Y10 Mock Exam June 2022

Revise the following topics:

The menstrual cycle (LO1)
Signs and symptoms of pregnancy (LO1)
Multiple births (twins) (LO1)

Home birth v hospital birth (LO2)
Caesarean section (LO2)
Pain relief (LO2)
Assisted deliveries (LO2)

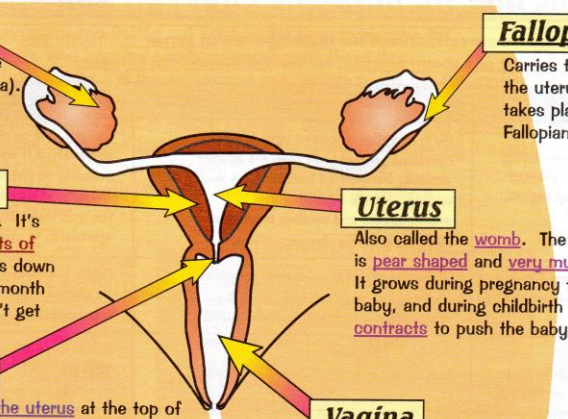
Postnatal checks (LO3)
Reflexes at birth (LO3)

Teaching a child about road safety (LO5)
Safety in the home/preventing electric shocks (LO5)
Safety labelling in clothes (LO5)

Advantages of breastfeeding (RO19 LO4)
Healthy diets for children (RO19 LO4)

The Female Reproductive System

The Structure and Function of the Female Genitals



Ovary

The ovaries produce eggs (also called ova). One egg is released each month.

Fallopian tube

Carries the egg towards the uterus. Fertilisation takes place in the Fallopian tube.

Endometrium

The lining of the uterus. It's spongy and contains lots of blood vessels. It breaks down and comes away each month if a fertilised egg doesn't get implanted in it.

Uterus

Also called the womb. The uterus is pear shaped and very muscular. It grows during pregnancy to fit the baby, and during childbirth it contracts to push the baby out.

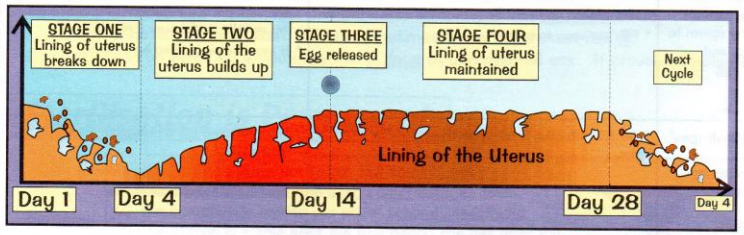
Cervix

The neck of the uterus at the top of the vagina. It's usually very narrow, but stretches out to fit the baby through it during childbirth.

Vagina

The penis goes in here during vaginal sexual intercourse and ejaculates sperm here. Babies are born through the vagina.

The Menstrual Cycle Prepares the Uterus for an Egg

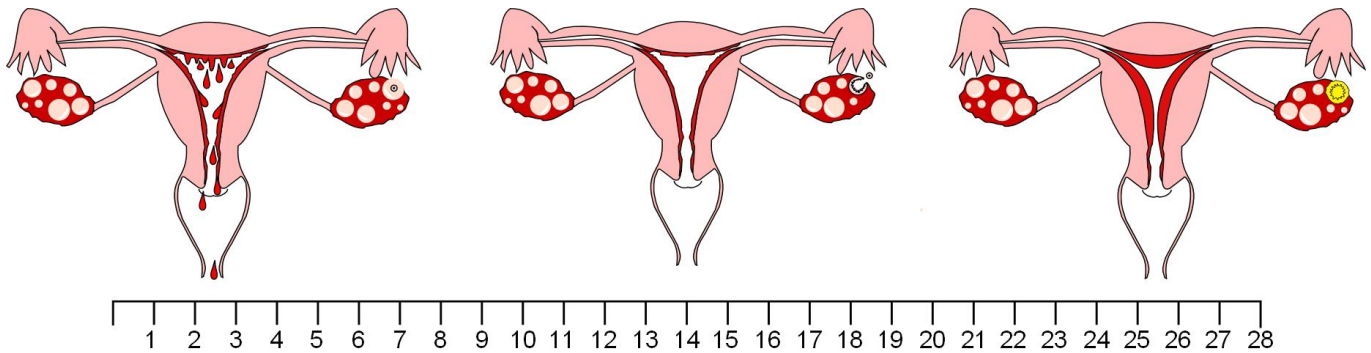


1) Day 1 — bleeding starts as the endometrium (lining of the uterus) breaks down and passes out of the vagina for about 4-7 days. This is having a period.
2) Day 4 — the endometrium builds up again from about day 4 until about day 14. It forms a thick layer full of blood vessels, ready to receive a fertilised egg.
3) Day 14 — an ovum (egg) is released from one of the ovaries. This is the time when the woman is most likely to get pregnant.
4) Day 14 to day 28 — the endometrium stays thick and ready for a fertilised egg. If no fertilised egg arrives, the endometrium breaks down and the cycle starts again.

Two big piccys, and a load of points — Learn the lot...

In the Exam, you might be asked to label a diagram of the female organs, or to say what the different parts do. So you need to learn all the details on the top diagram. Learn what each of the four stages of menstruation are, and make sure you can scribble both the diagrams from memory.

The Menstrual Cycle



- ★ Girls begin to menstruate (have periods) some time between the ages of 10 and 17
- ★ This shows that the reproductive organs are beginning to be in working order
- ★ It is sometimes called the monthly cycle as it takes about 28 days to complete
- ★ The purpose of the menstrual cycle is to produce an egg and prepare the uterus to receive the egg if it becomes fertilised by a sperm
- ★ If the egg is not fertilised, the lining of the womb breaks down and comes away from the body. This is called a **period** or **menstruation.**
- ★ Between about 45 and 55 the menstrual cycle stops. This is called the **menopause** and it means that the woman can no longer conceive a baby naturally

The signs and symptoms of pregnancy

There are some common signs and symptoms of pregnancy, but not all women will have all of the symptoms. Women also experience signs and symptoms at different rates, therefore some are further along in the pregnancy than others when they find out that they are pregnant.

Missed period

The first sign of pregnancy is often a missed period, or a very light period. This is generally the most reliable sign for women who usually have a regular monthly menstrual cycle.

Breast changes

The breasts may feel similar to just before a period, becoming larger and feeling tender. Some women may feel tingling and veins may be more visible. The nipples may appear darker and stand out.

Passing urine frequently

Pregnant women often need to pass urine more frequently. There may also be constipation and an increase of vaginal discharge without any soreness or irritation.

Tiredness

Women may feel tired or exhausted, particularly during the first 12 weeks of pregnancy, due to hormonal changes in the body. These changes can also cause a woman to feel emotional and upset at this time.

Nausea

Feeling sick and nauseous, and/or vomiting when pregnant is often called 'morning sickness', but although it can occur at any time of day. This symptom generally begins around six weeks after a pregnant woman's last period.

Good practice

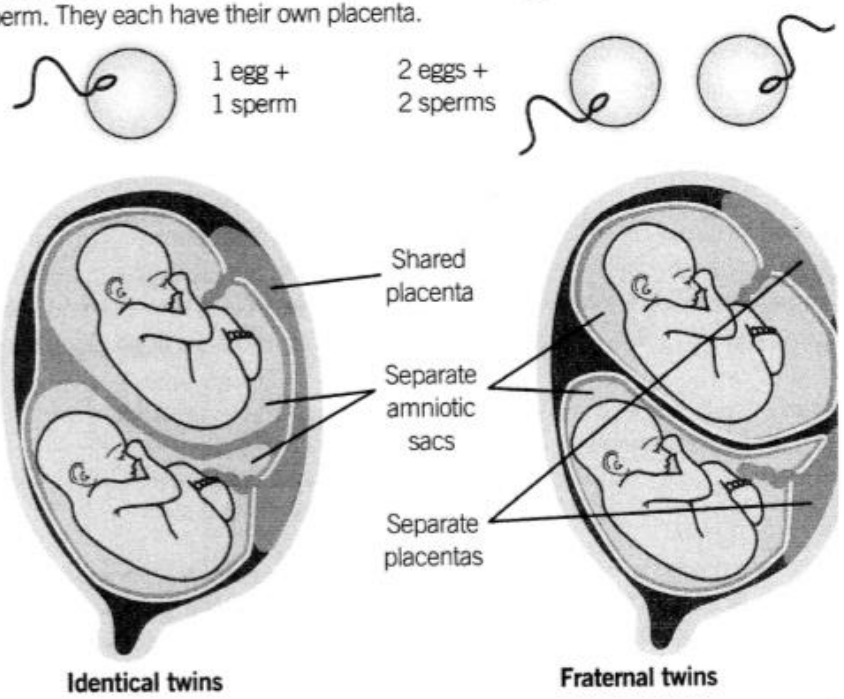
Hyperemesis gravidarum (HG) is a serious condition that causes severe vomiting in pregnant women and requires treatment. If a pregnant woman is frequently being sick and cannot keep food or drink down, she should see her GP.

Multiple pregnancies

A multiple pregnancy is when more than one baby grows in the uterus. Identical twins are the result of one fertilised egg dividing into two cells. Non-identical twins are the result of two separate eggs being released and fertilised by two different sperm.

If the fertilised egg splits into two parts then each part develops into a baby which becomes identical twins. In the uterus they will share the same placenta.

Non-identical (fraternal) twins are formed when two eggs are fertilised by two differe sperm. They each have their own placenta.



2.5 The choices available for delivery

There are several choices available when it comes to the delivery and birth. To make the right choice, a mother needs the right information. The GP will normally be the first to provide information explaining the options. The mother can also talk the options over with her midwife at an early appointment, and with the leader of antenatal and parenting classes. The following diagram shows the choices available. Often, not all of the provision will be available within one local area. For example, some mothers may have a consultant-led unit nearby, while others may have a midwife or GP-led unit.

Hospital birth

Types of hospital provision vary locally and can include:

- consultant-led units
- midwife or GP-led units
- birthing centres (this environment is generally the most homely).

Delivery rooms in hospitals are becoming increasingly home-like and comfortable, with furniture such as soft chairs and beanbags. These enable mothers to change position, which can help with pain management. Warm baths and showers may also be available (most commonly in birthing centres), and these can also soothe and ease pain during early labour.

Maternity units increasingly offer birthing pools, which as well as comfort and pain relief, also enables a water birth if labour progresses normally. A water birth will need to be arranged ahead of time as part of the birthing plan, because of the limited number of pools available.

Advantages of hospital births include the following:

- Highly trained staff and equipment are available should an emergency arise – this could save a baby's life and is reassuring for parents.
- Some types of pain relief can only be given in hospital.
- Forceps, ventouse and Caesarean section deliveries can only be carried out in hospital (see below).
- Midwives are on hand after the birth to help with concerns and issues such as feeding, and can let a mother rest by taking a baby into the nursery.
- The demands of the mother's home life are left behind.

Home birth

Home birth is an option when the pregnancy is normal and mother and baby are both well. Support is given by a midwife, who attends during labour. If the labour does not progress normally or the mother needs help, the midwife's role is then to arrange a transfer to hospital. Advantages of a home birth include the following:

- The mother is in familiar, relaxing surroundings.
- Labour is not interrupted by travelling to hospital.
- If the new baby has older siblings, they will not need to be separated from the mother as she gives birth, and they can be involved in the labour/birth.
- The mother is more likely to be looked after by a midwife she has seen throughout the pregnancy.
- An intervention such as forceps or ventouse is less likely than when giving birth in hospital.

Other considerations with home birth:

- A transfer to a hospital may be needed if there are complications.
- The NHS report that for women having their second or subsequent baby, a planned home birth is as safe as having a baby in hospital or a midwife-led unit. However, for women having their first baby, home birth slightly increases the risk of a poor outcome for the baby (from 5 in 1,000 for a hospital birth to 9 in 1,000 – almost 1 per cent – for a home birth). Poor outcomes include death of the baby and problems that might affect the baby's quality of life.
- Epidurals (for pain relief) are not given at home.
- A midwife or doctor might advise that a hospital birth is safer for a mother and baby in some circumstances.

Methods of delivery

There are various methods of delivery. Some will be planned in advance, while others become necessary should help be needed during labour. The NHS reports that about one in eight women has an assisted birth, where forceps or a ventouse suction cup are used to help deliver the baby's head. This can be because:

- there are concerns about the baby's heart rate
- the baby is in an awkward position
- the mother is too exhausted.

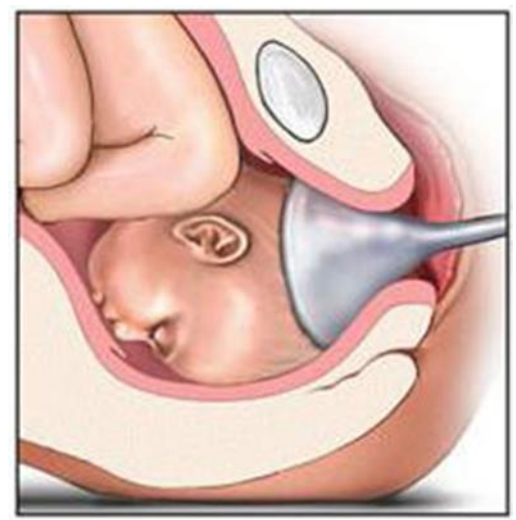
The procedures are safe but are only used when necessary.

Forceps

Forceps looks similar to tongs – a curved metal instrument that fits around a baby's head. They are carefully positioned, then joined together at the handles. As the mother pushes with a contraction, an obstetrician gently pulls to help deliver the baby. Some forceps are designed to turn the baby to the right position to be born, if this is necessary. Forceps are usually more successful than ventouse (see below), but are more likely to result in vaginal tearing.

Ventouse

A ventouse (vacuum extractor) is a plastic or metal cup that fits firmly on the baby's head and is attached by suction. As the mother pushes with a contraction, an obstetrician gently pulls to help deliver the baby. The process leaves a small swelling on the baby's head, which will disappear quickly. The cup may also leave a temporary bruise. A ventouse is not used with babies born before week 34 of pregnancy because the head is too soft.



Elective/emergency caesarean section

A caesarean section is an operation to deliver a baby through a cut made in the abdomen and womb. A caesarean may be recommended as an elective (planned) procedure or done in an emergency if a vaginal birth becomes unsafe. Reasons for a caesarean include:

- the baby being in the breech position (feet first)
- a low-lying placenta (placenta praevia)
- pre-eclampsia
- infections such as STIs and untreated HIV
- the baby not getting enough oxygen and nutrients so needs to be delivered immediately
- labour is not progressing
- excessive vaginal bleeding.

Caesareans are a major operation and there are risks, so they are not suitable for every mother.

Pain relief

It is natural for mothers to be concerned about handling the pain of childbirth, so it is important that they consider the options for pain relief when they make their birth plan.

Gas and air (Entonox)

This mixture of oxygen and nitrous oxide gas does not remove all the pain, but it can help to reduce it. Mothers breathe in the gas and air through a mask or mouthpiece which they hold themselves – this gives them a sense of control. It works within about 20 seconds, so a deep slow breath will be taken as a contraction begins. There may be a light-headed sensation, and some mothers decide to stop using it as they may feel sick, sleepy or unable to concentrate. A painkilling injection can be given alongside if this pain relief is not sufficient.

Pethidine

This opiate-based drug is given by injection. It quickly makes the mother feel relaxed because it causes the muscles to relax. This makes pain more tolerable, but it does not take it away altogether. Used in early labour, it can help the mother to settle and rest. It cannot be used too close to birth because the mother might not be sufficiently alert and it could also cause the baby to become sleepy. This could adversely affect feeding and even breathing. Pethidine can cause some mothers to feel sick or disoriented.

Epidural anaesthetic

This is a local anaesthetic that numbs the nerves that carry the pain impulses from the birth canal to the brain. It can provide total pain relief, but it is not always 100 per cent effective. It is often used when a mother is experiencing a very long or painful labour, or when a mother becomes distressed. An epidural can only be given by an anaesthetist in hospital.

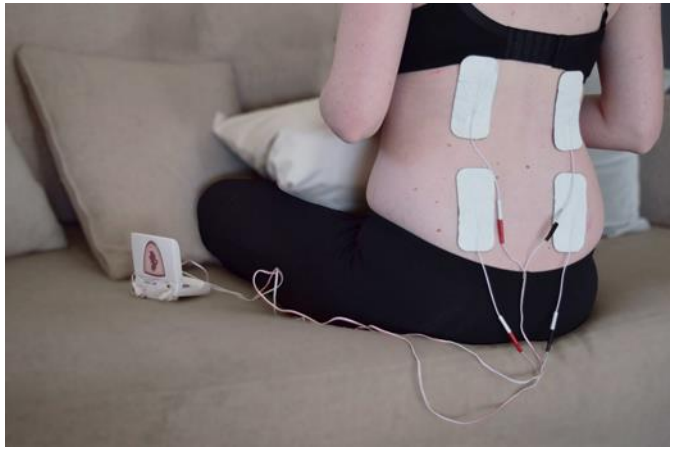
The mother lies on her side or sits curled up. Local anaesthetic is used to numb the back, then a needle is inserted. A tube passes through the needle into the back, near the nerves that carry pain impulses from the uterus. Drugs, usually a mixture of local anaesthetic and opioid, are administered through this tube. It takes about 10 minutes to administer an epidural, and up to another 15 minutes for it to work. It can then be topped up if necessary. An epidural does not usually cause sickness or drowsiness, but the mother's contractions and the baby's heart rate will need to be continuously monitored. Possible side effects include:

- legs feeling heavy
- blood pressure dropping (this is rare)
- prolonged second stage of labour as contractions may not be felt, leading to increased likelihood of assisted delivery
- difficulty passing urine
- a headache (this can be treated)
- a sore back for a day or two afterwards.

TENS

TENS stands for 'transcutaneous electrical nerve stimulation'. A TENS machine is a small device that has leads connected to sticky pads called electrodes. These are attached to the mother's skin. Small electrical impulses are delivered– these give a tingling sensation. They reduce the pain signals going to the spinal cord and brain, relieving pain and relaxing muscles. It is possible that they also stimulate the production of endorphins – the body's 'natural painkillers'. For most people, TENS carries no side effects (there are special pads for people with allergies), but it should not be used:

- if the mother has a pacemaker or another type of electrical or metal implant
- if the mother has epilepsy or a heart problem
- in some cases early in pregnancy.



Water birth

Water can help a mother to relax, and this in turn makes contractions more bearable. The water should be kept at a comfortable temperature, but not above 37.5°C. The mother's temperature will be monitored throughout. This is because a raised maternal temperature increases the oxygen requirement of the baby, which may not be able to meet an increased oxygen need. There is more about water birth on page 26.

Postnatal check 6 weeks after birth

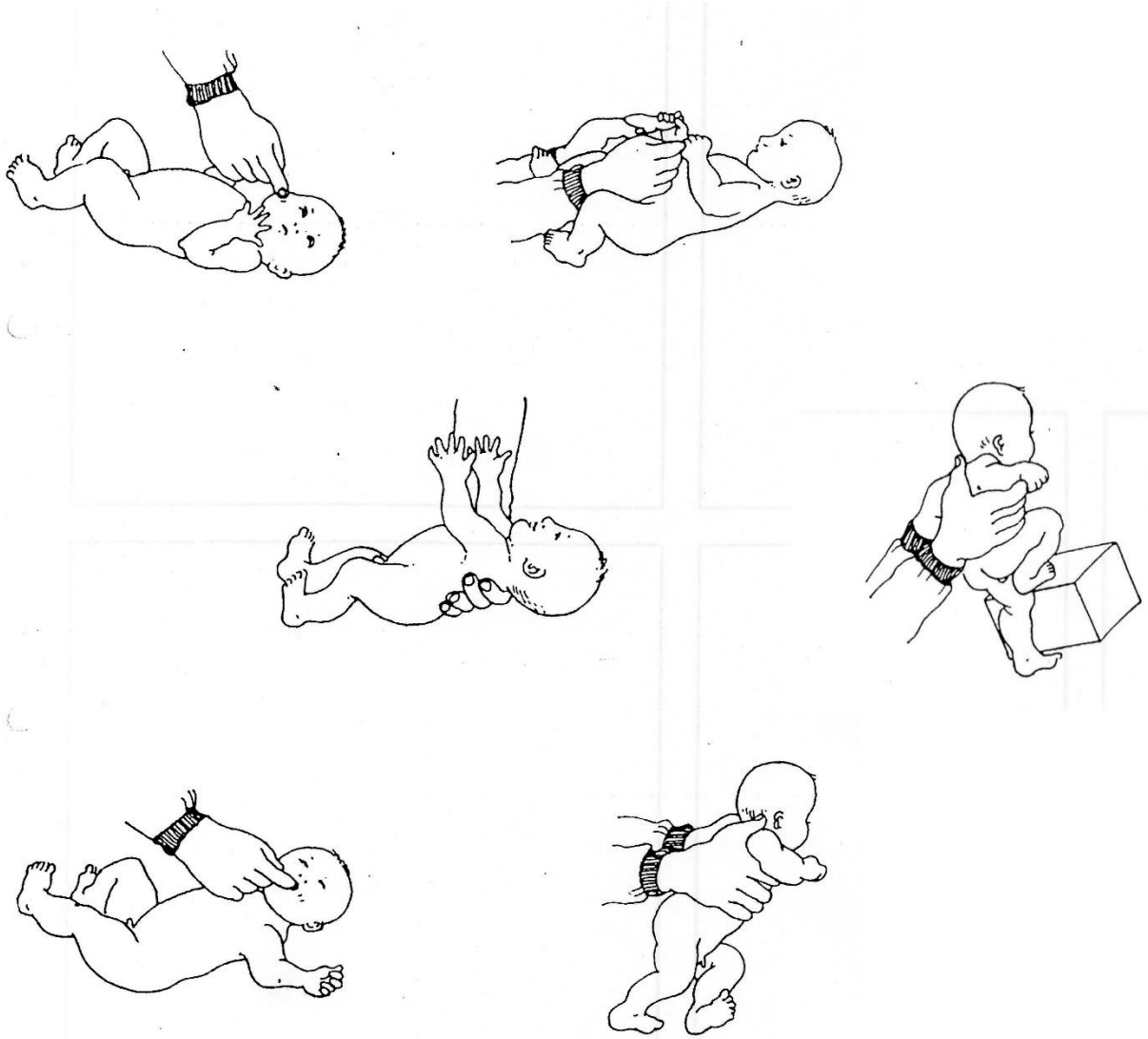
This check is to make sure that the mother feels well and that she is recovering properly from the birth. This is not offered in every area, but the mother can request an appointment for a check, especially if she has any concerns. There are no set guidelines for what should be covered in the check.

6–8 week review by a health visitor or doctor

This check repeats the baby's newborn physical examination. There are some local variations, but generally a mother can also expect:

- questions about how she is feeling in terms of mental health and wellbeing
- to be asked if she has any vaginal discharge and whether there has been a period since the birth
- a blood pressure check if there were problems at the birth
- to be offered an examination to see if stitches have healed (if relevant)
- to be asked about contraception
- to be weighed if overweight or obese, and to receive weight loss advice, and guidance on healthy eating and physical activity.

Reflexes – these are the actions that a baby is born with, but they usually disappear by the age of 3 months and have to be "re learnt"



Rooting reflex – this is related to finding food. If you touch the baby's cheek, it will turn its head in the direction of the touch, as it is searching for the mother's nipple.

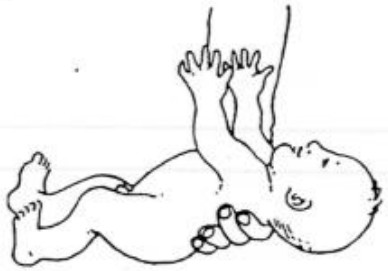
Grasp reflex – a baby will grasp anything placed in its hand. If you touch the baby's palm with your finger, its fingers will close around your finger.

Startle reflex – if the baby loses support of its head or neck, it throws out its arms and legs as if it is trying to grab onto something. (also known as the Moro reflex)

Stepping reflex –if you hold the baby so that its leg is in contact with an object, it will lift the other foot as if trying to step onto the object. This is related to learning to walk later on.

Sucking/swallowing reflex – a baby will automatically start to suck on anything placed in its mouth. This enables it to obtain food when the object is a nipple

Walking reflex – if you hold a baby with its feet just touching the ground, it will move its legs forward as if trying to walk. This happens even though it is not ready to walk.



Electric shocks

Electricity can be extremely dangerous, and electric shocks can kill by stopping the heart. It is important to fit socket covers that protect children from electric shocks caused by them poking fingers or objects into electric sockets.

If a child has been electrocuted, it is vital to stop the flow of electricity. The child must never be approached until this is undertaken, otherwise the first aider is also likely to receive an electric shock. The power should be turned off at the mains or master switch. If this isn't possible, the child may be pushed or pulled well away from the source using material that will not conduct the electricity. (A first aider will learn how to do this safely on a first aid course.) Techniques may include looping a thick towel around the feet to enable a child to be pulled, or using a wooden broom to push them away from the electricity source.

Road safety

Young children should always be under close and direct supervision of adults when walking on the pavement or crossing the road. If you are in charge of a child who is old enough to be walking near a road, you should hold their hand at all times. Follow the five point Green Cross Code and make children aware of it:

1 First find the safest place to cross.
- If possible, cross the road at: subways; footbridges; islands; zebra, puffin, pelican or toucan crossings; or where there is a crossing point controlled by a police officer, a school crossing patrol or a traffic warden.
- Otherwise, choose a place where you can see clearly in all directions, and where drivers can see you.
- Try to avoid crossing between parked cars and on sharp bends or close to the top of a hill. Move to a space where drivers and riders can see you clearly.
- There should be space to reach the pavement on the other side.

2 Stop just before you get to the kerb.
- Do not get too close to the traffic. If there is no pavement, keep back from the edge of the road but make sure you can still see approaching traffic.
- Give yourself lots of time to have a good look all around.

3 Look all around for traffic and listen.
- Look in every direction.
- Listen carefully because you can sometimes hear traffic before you can see it.

4 If traffic is coming, let it pass.
- Look all around again and listen.
- Do not cross until there is a safe gap in the traffic and you are certain that there is plenty of time.
- Remember, even if traffic is a long way off, it may be approaching very quickly.

Road Safety

https://www.youtube.com/watch?v=-Jgald8o9Jo

https://www.youtube.com/watch?v=R2vxlXaVLlM
https://www.youtube.com/watch?v=KnwxN24E2yY

https://www.youtube.com/watch?v=UxHBVgM9zfg

The **Green Cross Code** is a brand created by the National Road Safety Committee (now the Royal Society for the Prevention of Accidents, RoSPA) to raise awareness of pedestrian road safety in the United Kingdom. The multimedia **Green Cross Code** campaign began in 1970 and continues today.

https://www.youtube.com/watch?v=CRUBMBi_lp4

Child pedestrians
2013 52 killed each year. 37 seriously injured every week.

Child Care + Dev.
by Minett

70 SAFETY ON THE ROADS

Accidents on the roads are the most common danger outside the home. In 2002, 23 children under the age of 8 years were killed or seriously injured every week on roads in the UK. Many more were injured to a lesser degree.

HOW PARENTS CAN HELP

Parents and carers can help prevent their children becoming involved in road accidents when they follow these instructions:

Be a good role model.

- Set a good example by always crossing roads in a careful way.
- Use walking reins or wrist straps for toddlers – never rely on holding a toddler's hand as he can pull free in an instant.
- Do not let young children out on the roads by themselves.
- Insist that a young child holds the hand of an adult when crossing a road.
- Make sure the child can be seen – when out in the dark, children should always wear light-coloured or reflective clothing, or carry a reflective bag.
- Make sure their child knows the Green Cross Code – go through the code every time the road is crossed until the child knows it.

WHY CROSSING THE ROAD IS DIFFICULT FOR YOUNG CHILDREN

Young children cannot cross safely because:

- being small, they cannot see over parked cars etc.
- they do not remember instructions for very long
- they have not yet learnt to be good judges of distance or of the speed at which the vehicles are travelling
- they do not yet understand how traffic behaves
- their minds may be occupied with other matters, e.g. running after a ball.

LEARNING ABOUT ROAD SAFETY

Road safety education needs to begin at an early age. The majority of serious accidents to child pedestrians and cyclists occur on roads where the children live.

The under-5s

From the time that children can walk, they need to be taught that pavements are for people and roads are for traffic. Adults with children set a good example when they cross roads correctly. While doing so, they should talk to the children about stopping at the kerb, and looking and listening for traffic before crossing the road.

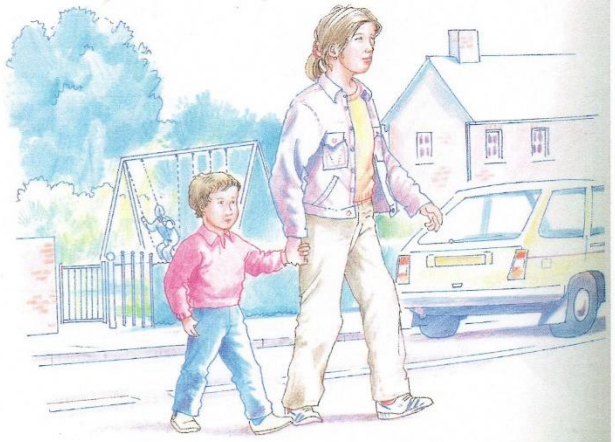
5–6 years

The risk of a road accident increases when children start school. They are not yet old enough to be out on the roads by themselves and should be taken to and collected from school. They have reached the stage when they can begin to learn how to cross quiet roads on their own. They will need to be taught and then be frequently reminded of the **Green Cross Code**.

Stand near the kerb but not at the very edge

GREEN CROSS CODE

1. **Find a safe place to cross, then stop**. Safe places include Zebra and Pelican ('green man') crossings or where there is a traffic island or school crossing patrol (lollipop lady or man). If it is necessary to cross near parked cars, stop at the outer edge of the cars and look and listen carefully before continuing across.
2. **Stand on the pavement near the kerb**. Do not stand at the very edge of the pavement; traffic often passes closer than you think.
3. **Look all around for traffic and listen**.
4. **If traffic is coming, let it pass. Look all around again**.
5. **When there is no traffic near, walk straight across the road**. If you are not sure, do not cross. Always walk, do not run.
6. **Keep looking and listening for traffic while you cross**.



Walk straight across the road and keep looking and listening for traffic

June 2017

5 (a)* Explain ways parents/carers can teach their child about road safety.

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..... [6]

This is a **QWC** question – it needs a PLAN!

Highlight the key words/phrases

To get full marks, you will need **a detailed explanation of at least two ways** (ideally three) parents can teach their children about road safety.

Use words such as:

- explain
- tell
- show
- demonstrate
- encourage/discourage

Ideas- parents should always set a good example.
They should teach their child the Green Cross Code, they should talk about road safety when they are out and about, they could use games, DVDs, cartoons, songs about road safety

The question is **not** asking you to write out the Green Cross Code!

Safety equipment

The table below shows key safety equipment that can prevent accidents:

Equipment	Purpose
Harness and reins	Prevent falls from prams, push chairs and high chairs. Prevent young children escaping and/or running into the road when out walking.
Safety gates	Prevent access to kitchens, stairways, outdoors. Always place a guard at the bottom and top of stairs for babies and young children.
Locks for cupboards and windows	Prevent children getting hold of dangerous substances or falling from windows.
Safety glass/ safety film	Prevent glass from breaking into pieces, causing injuries.
Socket covers	Prevent children from poking their fingers into electrical sockets.
Play pens	Create a safe area for babies.
Smoke alarms	Detect smoke and sounds the alarm.
Cooker guards	Prevent children pulling pans from the cooker.
Firefighting equipment such as a fire blankets or extinguishers	May be used to tackle minor fires.

5.2 Safety labelling

Safety labelling tells you whether a product or piece of equipment is safe for use by children. Any relevant additional safety information will be specified. You must always check for safety marks and read safety information before buying or using products for children. You can read more about this in Unit R019, page 91.

BSI safety mark/kite mark

The BSI safety mark/kite mark is a UK product and service quality certification mark, administered by the British Standards Institution (BSI). It is used to identify products where safety is paramount, for example bicycle helmets and smoke alarms. It gives assurance that the product should be safe and reliable, but manufacturers are not legally required to display a kite mark on their products.

TM

Lion Mark

The Lion Mark appears on toys that have been made by a member of the British Toy and Hobby Association and Toy Fair. This organisation requires members to sign up to a strict safety Code of Practice. Around 95 per cent of toys sold in the UK are supplied with a Lion Mark as many any major UK and European toy manufacturers are members.

Figure 5.3: Lion Mark.

Age advice symbol

This symbol identifies when equipment or a product isn't suitable for children under the age of 36 months (in the opinion of the manufacturer). It is mainly displayed on toys that might not pass a 'choke hazard test'. It is also seen if a product has small parts that could be removed and swallowed by children under three years.

Figure 5.4: Age advice symbol.

CE symbol

This is the most common toy label and it is the first one to look for. By law, it has to be displayed on all new toys on the market in the EU. The CE logo proves that the toy has been tested for compliance with EU standards. It is also the manufacturer's declaration that the item meets all toy safety requirements.

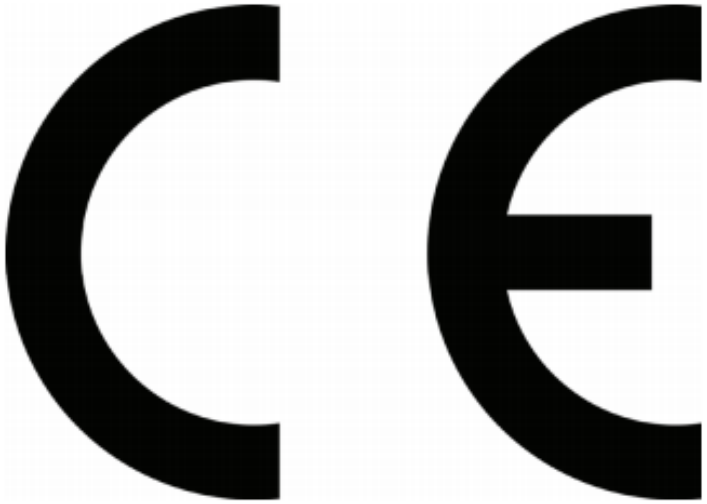

Figure 5.5: CE symbol.

Children's nightwear labelling

Nightwear can burn quickly if set alight by contact with an open fire, gas or electric fire, or another heat source, and this can cause serious injury. As a result, you should look for a label confirming that children's night garments (including dressing gowns) meet the flammability performance requirements. This includes garments for babies.

Did you know?

Stretch garments such as baby grows should be treated as children's nightwear.

June 2017
LOS

(b) Identify **four** ways that parents/carers could reduce the risk of their child having an electric shock in the home.

1 .....

2 .....

3 .....

4 .....

[4]

(c) The safety label below can be found on items of children's clothing:

LOW FLAMMABILITY
TO BS5722

(i) Name the item of children's clothing that must have this label.

..... **[1]**

(ii) Give the meaning of 'LOW FLAMMABILITY'.

.....

..... **[1]**

(iii) How must the label be attached to the item of clothing?

.....

..... **[1]**