

Boy or girl?

Location

Ground floor, All About Us exhibition

In a nutshell

Will the baby be a boy or a girl? The journey to birth is epic. At this exhibit, meet the main characters involved.

What to do

Using the touch screen visitors can learn about the male and female sex cells (gametes). The exhibit starts with a short video showing a sperm cell fertilising an egg cell. The fertilised egg then divides (mitosis). Visitors can also take a tour of both the male and female reproductive organs.

Time Required

KS3 & KS4 4-5 minutes per student.

What's happening?

The egg is spherical in shape and carries 22 chromosomes plus an X chromosome. An egg is released roughly once every 28 days, usually alone and all eggs are made before a female is even born, the only thing left is for them to mature. They are nourished by cells in the lining of the Fallopian tube and carry nourishment for the embryo as well as the nucleus.

Each sperm cell consists of a small oval head, which contains the nucleus and a long thrashing tail. The sperm cell carries 22 chromosomes plus an X or Y chromosome which decides the sex of the baby. Boys have a Y chromosome, whilst girls inherit a second X chromosome. Males don't start producing sperm until they reach puberty. Around 250 million sperm cells are released but only one will reach the egg. The sperm cells use their tails to propel them on their journey and can reach speeds of up to 2cm per minute.



Curriculum links

KS3	Science - Reproduction <ul style="list-style-type: none">- reproduction in humans (as an example of a mammal), including the structure and function of the male and female reproductive systems, menstrual cycle (without details of hormones), gametes, fertilisation, gestation and birth, to include the effect of maternal lifestyle on the foetus through the placenta English - Reading <ul style="list-style-type: none">- learning new vocabulary, relating it explicitly to known vocabulary and understanding it with the help of context and dictionaries
KS4	Science - Growth and development of cells <ul style="list-style-type: none">- describe the process of mitosis in growth, including the cell cycle Science - Hormonal coordination and control in humans <ul style="list-style-type: none">- describe the roles of hormones in human reproduction, including the menstrual cycle Science - Inheritance <ul style="list-style-type: none">- describe sex determination in humans English - Spoken <ul style="list-style-type: none">- listening to and building on the contributions of others, asking questions to clarify and inform, and challenging courteously when necessary Computing <ul style="list-style-type: none">- develop their capability, creativity and knowledge in computer science, digital media and information technology

Relates to:

Workshops & Theme Days	Shows	Trails	Other exhibits
<ul style="list-style-type: none">• DNA codebreakers (KS3 lower)• DNA detectives (KS3 & KS4)	<ul style="list-style-type: none">• How my body works (KS3)		<ul style="list-style-type: none">• Before birth• How to build a human• Inside a womb

