Standard:

[CCSS.ELA-LITERACY.W.11-12.2](http://www.corestandards.org/ELA-Literacy/W/11-12/2/)  
Write informative/explanatory texts to examine and convey complex ideas, concepts, and information clearly and accurately through the effective selection, organization, and analysis of content.

Before reading define

Afferent:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Efferent:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Direction: Please read the designated sections of The Cell Biology of Asthma by *David J. Erle and Dean Sheppard* (abstract, introduction, Cell biology of airway epithelium, figure 1, Cell biology of airway smooth muscle in asthma, figure 3, and conclusion) then using the information from the reading, describe two cell communication pathways that produce symptoms of asthma due to the irritant, VOG. Be sure to include following information in your writing.

1. Specific symptoms of asthma caused by two specific cell types. Be sure to identify the cell types as well.
2. Signaling molecules in each of the pathway and the response to the signaling molecules. Discuss secondary messenger if discussed in the reading.

Please have a clear topic sentence with key details in your informative writing.

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