**GENERAL HUMAN BIOLOGY**

**MALE RAT DISSECTION PRACTICAL**

**INTRODUCTION:**

The reproductive systems of most mammals are similar in structure and function. Examination of the reproductive structures of the male and female rat will help you to understand the human reproductive system

**EQUIPMENT:**

* Male rat
* Dissecting wax tray
* Scalpel
* Forceps
* Scissors
* Probe
* Disposable gloves
* Lab coat
* Magnifying glass

**DISSECTION METHOD:**

1. Collect all your equipment
2. Pin your rat to the wax tray
3. Identify the external features of the rat that are associated with reproduction – the scrotum, containing the testes, the penis and the opening of the urethra at the tip of the penis
4. Following your teachers demonstration, perform a ‘Y’ incision delicately on the rats chest and abdominal cavity
5. Gently use the scalpel to open the scrotal sac to reveal the testis. This will involve cutting through the skin around the base of the penis and continuing the cut down through the middle of one of the scrotal sacs
6. Gently lift the testis clear of the scrotal sac
7. You will now be able to identify the vas deferens and the epididymis as well as the testis. Cut one of the testis in half and use a magnifying glass to see the seminiferous tubules inside the testis and the tubules that make up the epididymis
8. Clear the skin away from the rear portion of the belly of the rat. Tracing the vas deferens forward, cut through the wall of the rat’s abdomen so that you can see where it enters the body cavity
9. Identify the urinary bladder. It will appear as a semi-transparent bag containing clear fluid
10. Near the bladder, the two vas deferens, one from each testis, join together to form the urethra. Identify the urethra
11. Near the point where the vas deferens join you will be able to see two white elongated glands with a crinkly appearance. These are the seminal vesicles. The prostate gland, although present in the rat is very difficult to locate

**GENERAL HUMAN BIOLOGY**

**FEMALE RAT DISSECTION PRACTICAL**

**INTRODUCTION:**

The reproductive systems of most mammals are similar in structure and function. Examination of the reproductive structures of the male and female rat will help you to understand the human reproductive system

**EQUIPMENT:**

* Female rat
* Dissecting wax tray
* Scalpel
* Forceps
* Scissors
* Probe
* Disposable gloves
* Lab coat
* Magnifying glass

**DISSECTION METHOD:**

1. Collect all your equipment
2. Pin your rat to the wax dissecting tray
3. Identify the external features of the rat that are associated with reproduction – the genital opening and the mammary glands. In addition, locate the urethra and the anus
4. Count the number of nipples on the underside of the abdomen
5. Use a ‘Y’ incision to open the body cavity to reveal the reproductive organs. There may be some fat, but do not try to remove it, just move it to one side
6. Locate the vagina
7. Locate the two uterus that extend from the vagina up each side of the body cavity
8. At the front end of each uterus is a very short uterine tube and at the end of each uterus is a small round orange coloured structure. This is the ovary
9. Insert a blunt probe into the vagina to trace the pathway that sperm would take through the female reproductive organs
10. Identify the urinary bladder. It will appear as a semi-transparent sac with clear fluid