SEIFERT SURFACES

Reading: Lickorish *Introduction to Knot Theory*, Chapters 1,2

(1) What is the definition of a Seifert surface? Give an example.
(2) What is Seifert's algorithm to find a Seifert surface from a projection of a knot? Give an example. Why does this algorithm work?
(3) Calculate the Euler characteristic of the Seifert surfaces in your examples.
(4) Explore what happens with Seifert's algorithm for different kinds of braids. Can you find any families of braids where you can calculate the Euler characteristic of the corresponding Seifert surface in terms of the number of strands in the braid and the number of crossings?