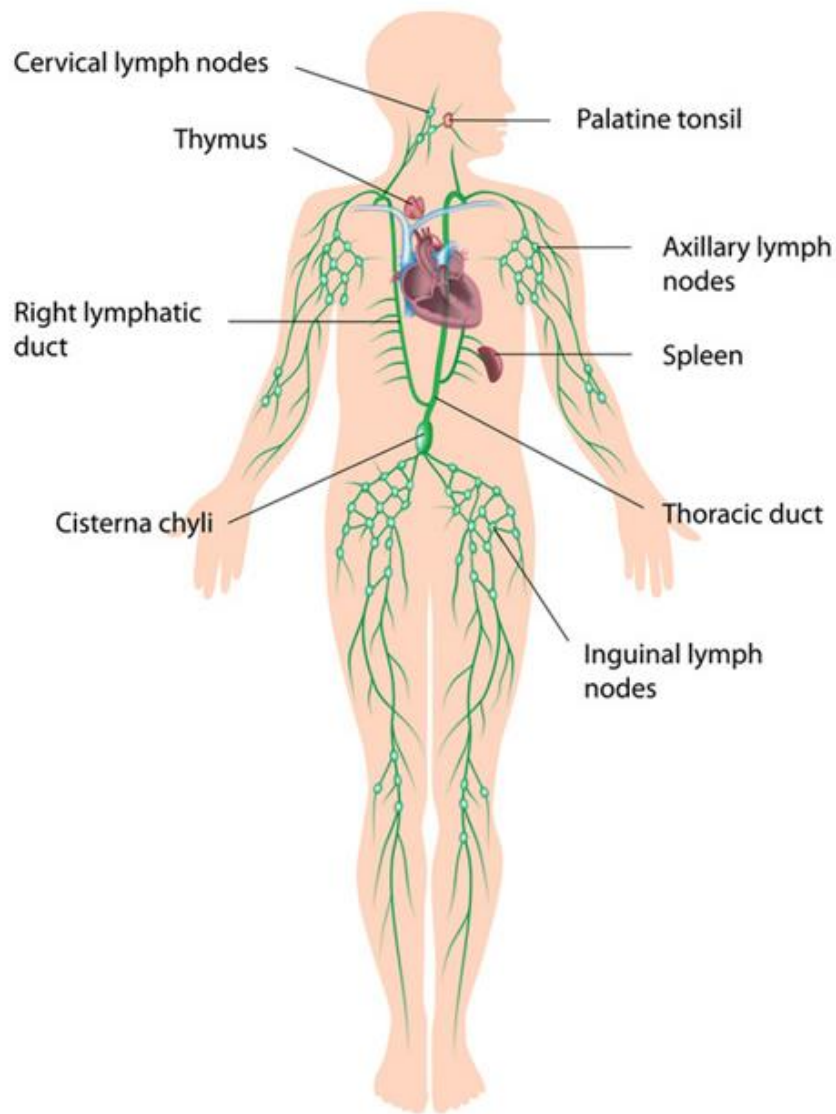


Lymphatic & Immune Systems Lapbook



L-LYMPH

Designed by
Cyndi Kinney

Lymphatic & Immune Systems Lapbook
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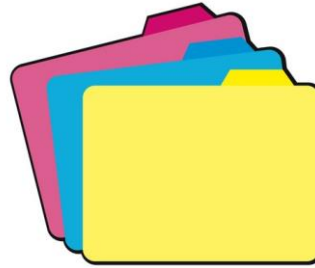
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Special thanks to Carrie Martin-Vegue. She is the author of the Study Guide that is included in this product. The Study Guide is being used with her permission and is now owned by Knowledge Box Central.

How do I get started?

First, you will want to gather your supplies.



*** Assembly:

***Folders:** We use colored file folders, which can be found at Walmart, Sam's, Office Depot, Costco, etc. You will need between 1 and 4 file folders, depending on which product you have purchased. You may use manila folders if you prefer, but we have found that children respond better with the brightly colored folders. Don't worry about the tabs...they aren't important. Within this product, you will be given easy, step-by-step instructions for how to fold and assemble these folders. *If you prefer, you can purchase the assembled lapbook bases from our website.*

***Glue:** For the folder assembly, we use hot glue. For booklet assembly, we use glue sticks and sometimes hot glue, depending on the specific booklet. We have found that bottle glue stays wet for too long, so it's not a great choice for lapbooking. For gluing the folders together, we suggest using hot glue, but **ONLY** with adult supervision. These things get **SUPER** hot, and can cause **SEVERE** burns within seconds.



***Other Supplies:** Of course, you will need scissors. Many booklets require additional supplies. Some of these include metal brad fasteners, paper clips, ribbon, yarn, staples, hole puncher, etc.



You may want to add decorations of your own, including stickers, buttons, coloring pages, cut-out clipart, etc. Sometimes, we even use scrapbooking supplies. The most important thing is to use your imagination! Make it your own!!



Ok. I've gathered the supplies. Now how do I use this product?

Inside, you will find several sections. They are as follows:

1. **Layout and Pictures:** This section gives instructions and diagrams that will tell the student exactly how to assemble the lapbook base and where to glue each booklet into the base. Depending on the student's age, he or she may need assistance with this process, especially if you choose to allow the student to use hot glue.

2. **Student Instruction Guide:** This section is written directly to the student, in language that he or she can understand. However, depending on the age of the child, there may be some parent/teacher assistance needed. This section will also tell the student exactly what should be written inside each booklet as he or she comes to it during the study.

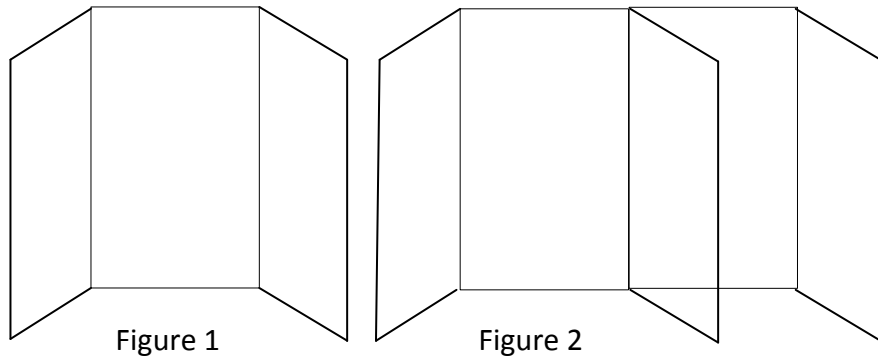
3. **Booklet Templates:** This section includes ALL of the templates for the booklets. These have been printed on colors that will help to improve retention of the information presented, according to scientific research on color psychology.

4. **Teacher's/Study Guide:** This section includes a Study Guide that can be used to teach this subject. It includes all information for completing the booklets in this lapbook.

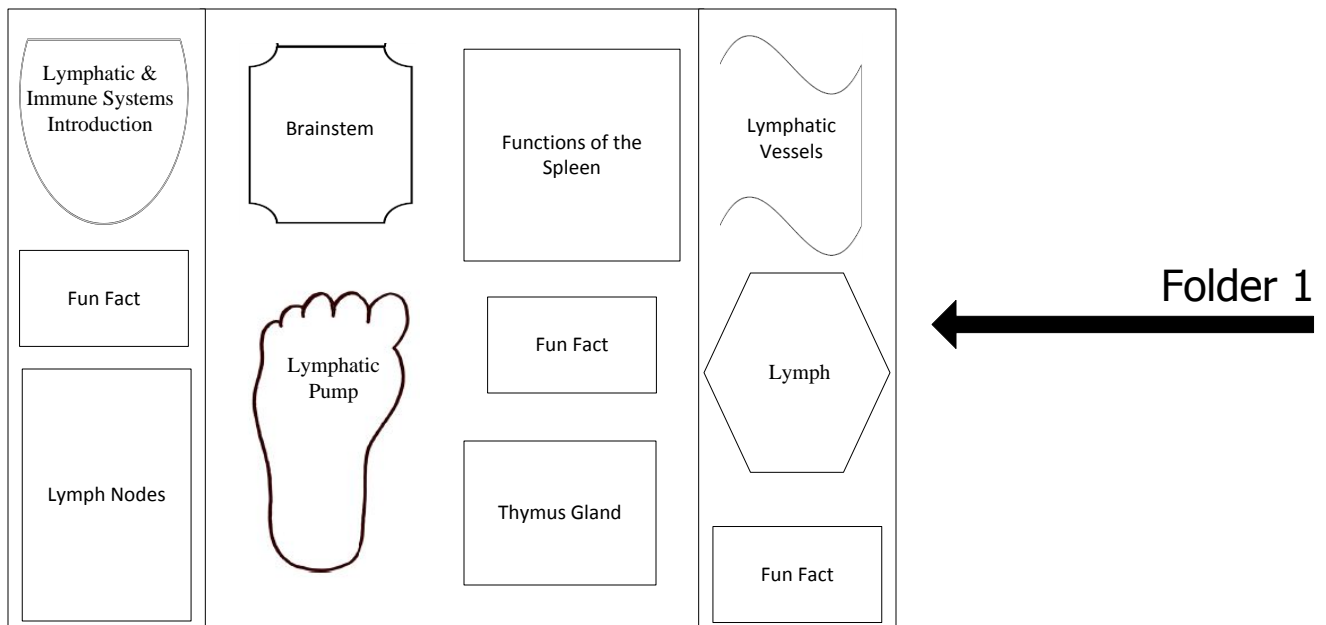
Lymphatic & Immune Systems Lapbook

Layout & Pictures

You will need 2 folders of any color. For each folder, you will fold both sides toward the original middle fold and make firm creases on these folds (Figure 1). Then glue the folders together along one flap (Figure 2).



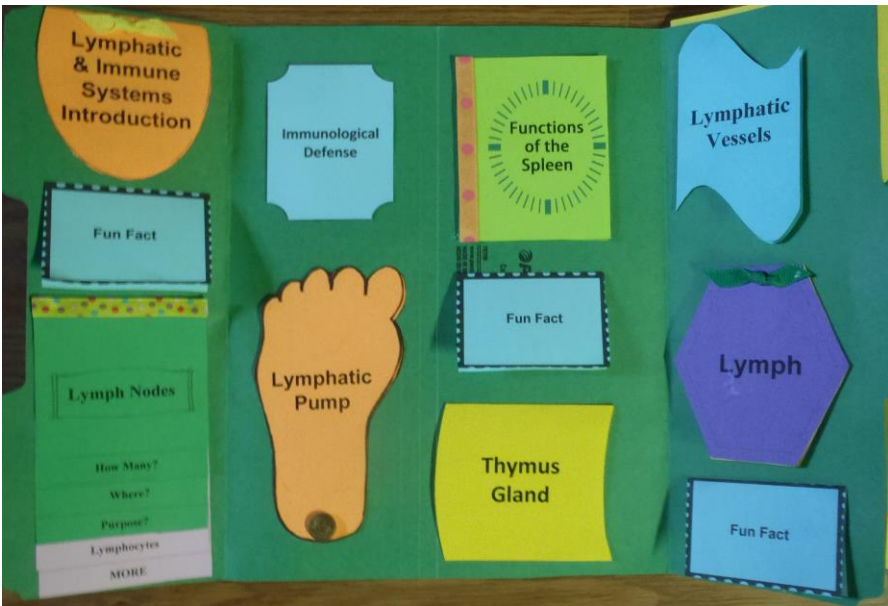
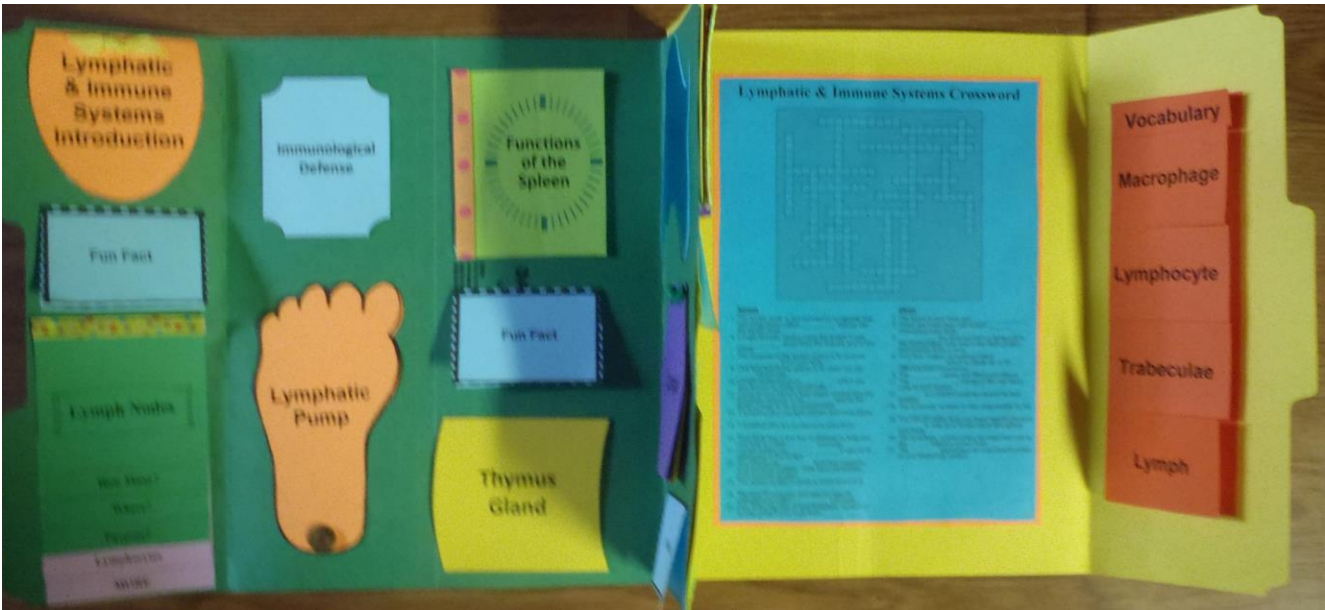
This is the "Layout" for your lapbook. The shapes are not exact on the layout, but you will get the idea of where each booklet should go inside your lapbook.



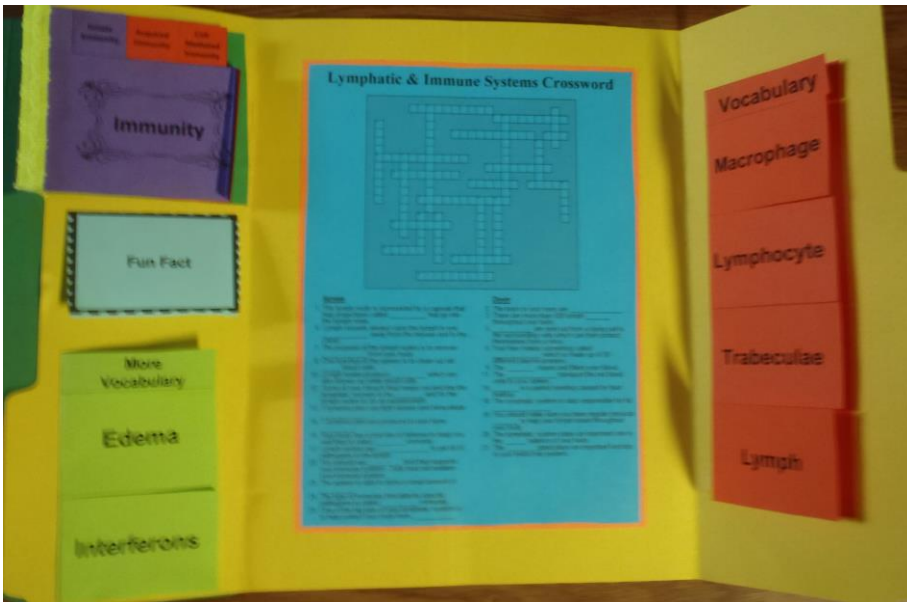
Folder 2



Below is a picture of a completed lapbook!!! This should help in figuring out how to assemble the booklets and then how to put them all together!



← Folder 1



← Folder 2

Lymphatic & Immune Systems Lapbook

Student Instruction Guide

Booklet 1: Lymphatic & Immune Systems Introduction

Assembly Instructions: Cut out along the outer black line edges of the booklet and the extra pages. Fold the booklet along the center line so that the title is on the front. Stack the extra pages inside. Secure at the top with a staple.

Completion Instructions: Inside this booklet, tell about the responsibilities of the lymphatic and immune systems.

****PLACE in Folder #1 (see layout).**

Booklet 2: Lymph Nodes

Assembly Instructions: Cut out along the outer black line edges of each page. Stack so that the title is on top and the pages get longer toward the back. Secure with a staple at the top.

Completion Instructions: On each page of this booklet, tell what you have learned about the lymph nodes.

****PLACE in Folder #1 (see layout).**

Booklet 3: Lymphatic Vessels

Assembly Instructions: Cut out along the outer black line edges of booklet. Fold along the center line so that the title is on the front.

Completion Instructions: Inside this booklet, tell what you have learned about the important lymph vessels.

****PLACE in Folder #1 (see layout).**



Booklet 4: Lymph

Assembly Instructions: Cut out along the outer black line edges of the booklet and the extra pages. Fold the booklet so that the title is on the front. Insert the extra pages. Secure at the top of the booklet with a staple.

Completion Instructions: What is lymph? Explain inside this booklet.

****PLACE in Folder #1 (see layout).**

Booklet 5: Lymphatic Pump

Assembly Instructions: Cut out along the outer black line edges of each page. Stack so that the title is on the top. Secure at the bottom (heel of the foot) with a staple.

Completion Instructions: Did you know that you can pump your lymph? Inside this booklet, explain the process and why it is important.

****PLACE in Folder #1 (see layout).**

Booklet 6: Immunological Defense

Assembly Instructions: Cut out along the outer black line edges of the booklet. Fold along the center line so that the title is on the front.

Completion Instructions: Inside this booklet, explain immunological defense.

****PLACE in Folder #1 (see layout).**

Booklet 7: Functions of the Spleen

Assembly Instructions: Cut out along the outer black line edges of each page. Stack the pages so that the title is on the front. Secure along the left side with a staple.

Completion Instructions: Your spleen has some very important functions in keeping you well. Explain inside this booklet.

****PLACE in Folder #1 (see layout).**

Booklet 8: Thymus Gland

Assembly Instructions: Cut out along the outer black line edges of the booklet. Fold along the center line so that the title is on the front.

Completion Instructions: Inside this booklet, tell about the purpose of the thymus gland.

****PLACE in Folder #1 (see layout).**

Booklet 9: Immunity

Assembly Instructions: Cut out along the outer black line edges of each page. Stack the pages so that the title is on the top and the pages get longer toward the back. Secure along the left side with a staple.

Completion Instructions: You learned about 3 types of immunity. Explain them inside this booklet.

****PLACE in Folder #2 (see layout).**

Booklet 10: Vocabulary

Assembly Instructions: Cut out along the outer black line edges of the booklet. Fold along the center line so that the words are on the front. Cut along each horizontal dotted line to create flaps.

Completion Instructions: Behind each flap, write the definition of the word.

****PLACE in Folder #2 (see layout).**

Booklet 11: More Vocabulary

Assembly Instructions: Cut out along the outer black line edges of the booklet. Fold along the center line so that the words are on the front. Cut along each horizontal dotted line to create flaps.

Completion Instructions: Behind each flap, write the definition of the word.

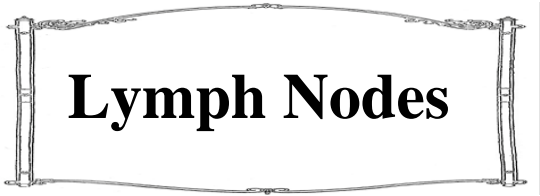
****PLACE in Folder #2 (see layout).**

**Lymphatic
& Immune
Systems
Introduction**

**The lymphatic
system plays an
important role in
the _____
_____ of
your body.**

Fat Absorption

Protection

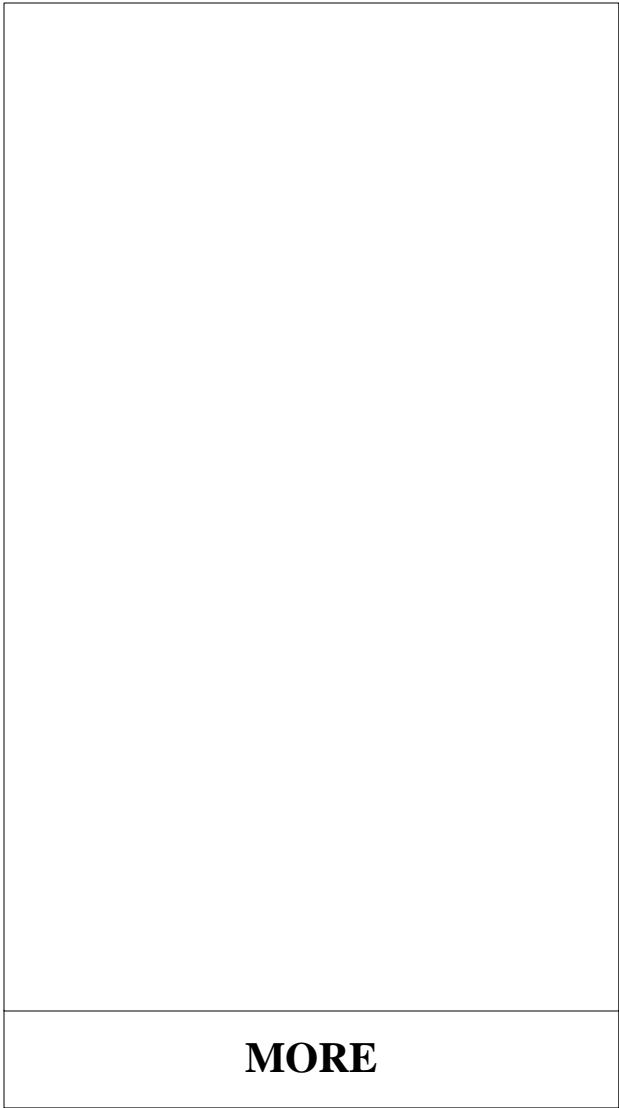
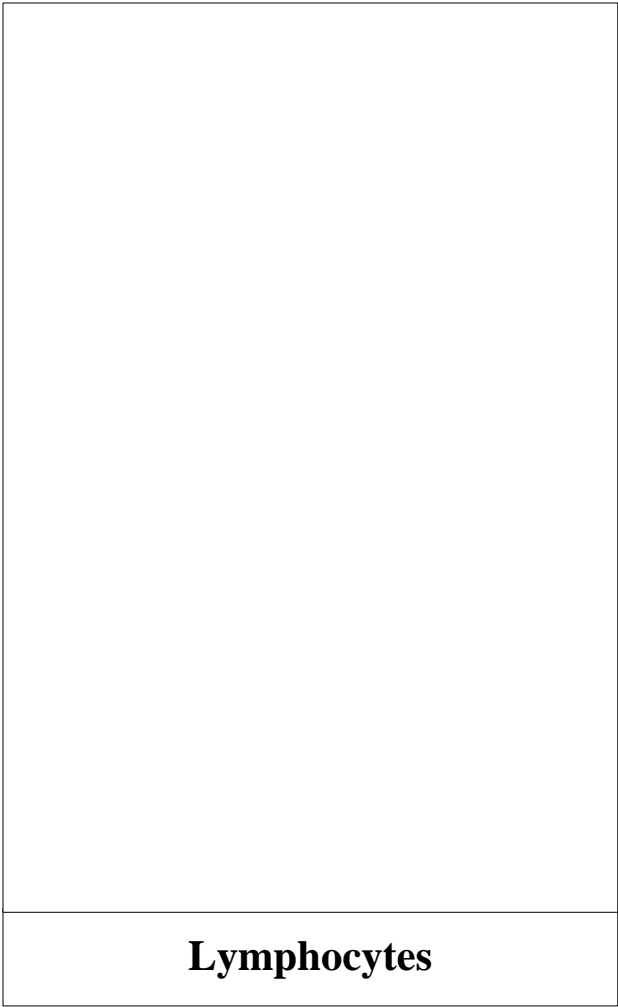


Lymph Nodes

How Many?

Where?

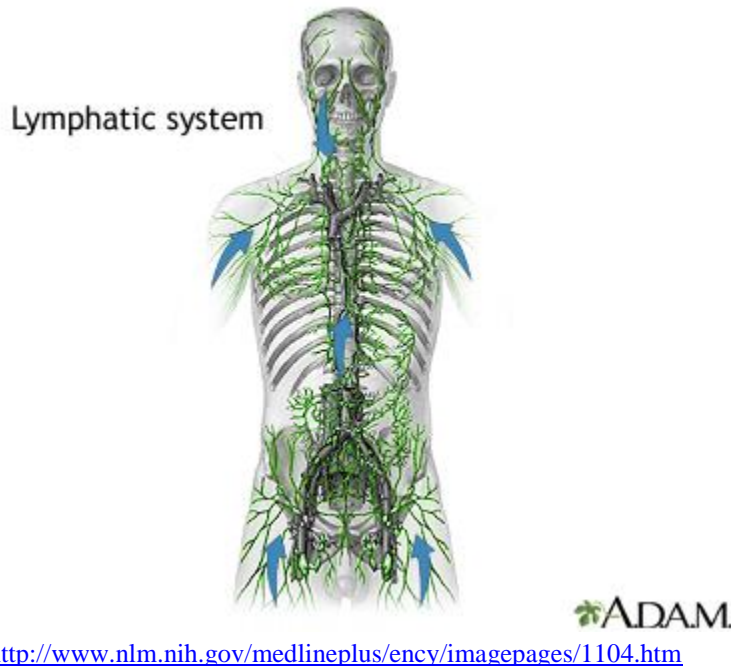
Purpose?



The Lymphatic and Immune Systems

Lapbook

Teacher's/Study Guide



Introduction

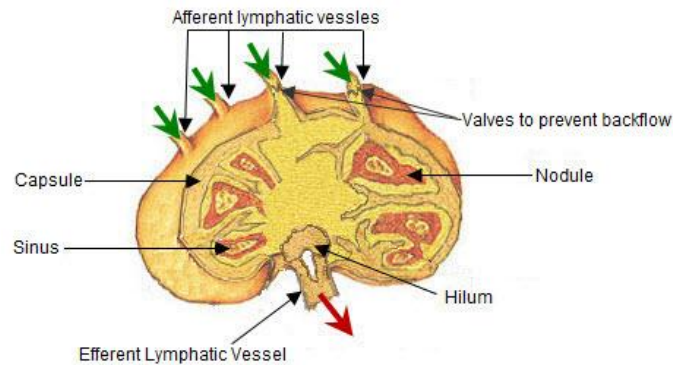
The lymphatic system is an important although often overlooked system of the body. It plays an important role in the fluid balance of your body.

The lymphatic system is also responsible for fat absorption. There are lymph vessels in your small intestine that absorb fat from your food as it passes through your digestive system. Then it transports that fat into your circulatory system so that it can be taken to wherever it is needed in your body.

One of the very big jobs of your lymphatic system is to help protect your body from pathogens.

The lymphatic and immune systems are separate and distinct. However, their functions complement each other, so we must study them together.

Lymph Node Structure



<http://training.seer.cancer.gov/anatomy/lymphatic/components/nodes.html>

Lymph Nodes

There are more than 500 lymph nodes throughout your body. Take a few minutes and slowly feel around on the side of your neck. If you feel any lumps, these are your lymph nodes. While the lymph nodes are everywhere in your body, you can feel them in your neck because there is a bigger concentration of them found there. There are also clumps of these lymph nodes in your armpits and groin area.

The purpose of the lymph nodes is to remove impurities from your body. They use macrophages to get rid of pathogens in the lymph. Macrophages basically “eat” anything that is in your lymph that doesn’t belong there and gets rid of it.

Lymph nodes also produce lymphocytes, which are also known as white blood cells. These white blood cells can then be sent anywhere in the body where an impurity needs to be removed.

The lymph node is surrounded by a capsule, and this capsule has projections that go into the lymph node. These fingers of the capsule are called trabeculae. Lymph nodules, which are compact and spherical in shape, gather around the outer edge of the lymph node.