Unit 1: Lesson 4 – Defending Our DNA: How Cells Protect Against Foreign Genetic Material

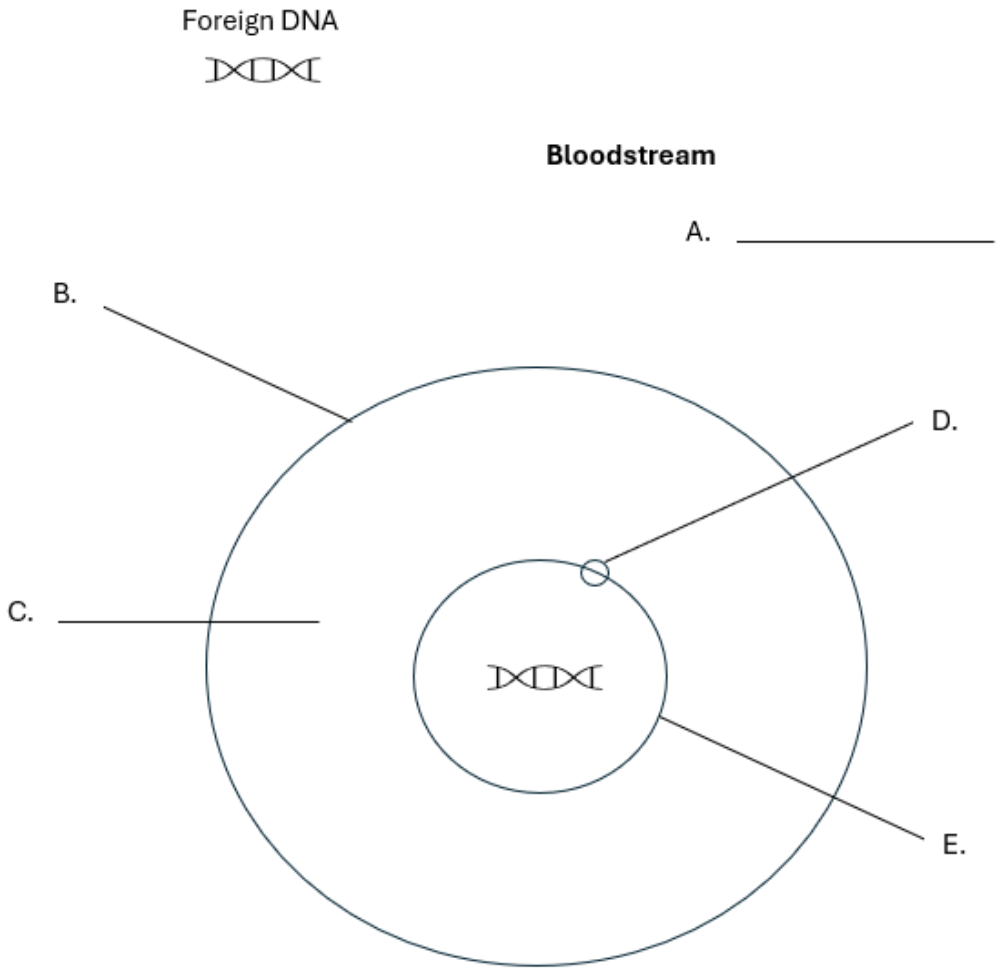
Activity 2: Defense Map

Using your observation sheets, trace the journey of a foreign DNA fragment from outside the body toward the nucleus of a cell. Label each defense layer on the diagram below, then describe what happens to the DNA fragment at each step. Your map must use all of the terms in the word bank.

Word bank (use every term once):

DNase / nuclease • cell membrane • cytoplasm • nuclear envelope • nuclear pore

Label the diagram below with the correct term from the word bank (A-E)



Use the spaces below to name the defensive component of each layer and describe what happens to a DNA fragment attempting to enter each.

Layer 1 - _____

Layer 2 - _____

Layer 3 - _____

Layer 4 - _____

Layer 5 - _____

Based on your map, explain to another group why it is so unlikely that a foreign DNA fragment could ever reach and change the host DNA. (Use back of page if more space is needed.)