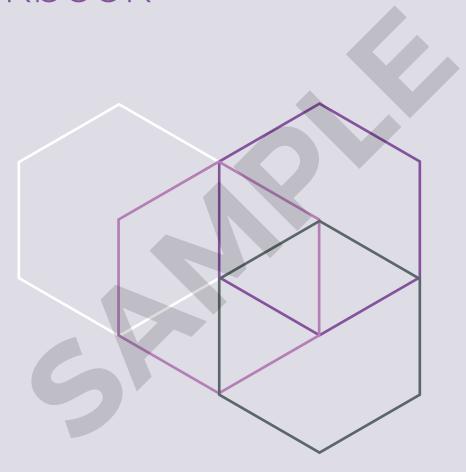
Diploma in Childcare and Education

(601/8437/1)

Workbook







PLEASE READ!

Every effort has been made to ensure the content of this workbook is accurate at the time of print/production. As some information (for example, legislation and government bodies) can change we recommend that you check the latest guidance and advice to ensure your answers are accurate and current.

Contents

Course In	roduction	08
Recording	your 'distanced travelled'	09
Unit 1: Ch	ild development from conception to seven years	
-	Learning outcomes and assessment criteria	15
-	Child development from conception to seven years	17
-	Understand stages and sequences of development from birth to seven years	37
-	Understand theory and educational frameworks which inform knowledge and understanding of Early Years practice	47
-	Understand the role of the Early Years practitioner when promoting child development from birth to seven years	59
-	Understand how to plan opportunities for children's learning and development from birth to five years	65
-	Unit review	67
Unit 2: Ch	ildren's health and well-being	
-	Learning outcomes and assessment criteria	71
-	Understand children's needs in relation to emotional well-being	74
-	Understand the needs of children during transition and significant events	80
-	Understand the physical care needs of children	91
-	Understand the impact of the Early Years environment on the health and well-being of children	104
-	Understand the nutritional needs of children	112
-	Understand the impact of poor diet on children's health and well-being	119
-	Understand children's need for exercise	120
-	Unit review	123

Unit 3: Providing safe environments for children	
- Learning outcomes and assessment criteria	127
- Understand safeguarding	129
 Understand how to safeguard children in relation to legislation, frameworks, policies and procedures 	140
- Understand child protection	148
- Understand the purpose of serious case reviews	158
 Understand the role and responsibilities of the Early Years practitioner when safeguarding children 	160
- Unit review	161
Unit 4: Child health	
- Learning outcomes and assessment criteria	165
- Understand common childhood illnesses	167
- Know how to recognise ill health in children	170
 Understand legal requirements for reporting notifiable diseases, injury and fatality 	172
- Understand care routines when a child is ill	176
- Understand childhood immunisation	183
 Understand the role of the Early Years practitioner when supporting children who are chronically ill 	188
- Understand how to support children for hospital admission	192
 Understand the role of the Early Years practitioner in relation to health promotion 	195
- Unit review	197

Unit 5: Pla	y and learning	
-	Learning outcomes and assessment criteria	201
-	Understand the role of play	203
-	Understand children's rights in relation to play	206
-	Understand theoretical approaches to play and learning	209
-	Understand play at different stages of children's development	216
-	Understand types of play for children	220
-	Understand the characteristics of an enabling play environment	228
-	Understand inclusive play practice	233
-	Understand how the Early Years practitioner supports children's socialisation and behaviour within play environments	235
-	Understand current frameworks in relation to play and learning	240
-	Unit review	241
	Unit review derstanding children's additional needs	241
Unit 6: Un		241
Unit 6: Un	derstanding children's additional needs	
Unit 6: Un	derstanding children's additional needs Learning outcomes and assessment criteria Understand biological and environmental factors which may result in	245
Unit 6: Un	derstanding children's additional needs Learning outcomes and assessment criteria Understand biological and environmental factors which may result in children needing additional support	245 246
Unit 6: Unc	derstanding children's additional needs Learning outcomes and assessment criteria Understand biological and environmental factors which may result in children needing additional support Understand inclusive practice Understand how personal experiences, values and beliefs impact on	245 246 255
Unit 6: Un	derstanding children's additional needs Learning outcomes and assessment criteria Understand biological and environmental factors which may result in children needing additional support Understand inclusive practice Understand how personal experiences, values and beliefs impact on the role of the Early Years practitioner when meeting children's additional needs	245 246 255 263
Unit 6: Un	derstanding children's additional needs Learning outcomes and assessment criteria Understand biological and environmental factors which may result in children needing additional support Understand inclusive practice Understand how personal experiences, values and beliefs impact on the role of the Early Years practitioner when meeting children's additional needs Understand the role of early intervention Understand the Early Years practitioner's need for professional and	245 246 255 263 265

Unit 7:	Observation, assessment and planning	
	- Learning outcomes and assessment criteria	274
	- Understand the observation, assessment and planning cycle	276
	- Understand professional practice in relation to the observation of children	281
	- Understand observation methods in relation to current frameworks	287
	- Understand child-centred planning	293
	- Understand the role of assessment in the observation assessment cycle	295
	- Understand the skills required by the Early Years practitioner when observing children	297
	- Unit review	298
Unit 9:	Supporting emergent literacy	
	- Learning outcomes and assessment criteria	302
	- Understand the language and communication needs of children	304
	- Understand the characteristics of a language rich environment	309
	- Understand current frameworks in relation to emergent literacy	315
	- Understand strategies which support emergent literacy	325
	- Understand partnership working	329
	- Understand inclusive practice in relation to emergent literacy	333
	- Unit review	334
	ormer eviet.	

Unit 10: Supporting emergent mathematics						
- Learning outcomes and assessment criteria	335					
- Understand mathematical concepts	345					
- Understand current frameworks in relation to emergent mathematics						
 Understand the role of the Early Years practitioner in relation to supporting children's emergent mathematical development 						
- Understand how to promote children's emergent mathematical development	401					
- Understand partnership working	405					
- Understand inclusive practice in relation to emergent mathematics	407					
- Unit review	409					
Unit 11: Preparing for school readiness						
- Learning outcomes and assessment criteria	500					
 Understand factors affecting children's readiness for school 	501					
- Understand areas of learning and development in relation to the current framework	503					
- Understand the assessment process in relation to the current framework	509					
 Understand how working in partnership with others contributes to children's school readiness 	512					
 Understand the role of the Early Years practitioner when preparing children for school 	515					
- Unit review	520					
Unit 12: International perspectives						
- Learning outcomes and assessment criteria	521					
- Understand different ways children learn	525					
- Understand theoretical perspectives in relation to children's learning	530					
- Understand international approaches to children's learning	535					
- Understand how international approaches inform current frameworks and practice	541					
- Unit review	543					

Unit 13: Reflective practice for professional development	
- Learning outcomes and assessment criteria	549
- Understand professional development	550
- Understand own professional development needs	555
- Understand employment opportunities for the Early Years practitioner	559
- Understand the role of reflective practice	562
- Unit review	569
Unit 14: Professional partnerships in Early Years	<i>></i>
- Learning outcomes and assessment criteria	572
- Understanding reasons for working in partnership within Early Years	573
- Understand legal requirements for working in partnership	579
- Understand family structures	582
- Understand working in partnership with families	589
 Understanding recording and reporting requirements in relation to partnership working 	592
- Understand challenges to partnership working	599
- Unit review	600
Unit 16: Professional Practice Portfolio	
- Learning outcomes and assessment criteria	603
- Be able to facilitate the development of cognition in children	666
 Be able to implement a learning experience which supports the developed of sustained shared thinking in children from birth to 5 years 	nent 669
 Be able to create a language-rich environment to develop the speech, language and communication of children in own setting 	672
- Be able to implement opportunities which support the development of splanguage and communication of children from birth to 5 years	peech, 679
- Be able to promote physical development	682
 Be able to implement opportunities which promote the physical development of children from birth to 5 years 	681
- Unit review	685

Course introduction

This workbook will support you to study towards the NCFE CACHE Level 3 Technical Diploma in Childcare and Education (Early Years Educator). It will provide you with knowledge and understanding essential to the early years sector, supporting progression to further learning or the workplace.

You can work through this workbook to support you with your learning for the mandatory units. There is content to read through as well as learning activities to expand your knowledge, challenge your understanding and stretch your learning. At the end of each section, there is a 'check your understanding' activity to help you consolidate what you have learned. There is a reflection activity to record your key learning points and create an action plan for further reading and research. There is also an activity to help you understand the bigger picture and how the topics link together.

This qualification is graded A*-D.

There is a supporting assessment book to use alongside this workbook. You can use both of these resources to help build your portfolio. The assessment book includes links to information to support you with wider reading and research.

Diploma in Childcare and Education qualification (601/8437/1)

Recording your 'distance travelled'

It is good practice to assess and record your current knowledge against the requirements of the qualification. This will help to identify the starting point and the areas you need to develop.

You can complete this questionnaire at the beginning, at the mid-point and at the end of your course. By comparing the results, you and your tutor will be able to measure your 'distance travelled' and show the progress that has been made.

Note: To help track the progress you are making, please enter a number 1 in the questionnaire to indicate each of your starting point ratings, and then use 2 for your mid-point ratings and 3 for your end point ratings.

	1	2	3	4	5	6	7	8	9	10
1. I understand development from conception to birth and routine screening programmes in the first year of life										
2. I understand stages and sequences of development from birth to seven years										
3. I understand theory and educational frameworks which inform knowledge and understanding of Early Years practice.										
4. I understand the role of the Early Years practitioner when promoting child development from birth to seven years.										
5. I understand how to plan opportunities for children's learning and development from birth to five years.										
6. I understand children's needs in relation to emotional well-being.										
7. I understand the needs of children during transition and significant events.										
8. I understand the physical care needs of children.										
9. I understand the impact of the Early Years environment on the health and well-being of children.										
10. I understand the nutritional needs of children.										

	1	2	3	4	5	6	7	8	9	10
11. I understand the impact of poor diet on children's health and well-being.										
12. I understand children's need for exercise.										
13. I understand safeguarding.										
14. I understand how to safeguard children in relation to legislation, frameworks, policies and procedures.										
15. I understand child protection.										
16. I understand the purpose of serious case reviews.										
17. I understand the role and responsibilities of the Early Years practitioner when safeguarding children.										
18. I understand common childhood illnesses.										
19. I know how to recognise ill health in children.										
20. I understand legal requirements for reporting notifiable diseases, injury and fatality.										
21. I understand care routines when a child is ill.										
22. I understand childhood immunisation.										
23. I understand the role of the Early Years practitioner when supporting children who are chronically ill.										
24. I understand how to support children for hospital admission.										
25. I understand the role of the Early Years practitioner in relation to health promotion.										
26. I understand the role of play.										
27. I understand children's rights in relation to play.										

	1	2	3	4	5	6	7	8	9	10
28. I understand theoretical approaches to play and learning.										
29. I understand play at different stages of children's development.										
30. I understand types of play for children.										
31. I understand the characteristics of an enabling play environment.										
32. I understand inclusive play practice.										
33. I understand how the Early Years practitioner supports children's socialisation and behaviour within play environments.										
34. I understand current frameworks in relation to play and learning.										
35. I understand biological and environmental factors which may result in children needing additional support.										
36. I understand inclusive practice.										
37. I understand how personal experiences, values and beliefs impact on the role of the Early Years practitioner when meeting children's additional needs.										
38. I understand the role of early intervention										
39. I understand the Early Years practitioner's need for professional and personal support when working with children with additional needs.										
40. I understand the observation, assessment and planning cycle.										
41. I understand professional practice in relation to the observation of children.										
42. I understand observation methods in relation to current frameworks.										

	1	2	3	4	5	6	7	8	9	10
43. I understand child-centred planning.										
44. I understand the role of assessment in the observation assessment cycle										
45. I understand the skills required by the Early Years practitioner when observing children.										
46. I understand the language and communication needs of children.										
47. I understand the characteristics of a language rich environment.										
48. I understand current frameworks in relation to emergent literacy.										
49. I understand strategies which support emergent literacy.										
50. I understand partnership working.										
51. I understand inclusive practice in relation to emergent literacy.										
52. I understand mathematical concepts										
53. I understand current frameworks in relation to emergent mathematics.										
54. I understand the role of the Early Years practitioner in relation to supporting children's emergent mathematical development.										
55. I understand how to promote children's emergent mathematical development.										
56. I understand partnership working										
57. I understand inclusive practice in relation to emergent mathematics.										
58. I understand factors affecting children's readiness for school.										

	1	2	3	4	5	6	7	8	9	10
59. I understand areas of learning and development in relation to the current framework.										
60. I understand the assessment process in relation to the current framework.										
61. I understand how working in partnership with others contributes to children's school readiness.										
62. I understand the role of the Early Years practitioner when preparing children for school.										
63. I understand different ways children learn.										
64. I understand theoretical perspectives in relation to children's learning.										
65. I understand international approaches to children's learning.										
66. I understand how international approaches inform current frameworks and practice.										
67. I understand professional development.										
68. I understand own professional development needs.										
69. I understand employment opportunities for the Early Years practitioner.										
70. I understand the role of reflective practice.										
71. I understand reasons for working in partnership within Early Years.										
72. I understand legal requirements for working in partnership.										
73. I understand family structures.										
74. I understand working in partnership with families.										
75. I understand recording and reporting requirements in relation to partnership working.										
76. I understand challenges to partnership working.										

Unit 1:

Child development from conception to seven years

This unit will support learners with knowledge and understanding of child development from conception to seven years of age.

Learning Outcomes and Assessment Criteria

To achieve this unit, you must:

1. Understand development from conception to birth and routine screening programmes in the first year of life.	 1.1. Describe stages of development from conception to birth. 1.2. Explain routine checks carried out during antenatal care, postnatal care and the first year of life. 1.3. Describe factors that may impact upon the development of the baby during: pre-conception each stage of pregnancy during first year of life
2. Understand stages and sequences of development from birth to seven years.	 2.1. Identify stages and sequences of development from birth to seven years in the following areas: cognition neurological and brain development speech, language and communication physical personal, social and emotional 2.2. Explain 'holistic' development. 2.3. Explain factors which influence children's development.
3. Understand theory and educational frameworks which inform knowledge and understanding of Early Years practice.	 3.1. Describe theoretical perspectives in relation to: cognitive development speech, language and communication development physical development social and emotional development 3.2. Explain how theoretical perspectives relating to child development inform current frameworks.

- 4. Understand the role of the Early Years practitioner when promoting child development from birth to seven years.
- 4.1. Discuss the role of the Early Years practitioner when promoting child development in relation to:
 - cognitive development
 - speech, language and communication development
 - physical development
 - social and emotional development
- 4.2. Evaluate the role of the Early Years practitioner in supporting children's holistic development.
- 4.3. Analyse how working in partnership:
 - enhances children's learning and development
 - values parents/carers' contributions
- 5. Understand how to plan opportunities for children's learning and development from birth to five years.
- 5.1. Plan opportunities for children from birth to five years in relation to:
 - cognitive development
 - speech, language and communication development
 - physical development
 - social and emotional development

Understand development from conception to birth and routine screening programmes in the first year of life

1.1 Development from conception to birth

Human **conception** is when an **ovum** (an egg) meets a **sperm** (the male reproductive cell). An ovum is released from the **ovaries** – where the eggs are stored – once a month and travels down the **fallopian tubes** which connect the ovaries to the **uterus** (womb). Conception takes place in the outer part of the fallopian tube. The sperm travels into the vagina from the penis during sexual intercourse and makes its way to the fallopian tube.

Within a few hours of conception, the cells in the fertilised egg (or **zygote**) begin to divide. By the time it reaches the uterus around four days later, it will be a mass of hundreds of cells. This is known as a **blastocyst**. If more than one egg is fertilised at the same time, or the fertilised egg splits, then multiple embryos may develop into twins or triplets, for example.



Did you know?

Chromosomes are the molecules that make individuals what they are. They contain **genes** which determine inherited characteristics such as eye colour, hair colour and height. They also determine biological sex at conception by the different combination of X and Y chromosomes. An egg carries only X chromosomes while sperm may carry either X or Y chromosomes. If the egg is fertilised by a X chromosome sperm, it will be a girl. If it is fertilised by a Y chromosome, it will be a boy.

On reaching the uterus, the blastocyst releases a **hormone** that helps it bury itself into the uterus lining. Hormones are chemical messages which trigger changes or activity in the body. Some of the blastocyst cells will join with blood vessels in the uterus to form the **placenta** while others will develop to form the **embryo**. The embryo is the term used to describe the baby until the eighth week of development, at which point it becomes known as a **foetus**.

More hormones are released which trigger changes in the woman's body so she can carry the embryo to full term. The placenta is an organ that provides oxygen and nutrients to the growing baby. From this point the embryo grows and develops month by month.



Did you know?

In vitro fertilisation (IVF) is where the egg is fertilised outside the body in a laboratory and then implanted directly into the womb.

Understand development from conception to birth and routine screening programmes in the first year of life





Activity

Make a glossary of the terms related to conception so that you remember them. Write down the meaning for each of the terms in the table.

Term	Meaning
Blastocyst	
Conception	
Embryo	
Fallopian tubes	
Foetus	
Genes	
Hormones	
In vitro fertilisation	
Ovaries	
Ovum	
Placenta	
Sperm	
X and Y chromosomes	
Zygote	

You could look up and add other words to your glossary as you work through the units.

Understand development from conception to birth and routine screening programmes in the first year of life

Month by month development

Pregnancy lasts around forty weeks (approximately 9 calendar months) though this may vary slightly. Health professionals usually divide this into three trimesters of 13 or 14 weeks (or approximately 3 months). A baby born before 37 weeks will usually be considered to be premature and may not be fully developed.

The first trimester

Month 1 (weeks 1 to 4)

In month 1, a protective layer is formed around the embryo made up of:

- The amniotic sac a bag full of fluid in which the embryo floats.
- The chorion an outer protective layer which develops into the placenta.
- The yolk sac which provides nourishment until the placenta is fully developed.

The ball of cells becomes a tiny prawn shape about 4mm long, 3 grams in weight and has a beating heart.

Month 2 (weeks 5 to 8)

The embryo develops into a more recognisable baby shape. The arms, hands, feet and legs grow along with the skin and hair. The internal organs start to form, and the brain grows quickly, making the head look out of proportion. The embryo grows to around 2.5cm and can respond to touch.

Month 3 (weeks 9 to 13)

The embryo becomes a foetus which is a fully formed baby. The body has developed to have fingernails and toenails, a face with the eyes closed, and genitals which can be identified on an ultrasound scan. Breathing, sucking and swallowing reflexes also develop and the baby can move. The umbilical cord delivers nutrients and oxygen. The foetus is now around 9cm long and nearly 50 grams.

The second trimester

Month 4 (weeks 14 to 18)

In month 4, the foetus starts to look more in proportion. The legs are longer, and the body size begins to catch up with the head. The brain develops and begins to send and receive messages, but movements are still involuntary. The hands can grasp, the face can show expression, the eyes can sense light and the eyelashes and brows start to grow. The foetus is now around 13.5cm and 180 grams.

Month 5 (weeks 19 to 22)

The main developments at this stage are the growth of the internal organs and the senses. The baby can now detect touch, distinguish between sweet and bitter tastes and respond to noises from outside the womb. A basic immune system has developed, the spinal cord has a protective layer and the skin is covered in fine hair (lanugo) and a waxy substance (vernix) which protects it from the amniotic fluid. The foetus is about 18.5cm and 500 grams.

Understand development from conception to birth and routine screening programmes in the first year of life

Month 6 (week 23 to 27)

By now the foetus is fully in proportion and has muscles and bones fully developed in the arms and legs. The hearing is more developed, the lungs are beginning to practise the breathing reflex and the foetus has a sleep/wake routine. The foetus is around 25cm long and weighs about 1 kilogram.

The third trimester

Month 7 (weeks 28 to 31)

In this month, the developments start to prepare the baby for birth. The brain becomes fully functioning, a fat layer is developed under the skin, the fine hair on the body recedes and the body temperature is regulated. The baby learns to position themselves in the womb ready for birth. The baby is around 28cm and 1.5 kilograms.

Month 8 (weeks 32 to 36)

All the organs apart from the lungs are fully developed. Eyes react to light and can blink and focus. Fingernails and toenails are full size and there may be hair on the head. The baby is around 32cm long and about 2.5 kilograms.

Month 9 (weeks 37 to 40)

In this last month of pregnancy, the baby's skin becomes smoother and the eyes fully functional. The internal organs and reproductive organs are all fully developed. A release of hormones causes the mother's breasts to produce milk and prepares mother and baby for birth. The head engages in the pelvis ready to be born. The length and weight of a baby at birth is variable but the norm is around 35 to 37cm and 3 kilograms.



Did you know?

The foetus is viable from 28 weeks, which means if it is born then it has a good chance of survival. However, babies born prematurely – before 37 weeks – may experience breathing difficulties as the lungs are the last of the internal organs to fully develop.

Understand development from conception to birth and routine screening programmes in the first year of life

1.2 Routine checks in antenatal and postnatal care and first year of life

The routine checks that are carried out before and after a baby is born are designed for the early detection of any health issues that may affect the baby and/or the mother.

A woman who suspects she is pregnant will usually visit her GP. The first sign of pregnancy is usually that monthly menstrual bleeding stops. The woman may have carried out a home urine test to confirm the pregnancy or the GP may do a urine test. These tests look for the presence of pregnancy hormones which indicate pregnancy.

At this first contact, the GP – or a midwife – will give the mother information about pregnancy and about the tests that can be carried out during pregnancy. They will also arrange the 'booking appointment' which is usually the first appointment with a midwife.





Activity

Local health authorities or GPs often provide information about pregnancy support on their websites or on leaflets in the surgery. Find out what support your local health authority or GP provides for women who think they may be pregnant. Note down the main points here. This may include when to see the GP or midwife, and the support given throughout pregnancy. You should note the website or leaflet that you accessed for the information as it is important to identify the source of any information you use.

Understand development from conception to birth and routine screening programmes in the first year of life

The roles of health care professionals

During pregnancy and after the birth of a child, the parents and baby may come into contact with a range of health care professionals whose role is to support the mother and baby through the pregnancy, the birth and through the first year of life. Their responsibilities will be to ensure that the mother and baby are healthy and thriving and to identify any health problems that may arise.

Health care professionals may include:

- **GP** The GP will probably be the first professional that the pregnant woman sees about her pregnancy. Involvement after this will depend on the arrangements in the local area. Where there is a shortage of midwives, GPs may be involved throughout the pregnancy.
- Midwife Midwives are trained in caring for mothers and babies through a normal pregnancy.
 They may provide care at the local surgery, at the woman's home or at a hospital or clinic. Most
 babies will be delivered by a midwife. A woman may see one or more midwives depending on
 whether she opts to have the baby at home or in hospital and depending on the local arrangements
 for care.
- Obstetrician An obstetrician specialises in the care of women throughout pregnancy, labour and
 after the baby is born. In some areas, all pregnant women see an obstetrician; in other areas they
 will only be referred if there are any concerns such as an ongoing illness or complications with a
 previous pregnancy.
- Paediatrician Paediatricians are doctors who specialise in the health of babies and children. Babies born in hospital may be examined by a paediatrician after birth. They may be present at the birth if there are complications with the birth or the baby's health.
- Neonatal nurse Neonatal nurses are specialists in caring for premature babies or those
 who have health issues at birth. They will support parents and babies in the hospital or in the
 community.
- Sonographer This is the person that carries out ultrasound scans. These are scans that use sound waves to create a picture of the foetus. The sonographer will also measure the foetus and look for anything that could indicate there is a health issue for the baby.
- **Health visitor** The health visitor is a qualified nurse with specialist training to support children and families. They support the mother and baby for the first few weeks at home or at health clinics. They can offer support up until the child is five years old.

Depending on the situation of the mother and baby, other specialists may become involved. For example, if the mother has diabetes or develops diabetes during pregnancy, they may need to see a dietician.

Understand development from conception to birth and routine screening programmes in the first year of life





Activity

Look back at the information you gathered about support offered to pregnant women in your area. Identify the professionals that will normally be involved and list them here.

Understand development from conception to birth and routine screening programmes in the first year of life

Antenatal checks

The schedule below explains the antenatal tests that are carried out at different stages in the pregnancy. The choice of whether to have a test is always the mother's.

Stage of pregnancy	Tests carried out
Booking appointment (usually before 10th week)	 Weight and height of mother measured to calculate BMI. If BMI is high, this increases the risk of complications such as gestational diabetes (high blood sugar during pregnancy) and the mother may need monitoring more closely. Blood pressure of mother measured to check that it is within the normal range. High blood pressure can affect the growth of the baby or may indicate pre-eclampsia (a condition which can cause organ damage to the mother). A urine sample will be tested for protein which could indicate an infection or pre-eclampsia. Blood test for HIV, hepatitis B and syphilis which are serious illnesses that can be passed on to the baby. Blood test to identify anaemia which will increase tiredness and, if severe, may affect the birthweight of the baby or lead to premature birth. Blood tested for red-cell antibodies. Red-cell antibodies can cause harm to the baby and the mother will be referred to a specialist if they are found. Blood type checked. If mother's blood type is rhesus negative and the baby is rhesus positive, the mother may produce antibodies which can cause anaemia and jaundice in the baby. The mother can be offered injections to prevent her being affected by the baby's red blood cells. The baby may need special care or a blood transfusion if rhesus disease develops.
8 to 14 weeks	 Ultrasound scan to estimate the date of the pregnancy by taking the measurements of the foetus. Screening for Down's syndrome, Edwards' syndrome and Patau's syndrome – this involves taking a 'nuchal translucency' measurement during the ultrasound scan. This is a measurement of the fluid at the back of the baby's neck. A blood test is also taken. The results of the tests are considered along with the age of the mother to work out the risk of the baby having one of these syndromes. Older mothers carry a higher risk.
14 to 20 weeks	Where the baby's position is such that the nuchal translucency measurement cannot be made, the mother will be offered a blood test at 14 to 20 weeks to screen for Down's syndrome.

Understand development from conception to birth and routine screening programmes in the first year of life

16 weeks	Blood pressure checked and urine sample tested for proteins.
18 to 21 weeks	 An ultrasound scan (known as the mid-pregnancy or anomaly scan) will be offered to look for signs of eleven different physical conditions: anencephaly, open spina bifida, cleft lip, diaphragmatic hernia, gastroschisis, exomphalos, serious cardiac abnormalities, bilateral renal agenesis, lethal skeletal dysplasia, Edwards' syndrome (T18), Patau's syndrome (T13).
25 weeks (For first-time mothers)	 Blood pressure checked and urine sample tested for proteins. Size of abdomen checked to ensure baby is growing as expected.
28 weeks	 Blood pressure checked and urine sample tested for proteins. Size of abdomen checked to ensure baby is growing as expected. Blood test for red-cell antibodies.
31 weeks (For first-time mothers)	 Blood pressure checked and urine sample tested for proteins. Size of abdomen checked to ensure baby is growing as expected.
34 weeks	Blood pressure checked and urine sample tested for proteins.Size of abdomen checked to ensure baby is growing as expected.
36 weeks	 Blood pressure checked and urine sample tested for proteins. Size of abdomen checked to ensure baby is growing as expected. Checking the position of the baby for birth. If the baby is bottom first (breech) options for turning the baby will be discussed.
38 weeks	 Blood pressure checked and urine sample tested for proteins. Size of abdomen checked to ensure baby is growing as expected.
40 weeks (For first-time mothers)	 Blood pressure checked and urine sample tested for proteins. Size of abdomen checked to ensure baby is growing as expected.
41 weeks (If baby not yet born)	 Blood pressure checked and urine sample tested for proteins. Size of abdomen checked to ensure baby is growing as expected. Membrane sweep (if the mother has had a baby previously) – an internal examination that stimulates the neck of the womb (cervix) to produce hormones that may trigger natural labour.

Information from the National Institute for Health and Care Excellence (NICE) at www.nice.org.uk and NHS www.nhs.uk

Understand development from conception to birth and routine screening programmes in the first year of life

Zahira's story

I was thirty-eight when I became pregnant with my first child and I knew that being an older mother carried higher risks for some complications. I was in good health though and reasonably fit. My pregnancy seemed to go quite well but after my first scan I was told there was a high risk of Down's syndrome. This is where the baby has an extra chromosome. It causes learning difficulties and can cause problems with hearing and vision as well as heart conditions. I was offered a further test where they would take a small sample of amniotic fluid (Amniocentesis) or take some cells from the placenta (Chorionic villus sampling) to check. With either of these tests there is a small risk of miscarriage. After discussing the situation with my partner and close family, I decided not to have the test. We decided that even if we discovered the baby definitely had Down's syndrome it wouldn't make any difference to our decision to continue with the pregnancy. When my gorgeous little boy was born, he did have Down's syndrome but doesn't seem to have any of the serious health conditions that are linked with it. We know we might face some difficulties, but we know we made the right decision.





Activity

The mid-term ultrasound scan can identify a whole range of physical conditions. Look on the NHS webpage at www.nhs.uk/conditions/

	pregnancy-and-baby/20-week-scan/ and write a brief description of each of the following conditions:
Anencephaly:	
Open spina bifid	a:
Cleft lip:	

Understand development from conception to birth and routine screening programmes in the first year of life

Gastroschisis:
Exomphalos:
Serious cardiac abnormalities:
Bilateral renal agenesis:
Lethal skeletal dysplasia:
Edwards' syndrome, or T18:
Patau's syndrome, or T13:

Understand development from conception to birth and routine screening programmes in the first year of life

Checks will be carried out after the birth and in the first few weeks of the baby's life by health care professionals that could include a paediatrician, midwife and health visitor. New parents will also have access to their GP if they have any health or medical concerns.

Postnatal checks

In the postnatal period, checks on the mother and baby will ensure that they are healthy and that the baby is thriving. Postnatal checks will be carried out immediately after the birth and in the first 6 to 8 weeks after the baby is born.

The first check carried out after birth is the Apgar score which the midwife will carry out one minute after birth and 5 minutes after birth. The midwife will check:

- Skin colour
- Heart rate
- Reflexes
- Muscle tone
- Breathing

If there are any problems, the midwife can refer the baby to an appropriate specialist.

Where a baby is born in hospital, a physical examination will usually be carried out by a paediatrician within 72 hours of birth. If the baby is born at home, the checks may be carried out by a doctor or midwife. This is a head to toe physical check including:

- eyes for eye problems such as cataracts
- heart for any heart disease
- hips for dislocation or other developmental problems
- descent of testes in boys

The same checks will be carried out by a GP when the baby is six weeks old. This is often done when the mother visits her GP for a 6-week check after giving birth. If any problems are identified, the baby will be referred for more specialist tests.

Another test carried out in hospital after the birth is the newborn hearing test. This involves playing clicking sounds in the baby's ears and seeing how they respond. If the baby doesn't respond, the test will be repeated or an alternative test using headphones and sensors on the head will be carried out. These are to detect hearing problems as soon as possible. Where babies are born at home, a health visitor or other healthcare professional will do the test in the first few weeks after birth.

Understand development from conception to birth and routine screening programmes in the first year of life

A blood spot or heel prick test is carried out when the baby is five days old. This will usually be at home by the midwife. The test is used to screen for 9 serious conditions, though these are all rare. The conditions screened for are:

- Sickle cell disease which affects the red blood cells causing pain, anaemia and an increased risk of infections. It is most common in those of African or Caribbean descent.
- Cystic fibrosis which affects the digestion and lungs, causing problems with breathing and absorbing nutrients from food.
- Congenital hypothyroidism which affects growth and can lead to learning disabilities.
- Six inherited metabolic diseases which may cause sudden life-threatening illness or serious developmental problems depending on the disease. The most common of these are phenylketonuria (PKU) and medium-chain acyl-CoA dehydrogenase deficiency (MCADD) which occur in 1 in 10,000 babies. The others are more than ten times as rare.

Midwives will visit the mother and baby at home about three times within the first ten to fourteen days to check that the baby is healthy and feeding properly and check the baby's weight, height and head circumference. These are plotted on a graph in the child's health record (a red book given to every child) to check they are in the normal range.

The midwife will also check on the mother's health. In hospital after the birth they will check the mother's abdomen to ensure the uterus is contracted and returning to the normal position. Once mother and baby return home, the midwife will check on the health and well-being of the mother and answer any questions they have about their own health.

After the first ten to fourteen days, the mother and baby will be discharged to the care of the health visitor.

Checks in the first year of life

The health visitor will make a home visit in the 10th to 14th day following the birth. The purpose of the visit is to check on the baby's health and give parents any support and information they need. They will then visit:

- Once a month for the first 6 months
- Once every two months up to the age of 1 year

These visits will check on the baby's general health and the parents' health and well-being. The growth of the baby is checked against average height and weight charts to ensure that the baby's growth is within normal ranges. The health visitor will also consider the baby's development in terms of motor skills, communication, vision and social behaviour.

Understand development from conception to birth and routine screening programmes in the first year of life



Did you know?

The charts used to check a child's height and weight are called centile charts. These show the expected rate of growth of a child and the comparison to the average growth for a child.





Activity

Look at how growth charts are used. You can find copies of the charts at www.rcpch.ac.uk/resources/uk-who-growth-charts-0-4-years

Look at one of the charts linked to this page and answer the questions below:

What do the centiles mean on the chart?

When might the chart show a baby's weight or height is of concern?

If a baby is very small or large compared to average, what might this indicate?

Understand development from conception to birth and routine screening programmes in the first year of life

The 6 to 8 week check will usually be carried out by a GP and include a physical examination, a check on weight, length and head circumference, and a discussion about the vaccination programme. Often the mother's 6 week check is carried out at the same time by the GP and will include:

- Checking weight
- Checking blood pressure
- That stitches have healed if there are any
- Whether the mother has any vaginal discharge and/or a period since the birth
- A discussion about contraception
- A general discussion about the physical and emotional health of the mother

Between 9 to 12 months, the health visitor will carry out a review looking at development, language and learning, safety, diet and behaviour. The parents will be asked to complete a questionnaire before the review about the baby's development.

Early detection of any problems is important so that support or treatment can be given as soon as possible. GPs, health visitors and/or child health clinics can also carry out additional checks where they or the parents have any concerns.

Jessica's story

Poppy was our first baby and we didn't know what to expect. We'd been told the midwife and health visitor would visit us several times, especially in the early days. We were quite irritated by the idea at first – like they were coming to check up on us and we just wanted to be left alone. They were actually a real help. We had so many worries and questions in those first few months and the checks they carried out and the advice they gave helped us to cope. Poppy wasn't an easy baby – she had colic. She would scream and we didn't know how to handle it. The health visitor gave us lots of advice on how to calm her.