

## GENERAL WORKSHEET

### *Infectious & Non-Infectious Diseases*

NAME \_\_\_\_\_

ORGANISATION \_\_\_\_\_

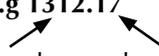
DATE \_\_\_\_\_

#### INSTRUCTIONS

1. Make sure you read the bold text in boxes throughout the worksheet as they contain important information

**These boxes contain instructions explaining how to complete the next section of your worksheet**

2. To find a particular disease or specimen you may need to refer to its specimen number. Once you have found the bay, the specimen will have a purple label to help you locate it on the shelf.

e.g 1312.17  
  
 specimen number      bay number (refer to map)

3. Detailed information about a specific disease or specimen will either be found on an info sheet, poster or next to the specimen itself. The following symbols are used throughout the worksheet.



**Info sheet**  
*A4 displays on table  
 nearest to specimen*



**Poster**  
*located throughout  
 museum*



**Microscopes**

#### IMPORTANT

*Real people have generously donated their body so that medical scientists can learn about health and disease.  
 Our donors deserve the utmost respect and admiration for their invaluable contribution to medical science.*

#### NOTES

# INFECTIOUS DISEASES

There are six main types of disease causing agents or pathogens: prions, viruses, bacteria, protozoans, fungi, and parasites. These pathogens vary greatly in size and shape, and also in the type of diseases they cause in their host.

Choose three diseases from the following list of infectious diseases to examine and complete the following tables

HIV/AIDS  
3035.7 

Cryptococcosis  
2190.9 

Syphilis  
2040.6 

Smallpox 

Tuberculosis  
924A.14 

Diphtheria  
299.15 

Hydatid Disease  
2190.9 

Typhoid  
492.15 

Lung- Aspergillosis  
2130.14 

DISEASE NAME						
Pathogen <small>circle disease causing agent</small>	PRION	VIRUS	BACTERIA	PROTOZOAN	FUNGI	PARASITE
Appearance <small>find specimen &amp; describe main features</small>						
Cause & Transmission						
Symptoms						
Treatment, prevention & control						
<p>What is something interesting, surprising or useful you've discovered about this disease?</p>						

<b>DISEASE NAME</b>	
<b>Pathogen</b> <i>circle disease causing agent</i>	<b>PRION      VIRUS      BACTERIA      PROTOZOAN      FUNGI      PARASITE</b>
<b>Appearance</b> <i>find specimen &amp; describe main features</i>	
<b>Cause &amp; Transmission</b>	
<b>Symptoms</b>	
<b>Treatment, prevention &amp; control</b>	
<b>What is something interesting, surprising or useful you've discovered about this disease?</b>	

<b>DISEASE NAME</b>	
<b>Pathogen</b> <i>circle disease causing agent</i>	<b>PRION      VIRUS      BACTERIA      PROTOZOAN      FUNGI      PARASITE</b>
<b>Appearance</b> <i>find specimen &amp; describe main features</i>	
<b>Cause &amp; Transmission</b>	
<b>Symptoms</b>	
<b>Treatment, prevention &amp; control</b>	
<b>What is something interesting, surprising or useful you've discovered about this disease?</b>	

# NON-INFECTIOUS DISEASES

Non-infectious diseases can be caused by various factors and are often the result of an interplay of genetics and lifestyle. Many of these diseases are closely related to lifestyle factors such as smoking and obesity and much can be done to decrease your risk through positive lifestyle habits.

Choose three diseases from the following list of non-infectious diseases to examine and complete the tables

**Goitre**   
1980.22

**Osteoporosis**   
598.6

**Myocardial infarction**   
1312.17

**Asbestosis**   
975A.8

**Asthma**   
1872.9

**Lung Cancer**   
722.8

**Gangrene**   
1450.17

**Rheumatoid arthritis**   
554.6

**Cerebral infarction**   
485.12

**Coal miner's lung**   
1133.10

**Prostate Cancer**   
512.18

**Osteoarthritis**   
1417.6

**Melanoma**   
2995.5

**Breast Cancer**   
350.20

**Emphysema**   
156.9

DISEASE NAME	
Appearance <i>find specimen &amp; describe main features</i>	
Cause & Transmission	
Symptoms	
Treatment, prevention & control	
<p><b>What is something interesting, surprising or useful you've discovered about this disease?</b></p>	

<b>DISEASE NAME</b>	
<b>Appearance</b> <i>find specimen &amp; describe main features</i>	
<b>Cause &amp; Transmission</b>	
<b>Symptoms</b>	
<b>Treatment, prevention &amp; control</b>	
<b>What is something interesting, surprising or useful you've discovered about this disease?</b>	

<b>DISEASE NAME</b>	
<b>Appearance</b> <i>find specimen &amp; describe main features</i>	
<b>Cause &amp; Transmission</b>	
<b>Symptoms</b>	
<b>Treatment, prevention &amp; control</b>	
<b>What is something interesting, surprising or useful you've discovered about this disease?</b>	

Visit each of these bays in the Museum to discover which organs or diseases are found there

Use common names to describe the type of organs, tissues or diseases found in these bays in the Museum

BAY 7: HAEMATOLOGICAL \_\_\_\_\_

BAY 8-10: PULMONARY \_\_\_\_\_

BAY 11: CARDIAC \_\_\_\_\_

BAY 12: VASCULAR \_\_\_\_\_

BAY 19-20: NEOPLASIA \_\_\_\_\_

BAY 22: ENDOCRINE \_\_\_\_\_

BAY 24: HEPATIC \_\_\_\_\_

BAY 27: NEUROLOGICAL \_\_\_\_\_

BAY 30: RENAL \_\_\_\_\_

Select one of the following microscope slides to view and draw a diagram of what you see (*circle your selection*)

*Echinococcus granulosus* tapeworm 

*Anopheles* mosquito 

Leukemia bloodslide  
(compare with normal bloodslide) 

Head lice 

Can you work out what magnification is being used?

## INTERACTIVE COMPUTER SESSION



For this section of the worksheet you will need to locate the computer room, towards the back of the museum, and use the IMAGES OF DISEASE program on one of the computers. Please follow the instructions below to navigate through the program. If you are having any problems, ask one of our educators to help you.

### GETTING STARTED:

>Open the Images of Disease program

If you cannot see the tab open, go to START, then PROGRAMS, then IMAGES OF DISEASE

>Click on the MUSEUM button up the top left.

This will take you to a map of the museum. From here you can click on any bay number to view the specimens within that bay.

### EXPLORING THE SPECIMENS:

From here you can feel free to browse through any of the bays and specimens by simply clicking on the buttons using your mouse. Alternatively we have outlined some interesting specimens below for you to view. Enjoy!

>Find and Click on bay number 9, the pulmonary bay

Q. Have a look at the specimens in this bay, what part of the body is the word PULMONARY referring to? \_\_\_\_\_

>Find and Click on the specimen of **Pulmonary Tuberculosis 924B.9**

>View the different parts of the specimen and Click on the DESCRIPTION button underneath the image to find out more information on prior history and treatment.

Q. What type of condition is Tuberculosis (TB)? Circle the correct answer below

INFECTIOUS                      NON-INFECTIOUS

Q. From the description what symptoms might a person with this condition have?

\_\_\_\_\_

\_\_\_\_\_

Q. What disease changes can you see in the specimen? E.g. Colour

\_\_\_\_\_

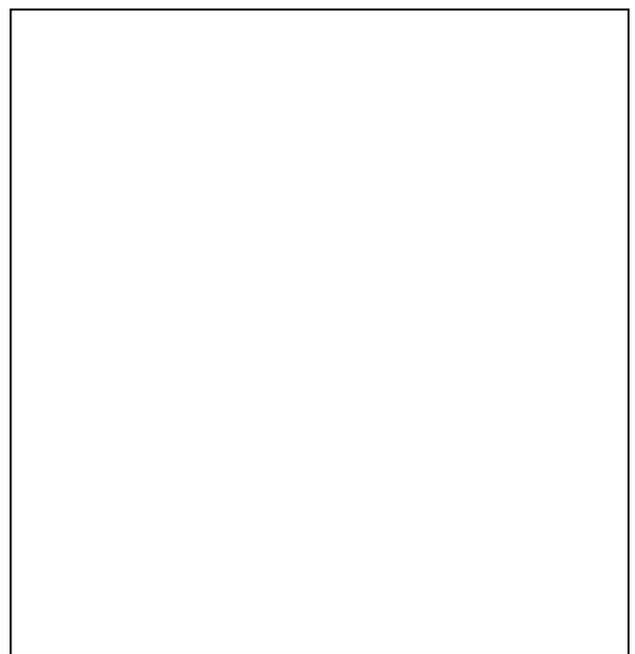
>Find and Click on the specimen of **Pulmonary Emphysema 156.9**

>View the different parts of the specimen and Click on the DESCRIPTION button underneath the image to find out more information on prior history and treatment.

Q. What major risk factor is associated with the cause of this condition?

\_\_\_\_\_

Q. What disease changes can you see in the specimen? Draw a sketch of this specimen in the box to the right and label the disease changes that you can see.



>[Find and Click on Bay number 5, the SKIN disorders bay](#)

>Find and Click on the specimen of **Malignant Melanoma 2995.5**

>View the different parts of the specimen and Click on the DESCRIPTION button underneath the image to find out more information on prior history and treatment.

>The melanoma on this specimen can be seen due to its typical dark brown coloration.

*Q. What major risk factor is associated with the cause of this condition? \_\_\_\_\_*

>Find and Click on the specimen of **Malignant Melanoma 903.5**

>View the different parts of this specimen

*Q. How is this specimen of melanoma different to the last specimen you just viewed? Compare.*

\_\_\_\_\_

\_\_\_\_\_

>Click on the DESCRIPTION button for this specimen and read the middle column.

*Q. What had already happened to the melanoma in this person before it was removed from his cheek?*

\_\_\_\_\_

*Q. Why is early detection so important with cancers such as a melanoma?*

\_\_\_\_\_

\_\_\_\_\_

## INTERESTING SPECIMEN

>[Find and Click on Bay number 1, the OBSTETRICS bay](#)

>Find and Click on the specimen of the **Ovarian Teratoma 618.1**

>View the different parts of the specimen

*Q. You are viewing the female reproductive system; can you make out the different organs and parts?*

*Sketch and label a diagram of the specimen in the box below*



>Click on the close-up button on the right hand side so you can see into the right ovary

*Q. What three abnormal features can you see inside this ovary?*

\_\_\_\_\_

\_\_\_\_\_

### KEY SPECIMEN 3

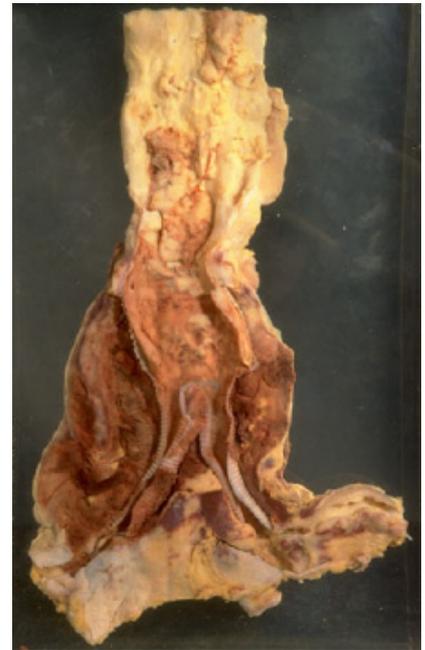
## 174.12 Atheroma of Aorta with Teflon Graft

### Arterial plaque build up due to cardiovascular disease

#### What's happened?

This specimen shows atheroma build up on the inner lining of the artery. Atheroma is also referred to as atherosclerotic plaque or simply plaque. Atheroma deposits may progressively thicken and harden the walls of the artery. This can affect blood flow and lead to angina, myocardial infarction (heart attack), stroke, clots, and aneurysms.

Arteries may become so diseased that they require replacement. A vascular graft is used to replace a section of diseased artery. This specimen displays a vascular graft made of teflon.



### KEY SPECIMEN 4

## 2999.14 Hydatid Cyst in Liver

### A cyst in the liver due to Hydatid disease

#### What's happened?

Hydatid disease is caused by a tapeworm which infects dogs, dingoes and foxes. Humans can develop cysts in internal organs, especially the lungs and liver, if they ingest eggs from an infected animal. The disease can become life threatening due to the risk of the cysts rupturing and may require surgery.



# MUSEUM MAP

