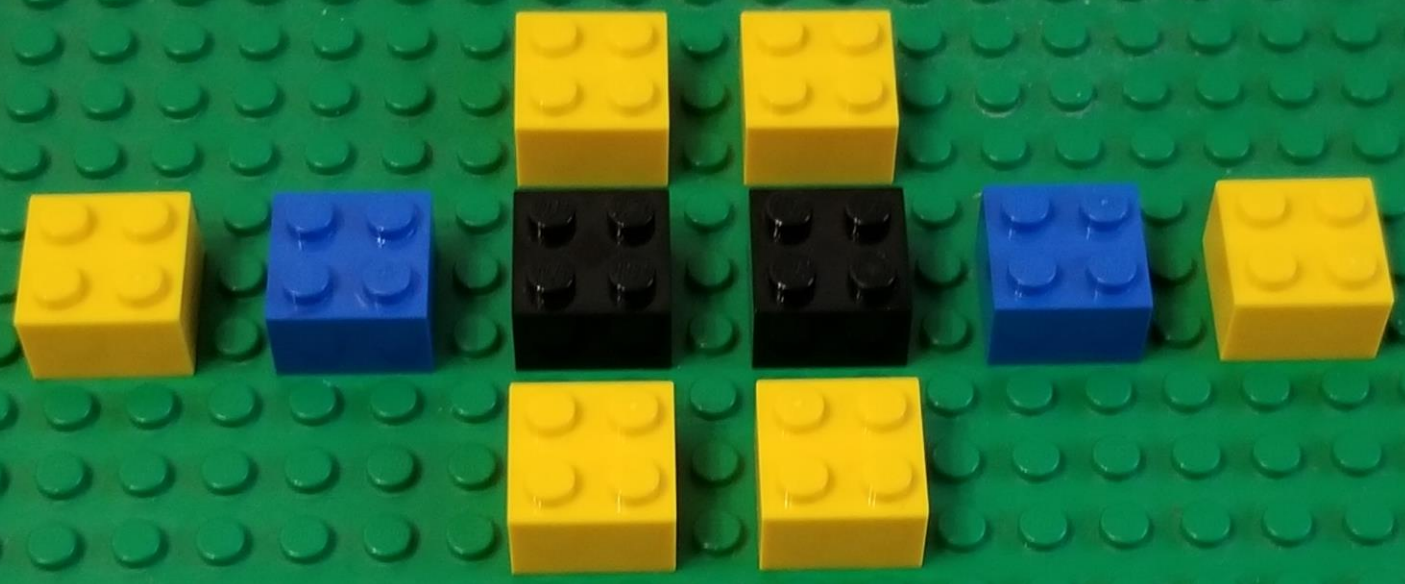




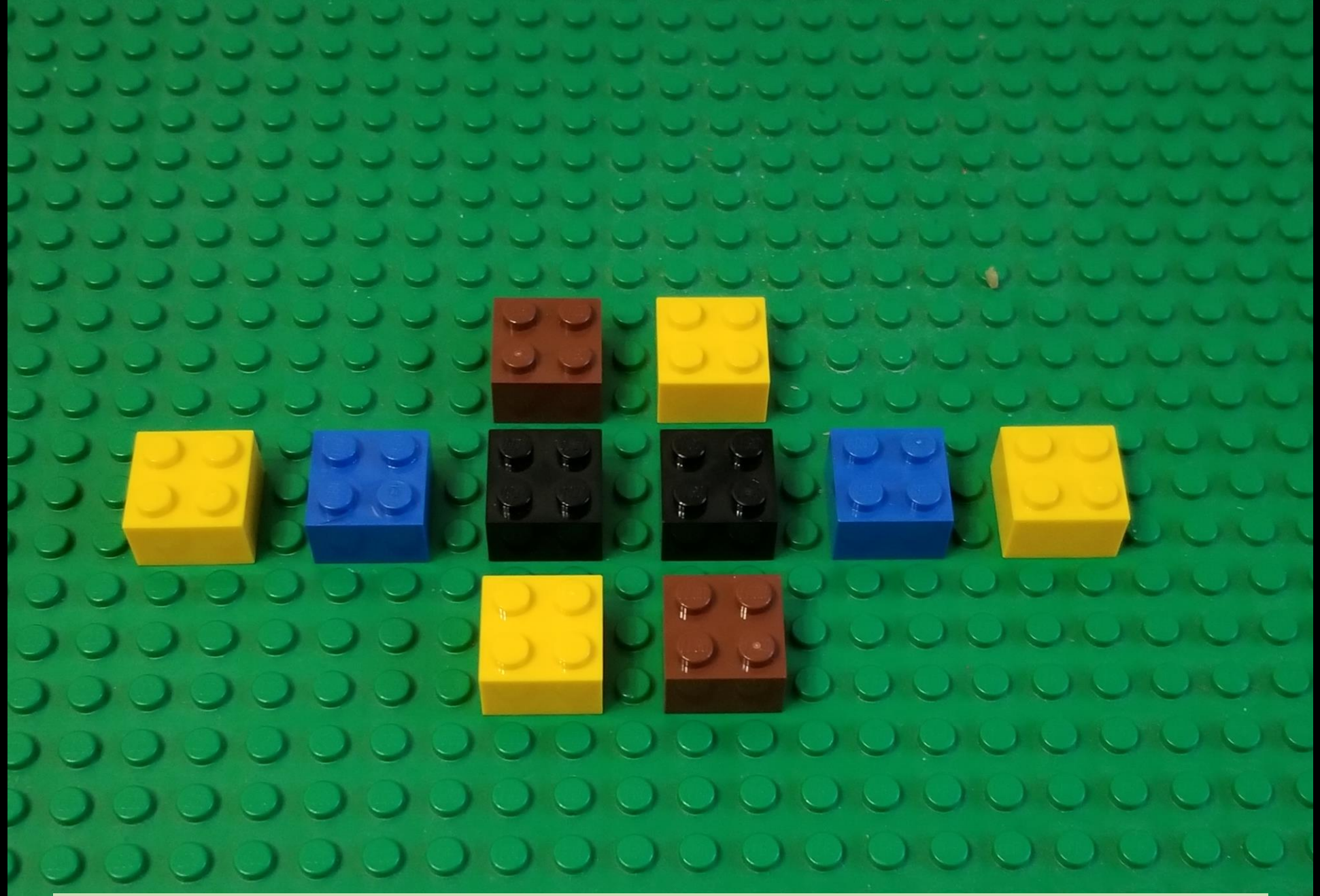
Organic compounds can have different functional groups at the same time, for example, 2-chloroethanol, and …

… 2,2-dichloroethanol.

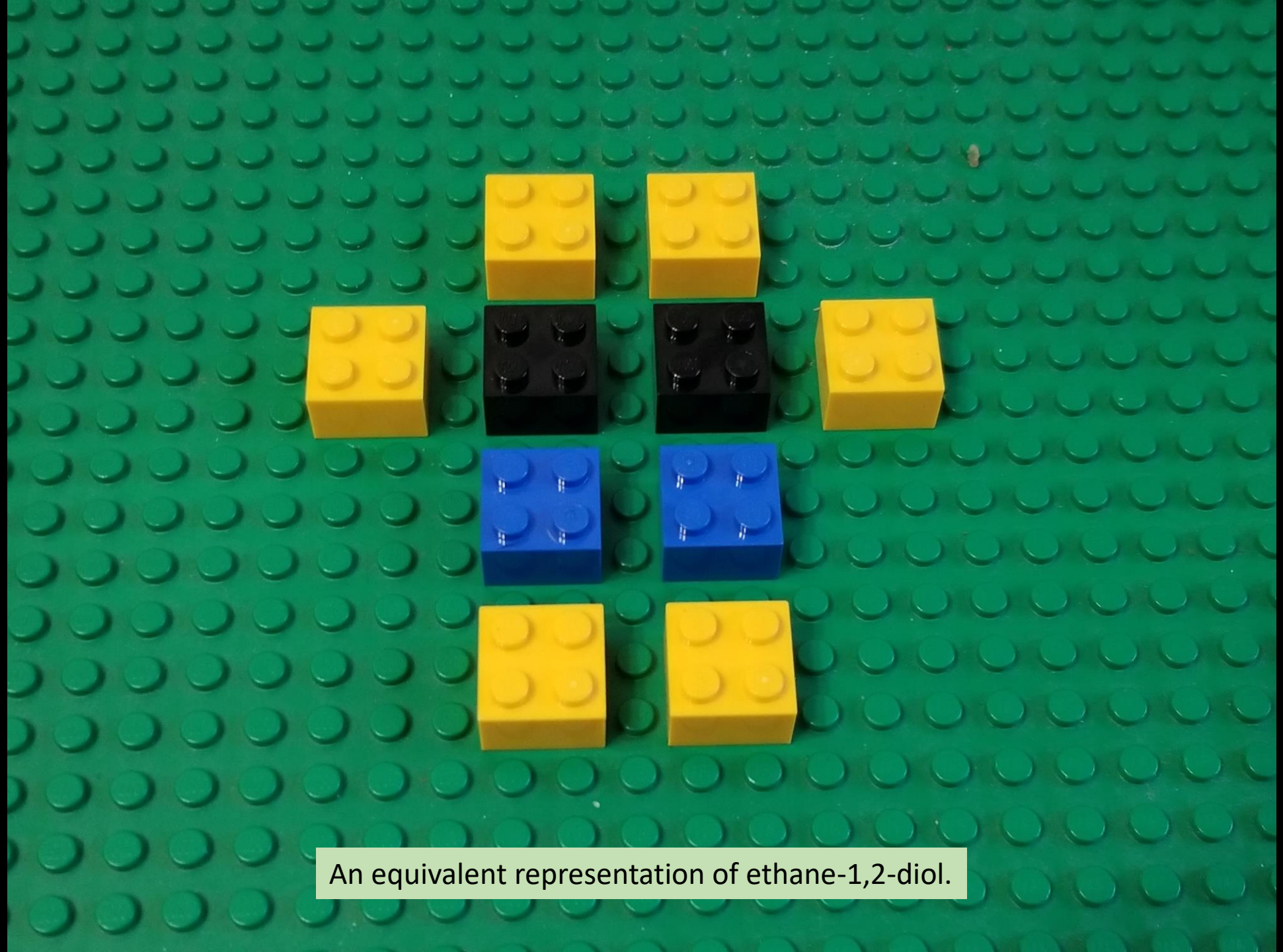




This is an example of a diol (glycol), a chemical compound containing two hydroxyl groups: ethane-1,2-diol (ethylene glycol, **CH_2OH-CH_2OH**).

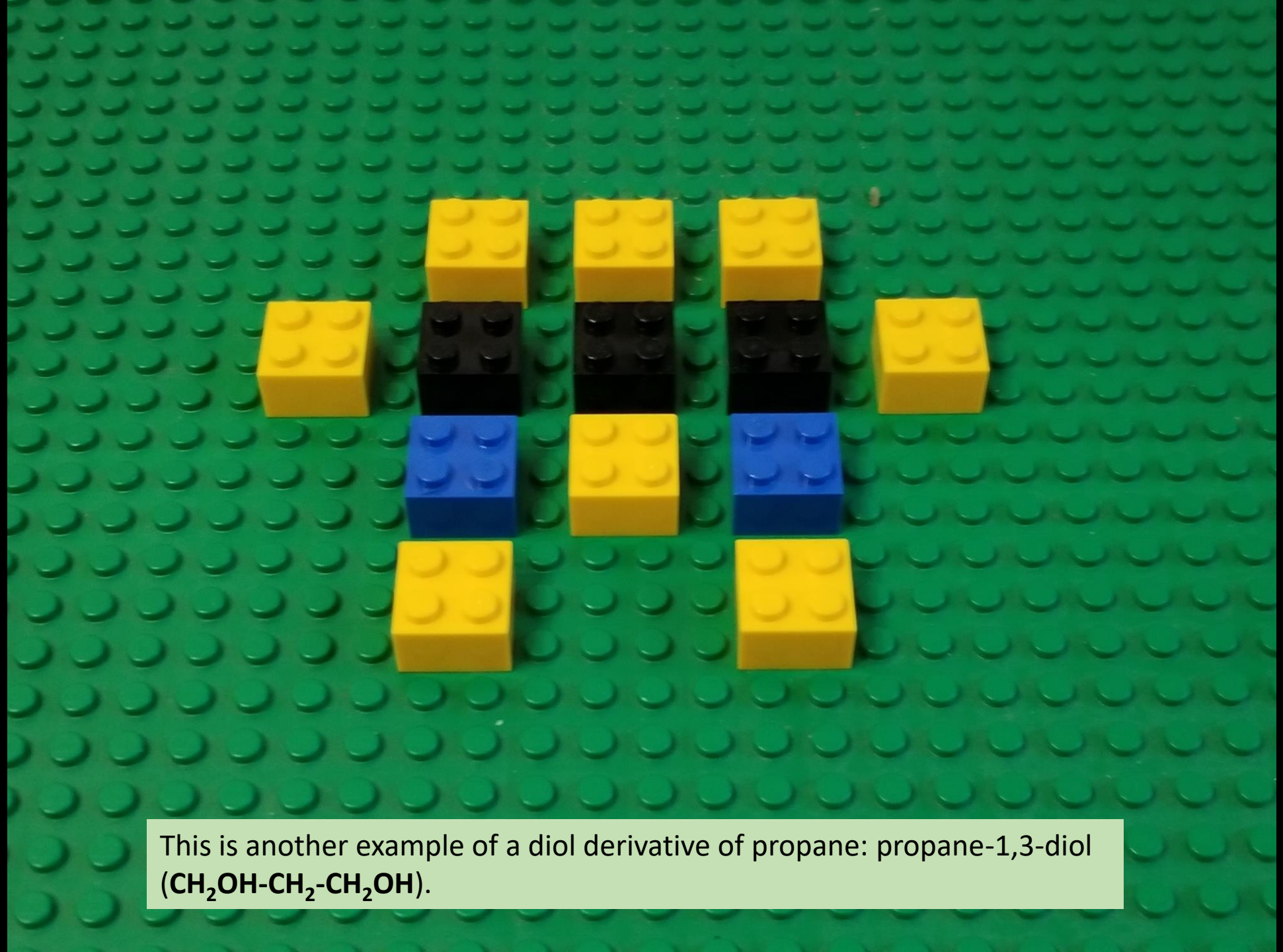


This is an example of a chlorine derivative of ethylene glycol: 1,2-dichloroethane-1,2-diol.



An equivalent representation of ethane-1,2-diol.

This is an example of a triol, a chemical compound containing three hydroxyl groups: ethane-1,2-diol (glycerol, glycerine, **CH_2OH-$CHOH$-CH_2OH**).



This is another example of a diol derivative of propane: propane-1,3-diol (**CH_2OH-CH_2-CH_2OH**).

Continued with Part 6

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