**Differences between the lungs and gills**

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| **Difference** | **Lungs** | **Gills** |
| Respiratory function | Lungs extract atmospheric oxygen through the oral and nasal cavity and trachea during inhalation. Oxygen is extracted from this inhaled air and is diffused into the blood capillaries that richly supply the lungs. While this takes place, carbon dioxide diffuses out of the blood and is expelled through exhalation. | Gills extract oxygen from water. Water Is taken up into the mouth and projected to the gills where by action of counter current flow of water over the gills and blood in the gills, oxygen is absorbed. The water is then expelled through the gill slits (cartilaginous fish)or the operculum (bony fish) |
| Location | Lungs are located interiorly within the thoracic cavity of mammals. | Gills can be located both interiorly and exteriorly depending on the species. For instance, the larval stages on most amphibians have extremely exposed gills i.e. they are exterior while in bony fish, the gills are protected by the operculum. |
| Excretion | Lungs can only get rid of respiratory waste. | Gills are able to diffuse excretory products along with respiratory wastes into the water. |