9. How can you determine whether a particular gene is being transcribed in different cell types?

You can determine whether a particular gene is being transcribed in different cell types by analyzing regulatory genes. Regulatory genes control networks of structural genes involved in developmental processes. Looking at the proteins involved with the genes also helps us determine whether it is being transcribed in different cell types. Analyzing Drosophila development, we learned that maternal-effect genes encode transcription factors and proteins that control gene expression. Protein and mRNA control embryonic development in Drosophila. Homeotic genes identify each segment and the adult structures formed from the segments. Expression of homeotic selector genes tells us which adult structures will be produced by each body section.