

Topic/Objectives: 13-2 Lymphatic Organs; (1) Describe how tissue fluid and lymph form and explain; (2) Explain the function of lymph; (3) Describe a lymph node and its major functions.	Name:
	Date:
	Period:

Essential Question: What role does the lymph node, thymus and spleen play in human immunity and body defense?

Questions:	Notes: Lymph nodes, which contain _____ and _____, are located along lymphatic pathways. Structure of a Lymph Node <ul style="list-style-type: none"> ◦ _____ are bean-shaped, with blood vessels, nerves, and efferent lymphatic vessels attached to the indented hilum, and with afferent lymphatic vessels entering on the convex surface. ◦ Lymph nodes are covered with connective tissue that extends inside the node and divides it into nodules and spaces called _____. ◦ These contain both lymphocytes and macrophages which _____ the lymph as it flows through the node.
	Locations of Lymph Nodes <ul style="list-style-type: none"> ◦ The lymph nodes generally occur in _____ along the parts of the larger lymphatic vessels. Functions of Lymph Nodes <ul style="list-style-type: none"> ◦ The macrophages and lymphocytes within lymph nodes filter lymph and remove _____ and _____ before lymph is returned to the blood. ◦ Lymph nodes are also centers of lymphocyte production; these cells function in _____.
	The functions of the _____ and _____ are similar to those of lymph nodes. Thymus <ul style="list-style-type: none"> ◦ The _____ is a soft, bi-lobed organ located behind the sternum; it shrinks in size during the lifetime (large in children, microscopic in the elderly). ◦ The thymus is surrounded by a connective tissue capsule that extends inside it and divides it into _____. ◦ Lobules contain lymphocytes, some of which mature into _____ - _____ (T cells) that leave the thymus to provide immunity. ◦ The thymus secretes the hormone _____, which influences the maturation of T-lymphocytes once they leave the thymus.

