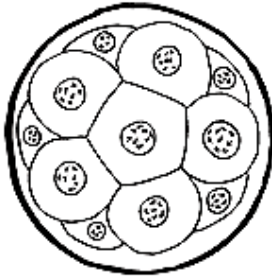
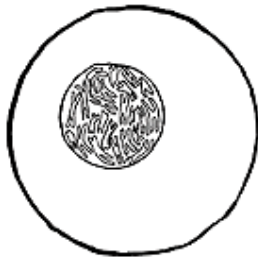


INFORMATION SHEET 2: BOY OR GIRL?



Left is a fertilised egg cell or zygote. The cells are dividing rapidly. Each cell contains a nucleus with 46 chromosomes in it (23 from the mother and 23 from the father).

HOW DO WE KNOW WHETHER THIS ZYGOTE WILL DEVELOP INTO A BOY OR A GIRL?



It all depends on two out of the 46 chromosomes. These are the sex chromosomes (sometimes called the X and Y chromosome because of their shape).

SEX CHROMOSOMES X AND Y



Roughly half of a man's sperm contain 22 chromosomes plus an X chromosome and half contain 22 chromosomes plus a Y chromosome. All of the women's eggs contain 22 chromosomes plus an X chromosome.

When the sperm and egg meet and fertilisation takes place... If an X chromosome from the mother meets with an X chromosome from the father, the fertilised egg will develop into a girl.

XX = GIRL ♀

But if an X chromosome from the mother meets with a Y chromosome from the father, the fertilised egg will develop into a boy.

XY = BOY ♂

INFORMATION SHEET 2: BOY OR GIRL

People have many reasons for wishing they could choose the sex of their child.

Nita is pregnant. She and Sam have three girls already and they want their next baby to be a boy.

Jill and Steve's first child, a boy, has Duchenne muscular dystrophy (DMD), a genetic condition causing progressive muscle weakness. They know that if their next child is a boy, he too could develop DMD, but if they have a daughter, she is unlikely to be affected. They want Jill's next child to be a girl.

We now know how the sex of a child is determined. But this has not always been so.

'If a woman lies on her right side during intercourse, a boy will be conceived'. (Parmenides, 5th century BC)

'If a man and his wife wish to conceive a son, the man must tie his right testicle with string'. (Hippocrates, 460-360 BC)

'Semen is produced by both men and women. The dominant semen is that of the more active partner, so if the woman is more vigorous during intercourse, she will have a female child'.

(Aristotle, 384-322 BC)

'The woman is responsible for the sex of her child. All eggs released from the right ovary will develop into boys. As eggs are released from the left and right ovaries on alternate months, a woman who keeps track of her menstrual cycle after her first child has been born should be able to produce a child of the desired sex'. (Dr. E. Dawson, early 1900s)

The weather — e.g. wind direction, tides, rainfall and temperature — were thought by some to influence the sex of a child.

Diet was also thought to be important. In the middle ages women were told to eat a mixture of wine and lion's blood if they wanted to have a male child. There are still people who believe that eating sour, bitter food and lots of red meat will lead to a son while eating cakes and other sweet food will lead to a daughter.

Fascinating perhaps, but folklore all the same! Have you heard any modern myths about how to have a boy or a girl? Why do you think people believe these myths?