BREASTFEEDING: MORE THAN MILK

Lesson plans for use in schools and early years settings.

2019

abm
Association of Breastfeeding Mothers

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Contents

Introduction

Breastfeeding is normal; in fact, it's amazing! But for reasons largely to do with lack of support most families in the UK today give up breastfeeding before they want to. That means lots of children growing up in the UK not seeing breastfeeding in their communities. And this puts these children at a disadvantage when they grow up and become parents. The Royal College of Paediatrics and Child Health, among others, have called for breastfeeding to be taught in schools as one way to fill this knowledge gap and contribute to the renormalisation of breastfeeding in the UK.

In this session, the class will be visited by a breastfeeding mother and baby. The children will have the opportunity to see the baby breastfeeding and to ask questions. The children will begin to understand that breastfeeding is about comfort and love and not just about food.

A note to teachers:

There are as many personal experiences of feeding babies as there are people doing it and these experiences are often very meaningful for the people who have lived them. We expect many of you to be parents yourselves and thus to have personal experience of feeding babies or to have been around family or friends feeding their babies. Experiencing or witnessing breastfeeding getting off to a rough start, and perhaps not carrying on when you wish you had, is common given the lack of support many UK families struggle with. Maybe you supplemented your breastfed baby or babies with formula, either by choice or out of necessity. Or maybe breastfeeding wasn't for you and you are quite happy with the experience you had of exclusively formula feeding your baby. Your own experience might not look like any of these scenarios.

We know it can be challenging to talk to children about feeding babies in a way that doesn't match your personal experiences. We hope that this lesson will allow the children to learn about breastmilk and breastfeeding which in turn will contribute to their future confidence in breastfeeding and their ability to make informed decisions about feeding their children when the time comes.

Format: Mother and baby visit class. Mother feeds baby. Children can ask questions in a supportive environment.

Duration: Approximately 30 mins

Facilitator: Breastfeeding peer supporter, breastfeeding mother and her 2-5-month-old baby; class teacher(s) to help children stay engaged

Arrangement of children: circle time.

Preparation: One week prior, you may wish to send a letter home to explain that a baby is visiting class as part of class work on 'Physical development', 'Personal, social and emotional development' and 'Understanding the world'. See template letter in Appendix.

Other requirements: chair for the mother to breastfeed in if she wishes (she may prefer to sit on the floor with the class)

Objectives:

1. To normalise breastfeeding
2. Breastfeeding is not just about milk but is also about connection, comfort and relationship-building

	Type*	Duration (mins)	Resources	Discussion points
1	E	2		Peer supporter introduces themselves and the mother and baby and explains why they are there. Breastfeeding mother starts to breastfeed her baby.
2	WG	10		Peer supporter: How do we comfort babies? Watch this mother with her baby. How does the baby tell the mum when it wants time on the breast? If the baby is crying, what might that mean?
3	E	2		Peer supporter: Breastfeeding is part of how mummies comfort their babies. A baby coming to the breast may not just be about the milk but also about being held, feeling warm, being helped to calm down and relax.
4	WG	5	Optional: Photos of primates to help explain what these are	Peer supporter initiates talking to the mother about how often baby comes to the breast. Why does she think it happens? Normality of lots of breastfeeds close together at certain times of the day, often in the evening. How do we feel as it gets closer to our bedtime? For baby, mother is 'home'. We are primates and holding babies close is normal for us.
5	WG	5		Q&A with peer supporter
6	WG	5		Finish with children having the opportunity to say goodbye to the mother and baby (bringing the baby up close to each child in turn)

* (P=paired discussion, SG=small group discussion, WG=whole group discussion, E=exposition)

Appendix Template letter to parents and carers

Dear parents and carers,

Next week a mother and baby will be visiting the class as part of class work on 'Physical development', 'Personal, social and emotional development' and 'Understanding the world'. A guest facilitator accompanying the mother and baby will engage the children and the mother in conversation which will include how we care for babies and the baby will be fed in the classroom. We hope and expect that the children will find this session engaging and interesting and that they will come home talking about what they learned. Below is a list of vocabulary words which may come up.

Sincerely,

Vocabulary

Breast, breastfeeding, bottle, comfort, primates

Appendix Primates

Babies! (no live infant) Early Years Foundation Stage

Introduction

Breastfeeding is normal; in fact, it's amazing! But for reasons largely to do with lack of support most families in the UK today give up breastfeeding before they want to. That means lots of children growing up in the UK not seeing breastfeeding in their communities. And this puts these children at a disadvantage when they grow up and become parents. The Royal College of Paediatrics and Child Health, among others, have called for breastfeeding to be taught in schools as one way to fill this knowledge gap and contribute to the renormalisation of breastfeeding in the UK.

In this session, the children will be introduced to the concept that caring for a baby is as much about comfort and love as it is about providing necessities like food and drink. They will learn that babies can be fed with milk from their mummy's breast.

A note to teachers:

There are as many personal experiences of feeding babies as there are people doing it and these experiences are often very meaningful for the people who have lived them. We expect many of you to be parents yourselves and thus to have personal experience of feeding babies or to have been around family or friends feeding their babies. Experiencing or witnessing breastfeeding getting off to a rough start, and perhaps not carrying on when you wish you had, is common given the lack of support many UK families struggle with. Maybe you supplemented your breastfed baby or babies with formula, either by choice or out of necessity. Or maybe breastfeeding wasn't for you and you are quite happy with the experience you had of exclusively formula feeding your baby. Your own experience might not look like any of these scenarios.

We know it can be challenging to talk to children about feeding babies in a way that doesn't match your personal experiences. We hope that this lesson will allow the children to learn about breastmilk and breastfeeding which in turn will contribute to their future confidence in breastfeeding and their ability to make informed decisions about feeding their children when the time comes.

Duration: 40-45 minutes maximum

Facilitators: Breastfeeding peer supporter (or similar) and class teacher

Arrangement of chairs/students: circle time

Preparation: fill a water balloon with about 30mL of water and tie it off (see point 11 in the table)

Objectives: to introduce two ideas

1. That baby care revolves around a relationship
2. That babies can be fed from mummy's breast

	Type*	Duration (mins)	Resources	Discussion points
1	E	2		Peer supporter introduces themselves and explains why they are there.
2	WG	5	Dolls	'Baby' is sad. How do we hold and touch babies when they are sad? Ask children to demonstrate and pass the doll(s) around. Highlight children who hold and pass baby with a gentle/ affectionate/ kind hold.
3	E	1	Dolls	Demonstrate holding the doll close, against the body.
4	WG	1	Dolls	Peer supporter continues to hold the baby. How do we help babies feel better when they are upset? What can we do?
5	WG	5	Dolls	Do you think baby might be hungry? Ask for a volunteer to come up and feed the baby. Try two or three volunteers. Peer supporter to put baby to their breast if none of the children do this. Ask volunteers to return to the carpet/circle.
6	WG	2		How do you feed a baby?
7	E	1		At the beginning, babies only have milk.
8	WG	2		Where does the milk come from? (Acceptance of answers that include shop, box of powder, fridge)
9	E	1		Mummies can make their own milk too. They don't all buy it.
10	WG	5	Knitted breasts	Where is milk made? How does it get into baby's mouth?
11	E	5	Balloon, skewer, Photo 1	Water balloon with ~30 mL of water in it, tied off. Using skewer, poke multiple holes near the knot. Pressure applied around the balloon squeezes water out of multiple holes – point that there is more than one duct opening and the mother does an internal squeeze to push milk out (milk ejection reflex). Give some children the chance to squeeze the balloon.
12	E	1	Photo 2	Here is a photo of a mother feeding her baby milk from her breast. How do you think the mummy is feeling? How is the baby feeling?
13	SG (role play)	5	Dolls	You have an upset baby to look after. What are you going to do? Highlight those who are holding the baby to feed at their body. There are different ways to hold the baby when they feed. Is anyone using a bottle? Do you know you can put mummy's milk in the bottle?
14	WG	5		Summary

* (P=paired discussion, SG=small group discussion, WG=whole group discussion, E=exposition)

Photo 1

Photo 2

https://www.unicef.org.uk/babyfriendly/about/benefits-of-breastfeeding/

Breastfeeding Is Amazing

KS 1-2
Year 1-3

Introduction

Breastfeeding is normal; in fact, it's amazing! But for reasons largely to do with lack of support most families in the UK today give up breastfeeding before they want to. That means lots of children growing up in the UK not seeing breastfeeding in their communities. And this puts these children at a disadvantage when they grow up and become parents. The Royal College of Paediatrics and Child Health, among others, have called for breastfeeding to be taught in schools as one way to fill this knowledge gap and contribute to the renormalisation of breastfeeding in the UK.

In this session, the children will learn about how babies are fed. Through discussion of how breastfeeding works and what's in breastmilk, the children will come to understand that breastfeeding is normal and that it is the ideal way to feed a baby. Finally, the class will have the opportunity to develop promotional material related to breastfeeding.

A note to teachers:

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Duration: 1 hour

Facilitator: Breastfeeding peer supporter or similar, with class teacher as co-facilitator (The presence of the teacher will help create a safe space for the class and facilitate any later discussion if needed)

Arrangement of chairs/tables: to allow whole group discussion as well as table-top activities

Preparation: fill a water balloon with about 30mL of water and tie it off (see point 7 in the table)

Objectives:

1. To learn how babies are fed

2. To understand that breastfeeding is normal and is the optimum way to feed a baby

3. To begin to use persuasive language in an advertising context

	Type*	Duration (mins)	Resources	Discussion points
1	E	2		Peer supporter introduces themselves and explains why they are there.
2	WG	5	Doll	On carpet: Doll. Ask for a volunteer. What does this baby eat? Can you feed them? Further volunteer? Is there a different way? (If none of the children does so, teacher could bring baby to breast.) What is teacher doing? Group discussion.
3	WG	2	Photos 1 and 2	Breastfeeding as seen from a distance, and up close.
4	P	5		Anything about breastfeeding you want to know? Work with the person next to you to think of your top 3 questions.
5	WG	10		Take questions from selected pairs (show of hands who else had the same question?)
6	WG	1	Graphic 1	Having a look inside a woman's breast. Structures like grapes are where the milk is made
7	E	3	Balloon, skewer	Water balloon with ~30 mL of water in it, tied off. Using skewer, poke multiple holes near the knot. Pressure applied around the balloon squeezes water out of multiple holes – point that there is more than one duct opening and the mother does an internal squeeze to push milk out (milk ejection reflex). Give some children the chance to squeeze the balloon.
8	E	1	Graphic 1	Blood vessels (red/blue 'wires') in the breast deliver food components to the alveoli (grapes) to be incorporated into the milk. Milk is made from the blood. Breastmilk is a complete meal (builds the body, gives energy, has water). Babies don't need anything else for 6 months. Formula can do the meal and water but misses out other things. Scientists can't copy what's in breastmilk.
9	WG	2	Graphic 2	Bacteria cartoon. What's this? What does breastmilk have to do with bacteria?
10	E	2		Breastmilk is amazing! A mother's milk contains antibodies (which are like soldiers that fight and kill germs). Tell the story: meeting a germ on the bus and mum's body making an antibody against this germ, sending it to her breasts, which deliver this to her baby soon after, through her milk. Breastmilk also contains other things to treat and prevent illnesses in the baby.

* (P=paired discussion, SG=small group discussion, WG=whole group discussion, E=exposition)

	Type*	Duration (mins)	Resources	Discussion points
11	E	2	Graphic 3, 4	Through breastfeeding babies are protected from getting tummy, ear and lung infections and from developing allergies. There are other ingredients in breast milk that help babies' bodies and brains develop in the healthiest way possible.
12	SG	10	Graphic 5 (Bus template), big paper, marker pens	Table-top activities. Options: 1. Make a bus poster to advertise breastfeeding. Give bus template. 2. Make a TV advert. Short scene.
13	WG	10		Feedback from table-top activity
14	E	5		Summary

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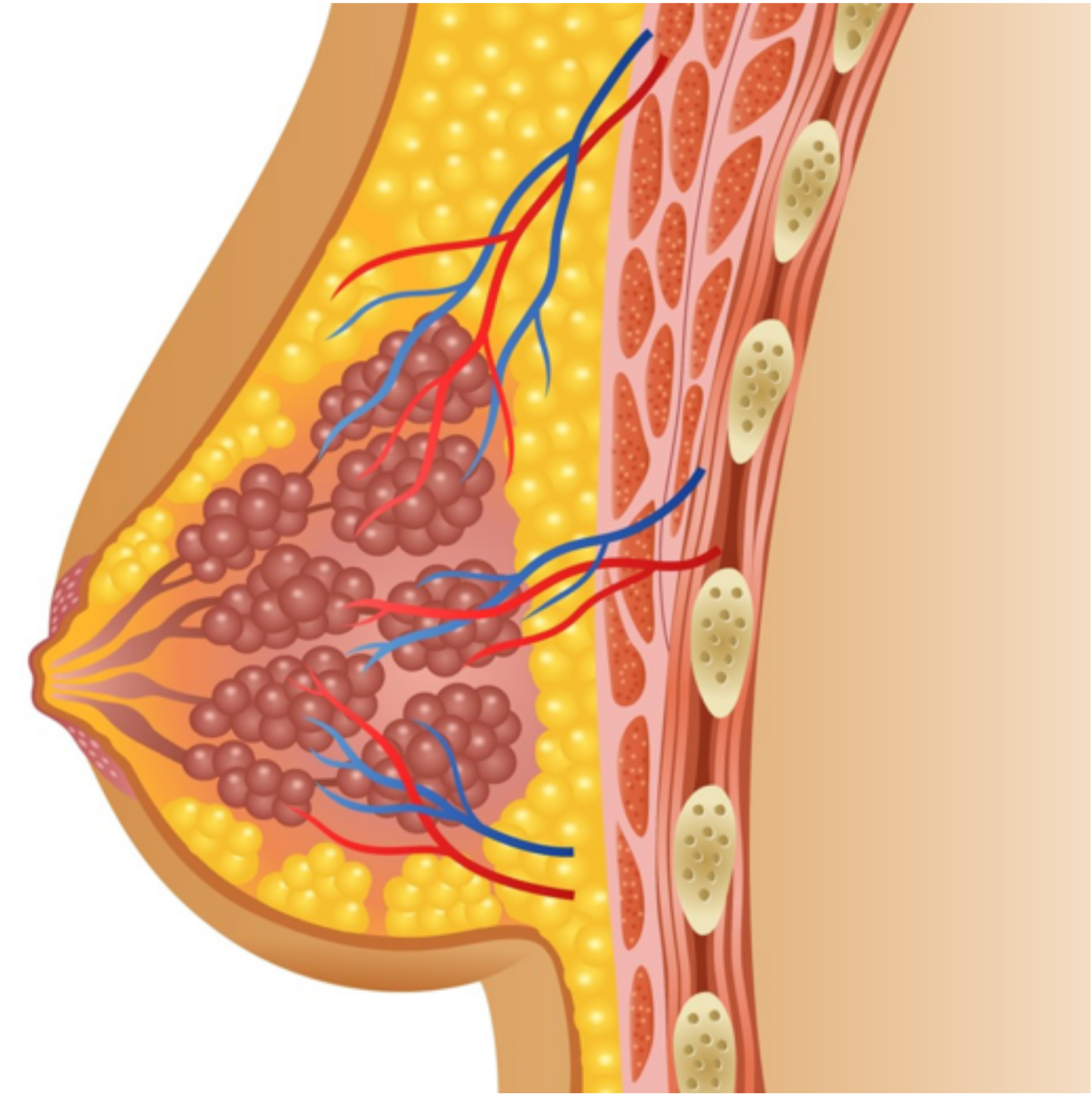
Photo 1

https://www.unicef.org.uk/babyfriendly/about/benefits-of-breastfeeding/


unicef

Graphic 1



breast milk benefits

The more breast milk your baby receives the greater the benefits.

Protects against infection and inflammation

tummy protects against tummy bugs

lungs protects against respiratory infections

Protects against obesity and diabetes when a child is older

ears protects babies from ear infections

bladder protects against urinary infections

Mums who breastfeed have a lower risk of breast and ovarian cancers

Ask your midwife or health visitor for more information.

www.feedgoodfactor.org.uk

NHS Health Scotland

Public Health England

THE BABY FRIENDLY INITIATIVE
unicef UNITED KINGDOM

Breastfeeding benefits the baby from top to toe[7,8,9]

NOT breastfeeding is linked to an increased risk of

ear infections (otitis media)

tooth decay & dental malocclusion

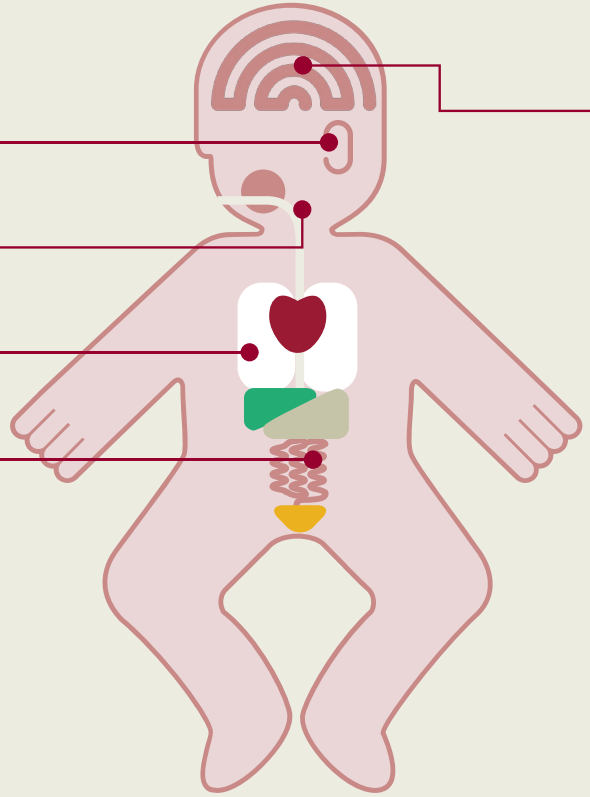
chest infections (lower respiratory infections)

diarrhoea & vomiting (gastroenteritis)

death from gut infections in sick and premature babies (nectrotising enterocolitis)

overweight/obesity later in life

Sudden Infant Death Syndrome (SIDS)



There is evidence to suggest

there may be a link between breastfeeding and educational attainment

Breastfeeding supports close and loving relationships which helps the baby's brain development

What do babies do all day?

KS 2
Years 5&6

Introduction

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In this session, the children will be introduced to some of the key concepts around responsive parenting and breastfeeding. They will learn the main differences between breastmilk and manufactured milk for infants. Finally, the class will have the opportunity to develop promotional material related to breastfeeding.

A note to teachers:

There are as many personal experiences of feeding babies as there are people doing it and these experiences are often very meaningful for the people who have lived them. We expect many of you to be parents yourselves and thus to have personal experience of feeding babies or to have been around family or friends feeding their babies. Experiencing or witnessing breastfeeding getting off to a rough start, and perhaps not carrying on when you wish you had, is common given the lack of support many UK families struggle with. Maybe you supplemented your breastfed baby or babies with formula, either by choice or out of necessity. Or maybe breastfeeding wasn't for you and you are quite happy with the experience you had of exclusively formula feeding your baby. Your own experience might not look like any of these scenarios.

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Duration: 1 hour

Facilitator: Breastfeeding peer supporter or similar, with class teacher as co-facilitator (The presence of the teacher will help create a safe space for the class and facilitate any later discussion if needed)

Arrangement of chairs/tables: to facilitate small group (5-6 students) table-top activity; note, the session also includes paired and whole group discussion as well as exposition

Objectives:

1. To gain an understanding the value of responsive parenting

2. To learn the differences between formula and breastmilk

3. To develop persuasive language writing skills

	Type*	Duration (mins)	Resources	Discussion points
1	E	2		Peer supporter introduces themselves and explains why they are there. Includes basic summary of learning objectives.
2	WG	2		In 24 hours, how much time do you spend sleeping? Eating?
3	P	5	Timetable with 30-minute slots	Pair up with the person next to you. For one of you, block your day out on the timetable. Pay special attention to times when you are sleeping and eating.
4	WG	2		What about babies? Guess vs reality (Newborns breastfeed a minimum of 8-12 times in 24 hours for perhaps 20-30 minutes each time and might have one stretch of sleep of 4 hours but otherwise generally sleep only in short bursts. It can be normal to breastfeed even more frequently.)
5	WG	2		Why so much breastfeeding? Are they always eating? Why else might babies like being held close?
6	WG	5		What do we know about how babies are fed?
7	E	2	Graphic 1	What's in breastmilk and formula
8	SG	7	Group activity	Beyond food and drink: here are 10 other things you find in breastmilk, along with a brief description of why each is there. If you could only keep 5 of these, which ones would you choose and why?
9	WG	5		A couple of groups share their choice of 5 ingredients to keep. Question: did everyone dump the oligosaccharides? The importance to our health of having good bacteria in and on our bodies is an active area of research. Having a healthy population of good bacteria in our bodies appears to be related to all aspects of our health: keeping us from getting upset stomachs, possibly helping us stay at a healthy weight, it might even be protecting our mental health! A note at the end: none of these is in formula milk.
10	E	1		There are some things that can only be in breastmilk: living cells, stem cells, antibodies.
11	WG	3	Photos 1, 2, 3	What are these mums feeling about feeding their babies?
12	SG	15		Develop slogans for advertising campaigns to go with these photos.
13	WG	7		Group sharing of slogans
14	WG	2		Summary

* (P=paired discussion, SG=small group discussion, WG=whole group discussion, E=exposition)

Timetable

Time	Activity
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06:30:00	
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Timetable

Time	Activity
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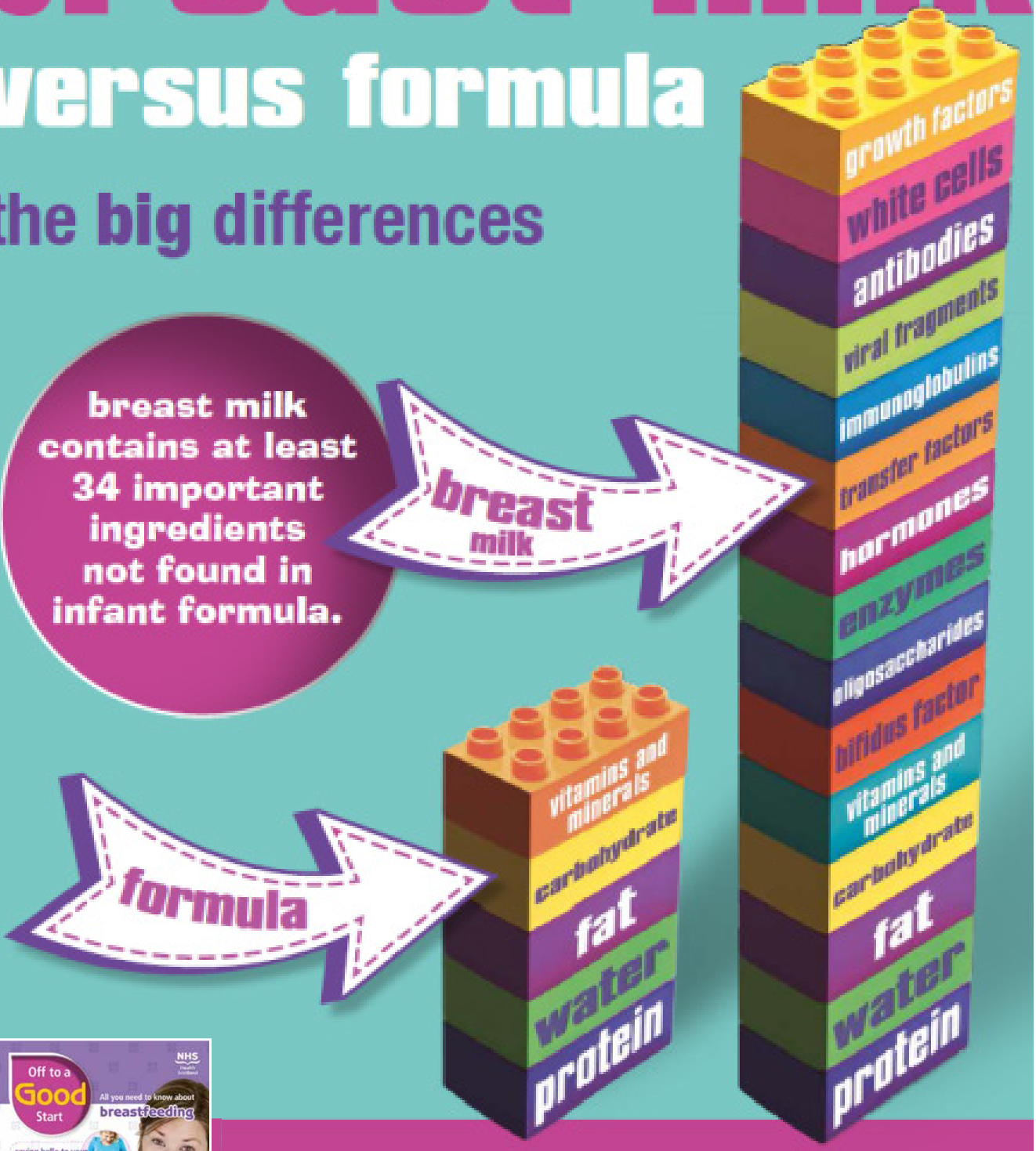
breast milk versus formula

the big differences

breast milk contains at least 34 important ingredients not found in infant formula.



Ask your midwife or health visitor for more information.

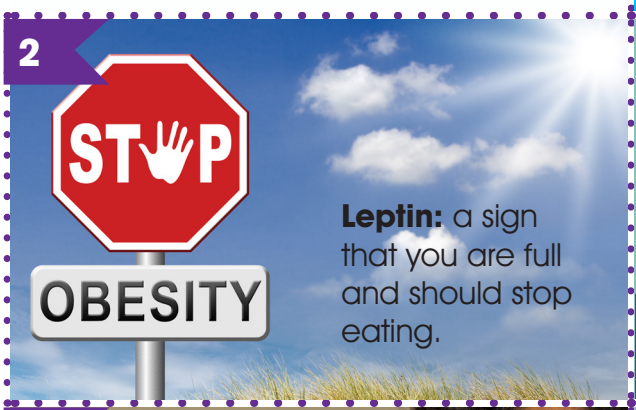
www.feedgoodfactor.org.uk

NHS Health Scotland

1

'HAMLET': a cancer-cell killer so babies may be less likely to get cancer.

2



Leptin: a sign that you are full and should stop eating.

3

Oxytocin: something that helps you to feel you trust your mum.

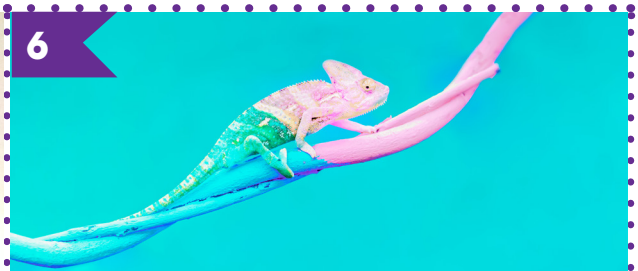
4

Melatonin: something to help you fall asleep.

5

Secretory IgA: something that can fight any germ you met on the bus that day.

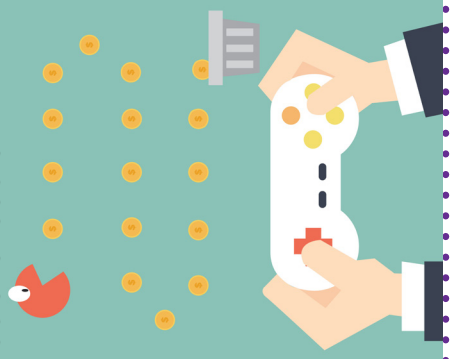
6



Stem cells: 'free agent' cells that can specialise as any type of cell in the body. Used for repairs.

7

Lactoferrin: binds excess iron so harmful bacteria aren't able to feed on it.



8

Water: breast milk contains all the water a baby needs.

9

Human milk oligosaccharides (HMOs): sugar to feed the friendly bacteria in the baby's body.

10

Epidermal growth factor: helps prevent allergies by helping the walls of the baby's intestines to close up.

Photo 1


#FEEDME
RÅNSTUDIO
Avenir Art
Art For Everyone
www.avenirart.com
abm
Association of Breastfeeding Mothers


#FEEDME
RÅNSTUDIO
abm
Association of Breastfeeding Mothers


#FEEDME
RÅNSTUDIO
abm
Association of Breastfeeding Mothers

Babies: Live

KS2

Introduction

Breastfeeding is normal; in fact, it's amazing! But for reasons largely to do with lack of support most families in the UK today give up breastfeeding before they want to. That means lots of children growing up in the UK not seeing breastfeeding in their communities. And this puts these children at a disadvantage when they grow up and become parents. The Royal College of Paediatrics and Child Health, among others, have called for breastfeeding to be taught in schools as one way to fill this knowledge gap and contribute to the renormalisation of breastfeeding in the UK.

In this session, the class will be visited by a breastfeeding mother and baby. The children will have the opportunity to see the baby breastfeeding and to ask questions. The children will begin to understand that breastfeeding is about comfort and love, for both mother and child, and not just about food for the baby.

A note to teachers:

There are as many personal experiences of feeding babies as there are people doing it and these experiences are often very meaningful for the people who have lived them. We expect many of you to be parents yourselves and thus to have personal experience of feeding babies or to have been around family or friends feeding their babies. Experiencing or witnessing breastfeeding getting off to a rough start, and perhaps not carrying on when you wish you had, is common given the lack of support many UK families struggle with. Maybe you supplemented your breastfed baby or babies with formula, either by choice or out of necessity. Or maybe breastfeeding wasn't for you and you are quite happy with the experience you had of exclusively formula feeding your baby. Your own experience might not look like any of these scenarios.

We know it can be challenging to talk to children about feeding babies in a way that doesn't match your personal experiences. We hope that this lesson will allow the children to learn about breastmilk and breastfeeding which in turn will contribute to their future confidence in breastfeeding and their ability to make informed decisions about feeding their children when the time comes.

Format: Mother and baby visit class. Mother feeds baby. Children can ask questions in a supportive environment.

Duration: 40 minutes

Facilitators: Breastfeeding peer supporter or similar; breastfeeding mother and her 2-5-month-old baby; class teacher as co-facilitator (The presence of the teacher will help create a safe space for the class and facilitate any later discussion if needed)

Arrangement of children/chairs: in a wide circle

Facility: chair for the mother to breastfeed in if she wishes (she may prefer to sit on the floor with the class if they are doing so)

A note to teachers:

Preparation:

1. One week prior, you may wish to send a letter home to explain that a baby is visiting class as part of PSHE (Personal, Social, Health and Economic) teaching, specifically the core theme of 'Relationships' which includes recognising healthy relationships and developing empathy. See template letter in Appendix.
2. Asking the children to write down their questions about breastfeeding on post-it notes

It would be ideal if the mother and baby could be invited to visit on more than one occasion. (The peer supporter would not necessarily need to attend these subsequent visits.) This would allow the children to build up a relationship with the mother and baby and to observe the changing relationship between the mother and child as the baby grows. One idea for how to facilitate creation of this longer-term relationship between the class and the mother and baby would be to find 20 minutes at a certain time of the day for the mother and baby to drop in, after the initial, longer visit. Later visits might show shorter breastfeeds. During these later visits, the children could do something for the baby such as reading or singing to the baby.

Objectives:

1. To normalise breastfeeding
2. To understand that breastfeeding is not just about milk but is also about connection, comfort and relationship-building

	Type*	Duration (mins)	Resources	Discussion points
1	E	2		Peer supporter introduces themselves and the mother and baby and explains why they are there. Breastfeeding mother starts to breastfeed her child.
2	WG	10		Peer supporter: Watch this mother with her baby. What does this baby need today? How does the baby tell mother what they need? If the baby is crying, what might that mean?
3	P	2		In pairs, discuss: why do mums want to breastfeed? What does she get out of it?
4	WG	3		Feedback from pairs. Any questions for the mum?
5	E	5	Graphic 1	Peer supporter: what mothers get out of breastfeeding: health, convenience, emotional connection. One day you were just a person, next day you're a mum. Breastfeeding sends messages (hormones) to your brain to help you feel calm, relaxed, happy and connected to your baby. Relationship building.
6	WG	2		Is breastfeeding free? (What about mum's time? Do other things need to be bought?)
7	WG	7		Peer supporter initiates talking to the mother about who supports her as a mum and how. Which parts are hard (Feeding outside the home? Night feeds?)? Who supports you with these difficult aspects of breastfeeding/being a mother? Any further questions? (teacher may have elicited questions on post-its in advance which peer supporter/mum could answer now)
8	WG	5		Finish with children having the opportunity to say goodbye to the mother and baby (bringing the baby up close to each child in turn)

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breast milk benefits

The more breast milk your baby receives the greater the benefits.

Protects against infection and inflammation

tummy protects against tummy bugs

lungs protects against respiratory infections

Protects against obesity and diabetes when a child is older

ears protects babies from ear infections

bladder protects against urinary infections

Mums who breastfeed have a lower risk of breast and ovarian cancers

Ask your midwife or health visitor for more information.

www.feedgoodfactor.org.uk

NHS Health Scotland

Appendix Template letter to parents and carers

Dear parents and carers,

Next week a mother and baby will be visiting the class as part of PSHE (Personal, Social, Health and Economic) teaching, specifically the core theme of 'Relationships', which includes teaching related to recognising healthy relationships and developing empathy. A guest facilitator accompanying the mother and baby will engage the children and the mother in conversation which will include how we care for babies and the baby will be fed in the classroom. We hope and expect that the children will find this session engaging and interesting and that they will come home talking about what they learned. Below is a list of vocabulary words which may come up.

Sincerely,

Vocabulary

Breast, breastfeeding, bottle, comfort, relationship, connection

Breastfeeding: What's so special about it?

KS 2
Years 5&6

Introduction

Breastfeeding is normal; in fact, it's amazing! But for reasons largely to do with lack of support most families in the UK today give up breastfeeding before they want to. That means lots of children growing up in the UK not seeing breastfeeding in their communities. And this puts these children at a disadvantage when they grow up and become parents. The Royal College of Paediatrics and Child Health, among others, have called for breastfeeding to be taught in schools as one way to fill this knowledge gap and contribute to the renormalisation of breastfeeding in the UK.

In this session, the children will be introduced to the benefits of breastfeeding for babies, mothers, whole families and all of society. The children will gain an appreciation of the environmental significance of how babies are fed. The students will reflect on the challenges facing new families. Finally, the class will begin to understand the value of supporting breastfeeding in public.

A note to teachers:

There are as many personal experiences of feeding babies as there are people doing it and these experiences are often very meaningful for the people who have lived them. We expect many of you to be parents yourselves and thus to have personal experience of feeding babies or to have been around family or friends feeding their babies. Experiencing or witnessing breastfeeding getting off to a rough start, and perhaps not carrying on when you wish you had, is common given the lack of support many UK families struggle with. Maybe you supplemented your breastfed baby or babies with formula, either by choice or out of necessity. Or maybe breastfeeding wasn't for you and you are quite happy with the experience you had of exclusively formula feeding your baby. Your own experience might not look like any of these scenarios.

We know it can be challenging to talk to children about feeding babies in a way that doesn't match your personal experiences. We hope that this lesson will allow the children to learn about breastmilk and breastfeeding which in turn will contribute to their future confidence in breastfeeding and their ability to make informed decisions about feeding their children when the time comes.

Duration: 40 minutes

Facilitator: Breastfeeding peer supporter or similar, with class teacher as co-facilitator (The presence of the teacher will help create a safe space for the class and facilitate any later discussion if needed)

Arrangement of chairs: to facilitate paired and whole group discussion as well as exposition

Other requirements: facility for showing two short video clips

Objectives:

1. To learn about the benefits of breastfeeding for babies, their mothers, and everyone in society
2. To become aware of the environmental significance of how babies are fed
3. To reflect on the challenges new parents face
4. To understand that supporting breastfeeding in public has societal and individual value

	Type*	Duration (mins)	Resources	Discussion points
1	E	2		Peer supporter introduces themselves and explains why they are there. Includes basic summary of learning objectives.
2	P	3		In pairs: What do you already know about breastfeeding? Do you know if you were breastfed? Or do you know anyone feeding a baby now? Why do you think mums want to breastfeed (more than three-quarters of mums in the UK do)?
3	WG	4	https://www.breastfedbabies.org (video is 40 seconds long)	Show the video clip. Why did the mum not say sorry at the end?
4	WG	5	https://vimeo.com/176718248 (start by showing just the first ~30 seconds)	Show the first 30 seconds of this video. (PAUSE video when the box 'What are they really thinking…?' appears) How is that mother feeling? What might the other people be thinking?
5	WG	5	https://vimeo.com/176718248 (full video is approx. 90 seconds long)	Now watch the rest of the video. Is that what you were expecting? How does the mum feel now?
6	WG+E	5	Graphic 1	Whole group discussion: Why is breastfeeding important to families? Why do you think cities/countries save money if more babies are breastfed? Points for peer supporter to mention if they don't come up in the group discussion: - Breastfeeding benefits everyone! - Breastfeeding is good for babies: It's the only food or drink they need until they are 6 months old. Breastmilk contains ingredients to help babies develop in a healthy way and to protect them from getting ill. - Breastfeeding also protects mothers from some forms of cancer. - Breastfeeding is zero waste! Compare this to the environmental cost of using infant formula to feed a baby. For formula feeding there are the costs of production (dairy, soy, palm; energy and water; converting liquid formula to powder), packaging (paper, plastic, energy, water), transportation (manufacture - there are only 40-50 production plants globally, so the constituents move around to be combined – and distribution) and ultimately using the formula (costs of manufacturing bottles, teats, etc, water and energy for making up feeds safely). Continued overleaf...

* (P=paired discussion, SG=small group discussion, WG=whole group discussion, E=exposition)

	Type*	Duration (mins)	Resources	Discussion points
6, continued				So, cities and countries pay to promote breastfeeding because it keeps babies and mothers healthier and reduces waste, which costs money to dispose of and harms the environment. Reference: Alison Linnecar et al, 2014, *Formula for disaster: weighing the impact of formula feeding vs breastfeeding on environment* (Available from https://www.bpni.org/reports/), BPNI and IBFAN Asia.
7	WG	3		Because breastfeeding benefits everyone, we want people to feel comfortable breastfeeding. Why does breastfeeding in public matter?
8	P	4		A final paired discussion activity. What could you do if you see a mum breastfeeding in a cafe or on the bus? (a warm smile, offering to get a drink, a friendly comment)
9	E	5		Summary

breast milk benefits

The more breast milk your baby receives the greater the benefits.

Protects against infection and inflammation

tummy protects against tummy bugs

lungs protects against respiratory infections

Protects against obesity and diabetes when a child is older

ears protects babies from ear infections

bladder protects against urinary infections

Mums who breastfeed have a lower risk of breast and ovarian cancers

Ask your midwife or health visitor for more information.

www.feedgoodfactor.org.uk

NHS Health Scotland

‘Food Unwrapped’: Investigating Breastmilk and Formula Milk

KS 2
Years 5&6

Introduction

Breastfeeding is normal; in fact, it’s amazing! But for reasons largely to do with lack of support most families in the UK today give up breastfeeding before they want to. That means lots of children growing up in the UK not seeing breastfeeding in their communities. And this puts these children at a disadvantage when they grow up and become parents. The Royal College of Paediatrics and Child Health, among others, have called for breastfeeding to be taught in schools as one way to fill this knowledge gap and contribute to the renormalisation of breastfeeding in the UK.

In this session, the children will discuss the main food groups and learn the key differences between breastmilk and manufactured milk for infants. The children will also gain experience of looking closely at food labels and thinking about their meaning.

A note to teachers:

There are as many personal experiences of feeding babies as there are people doing it and these experiences are often very meaningful for the people who have lived them. We expect many of you to be parents yourselves and thus to have personal experience of feeding babies or to have been around family or friends feeding their babies. Experiencing or witnessing breastfeeding getting off to a rough start, and perhaps not carrying on when you wish you had, is common given the lack of support many UK families struggle with. Maybe you supplemented your breastfed baby or babies with formula, either by choice or out of necessity. Or maybe breastfeeding wasn’t for you and you are quite happy with the experience you had of exclusively formula feeding your baby. Your own experience might not look like any of these scenarios.

We know it can be challenging to talk to children about feeding babies in a way that doesn’t match your personal experiences. We hope that this lesson will allow the children to learn about breastmilk and breastfeeding which in turn will contribute to their future confidence in breastfeeding and their ability to make informed decisions about feeding their children when the time comes.

Duration: 1 hour

Facilitator: Breastfeeding peer supporter or similar, with class teacher as co-facilitator (The presence of the teacher will help create a safe space for the class and facilitate any later discussion if needed)

Arrangement of chairs/tables: to allow paired and whole group discussions as well as exposition

Objectives:

1. To understand the main food groups

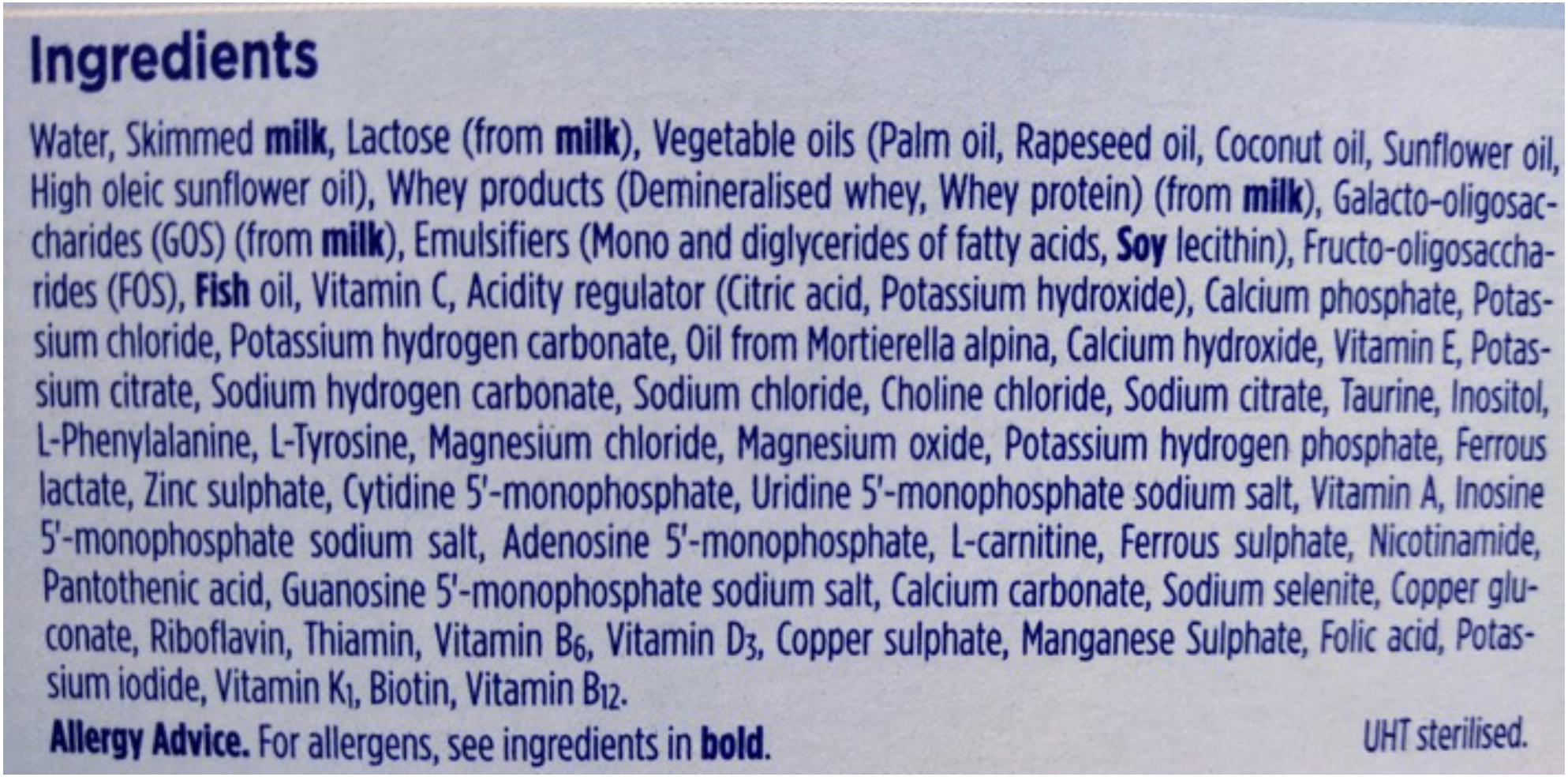
2. To learn the differences between breastmilk and formula milk

3. To gain experience of using food labels as a source of evidence

	Type*	Duration (mins)	Resources	Discussion points
1	E	2		Peer supporter introduces themselves and explains why they are there. Includes basic summary of learning objectives.
2	P	3		Working with the person beside you, design a healthy meal.
3	WG	5		What are examples of protein, fats, carbohydrates (i.e. sugars), vitamins and minerals? Do we know what their jobs are in our bodies?
4	WG	5		What do babies eat? What do we already know?
5	WG	5	Photos 1 and 2 (or formula containers if available)	Can we identify any fats, carbohydrates, proteins, vitamins and minerals?
6	E	2	Graphic 1	Breastmilk contains all that but much more besides: ingredients to make babies feel safe, ingredients to help programme babies not to overeat, ingredients designed to carry out body repairs, ingredients to promote growth, ingredients which dull pain, ingredients to fight off infections… Wow! (To learn more, see the section "Further reading: What's in breastmilk" at the end of this document).
7	WG	5		What are antibodies (proteins which target specific viruses/bacteria for destruction), hormones (chemicals that are the way different parts of your body communicate with each other; play a big role in how you feel), white blood cells (the army that projects your body from invaders including bacteria and viruses; one type of white blood cell is responsible for making antibodies))?
8	WG	2	Graphic 1	Pause and think about how the contents of formula milk compare to breast milk.
9	WG	5	Photos 3, 4, 5	Why do breasts make us giggle? (Note to the facilitators: Let's be up front about this, so the teacher can create a safe space/manage the conversation.) Breasts are private; we always keep them covered. They are something to do with being sexy. We giggle when we are nervous/uncomfortable. This is OK! These things don't feel as important when you have a new baby.
10	P	10	Graphic 2	If you had to write a food label for a breast, what would it say?
11	WG	10		Sharing breast food labelling ideas.
12	E	5		Summary

* (P=paired discussion, SG=small group discussion, WG=whole group discussion, E=exposition)

Photo 1[1]



Ingredients

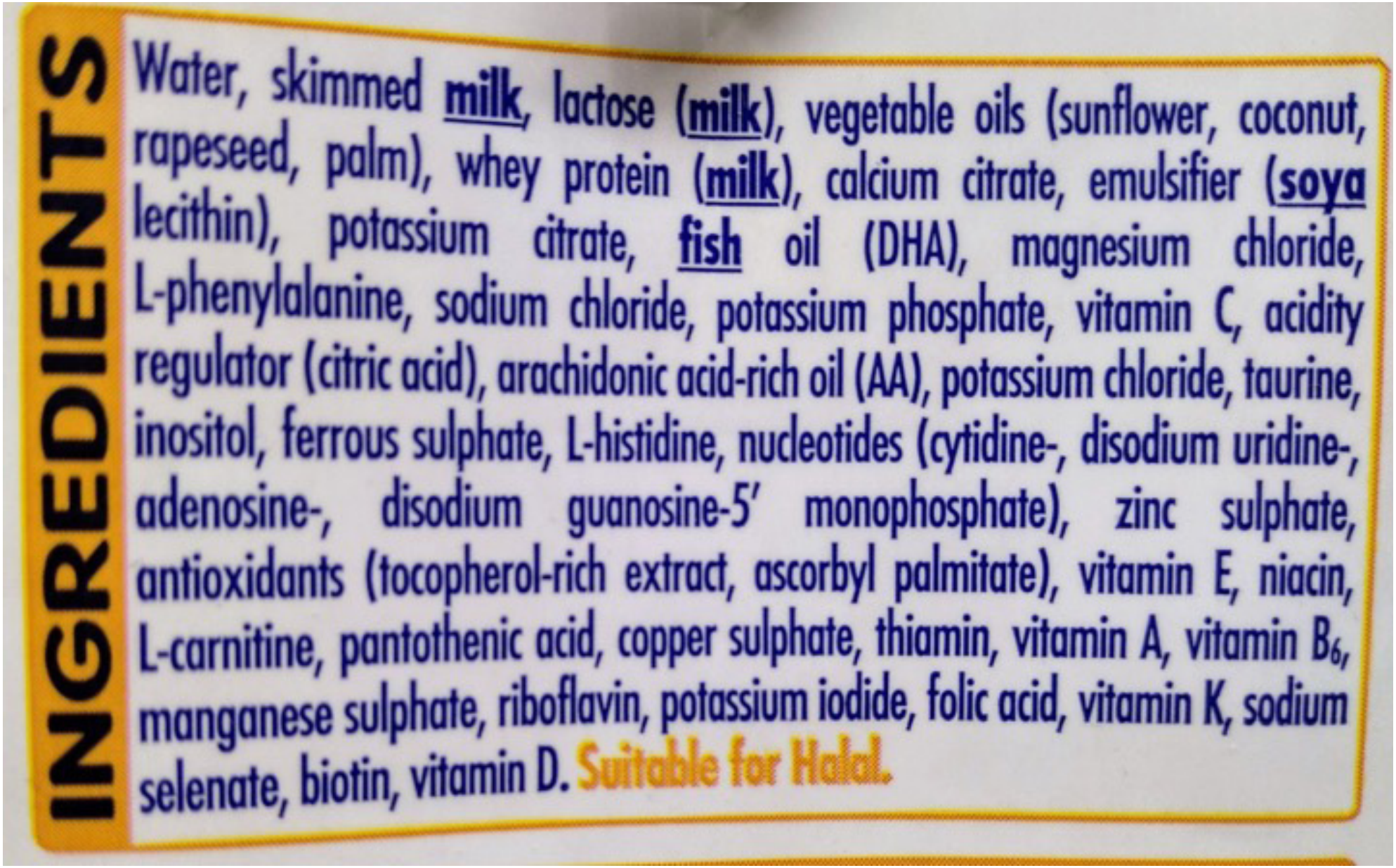
Water, Skimmed **milk**, Lactose (from **milk**), Vegetable oils (Palm oil, Rapeseed oil, Coconut oil, Sunflower oil, High oleic sunflower oil), Whey products (Demineralised whey, Whey protein) (from **milk**), Galacto-oligosaccharides (GOS) (from **milk**), Emulsifiers (Mono and diglycerides of fatty acids, **Soy** lecithin), Fructo-oligosaccharides (FOS), **Fish** oil, Vitamin C, Acidity regulator (Citric acid, Potassium hydroxide), Calcium phosphate, Potassium chloride, Potassium hydrogen carbonate, Oil from Mortierella alpina, Calcium hydroxide, Vitamin E, Potassium citrate, Sodium hydrogen carbonate, Sodium chloride, Choline chloride, Sodium citrate, Taurine, Inositol, L-Phenylalanine, L-Tyrosine, Magnesium chloride, Magnesium oxide, Potassium hydrogen phosphate, Ferrous lactate, Zinc sulphate, Cytidine 5'-monophosphate, Uridine 5'-monophosphate sodium salt, Vitamin A, Inosine 5'-monophosphate sodium salt, Adenosine 5'-monophosphate, L-carnitine, Ferrous sulphate, Nicotinamide, Pantothenic acid, Guanosine 5'-monophosphate sodium salt, Calcium carbonate, Sodium selenite, Copper gluconate, Riboflavin, Thiamin, Vitamin B_6, Vitamin D_3, Copper sulphate, Manganese Sulphate, Folic acid, Potassium iodide, Vitamin K_1, Biotin, Vitamin B_{12}.

Allergy Advice. For allergens, see ingredients in **bold**.

UHT sterilised.

[1] Aptamil First Infant Formula Ready to feed

Photo 2[2]



[2] SMA powdered First Infant Formula

breast milk versus formula

the big differences

breast milk contains at least 34 important ingredients not found in infant formula.

breast milk

growth factors
white cells
antibodies
viral fragments
immunoglobulins
transfer factors
hormones
enzymes
oligosaccharides
bifidus factor
vitamins and minerals
carbohydrate
fat
water
protein

formula

vitamins and minerals
carbohydrate
fat
water
protein

Ask your midwife or health visitor for more information.

www.feedgoodfactor.org.uk

NHS Health Scotland

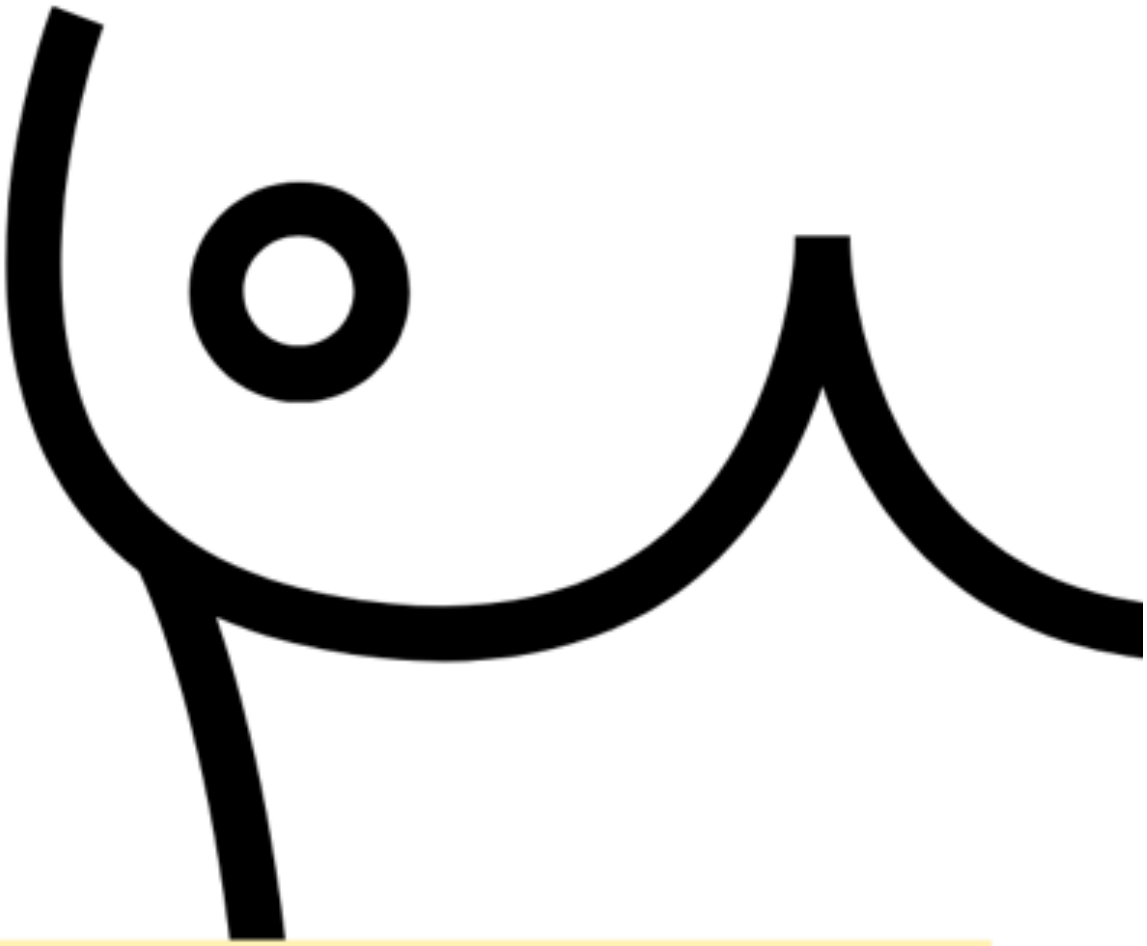
Photo 3


PORTOBELLO
ROAD W 11
One way
#FEEDME
RÅNSTUDIO
abm
Association of Breastfeeding Mothers


#FEEDME
RÅNSTUDIO
abm
Association of Breastfeeding Mothers

Photo 5


#FEEDME
RÅNSTUDIO
abm
Association of Breastfeeding Mothers



Ingredients

DID YOU EVER WONDER WHAT'S IN... ?

BREASTMILK

WATER

CARBOHYDRATES (energy source)
- Lactose
- **Oligosaccharides (see below)**

CARBOXYLIC ACID
- Alpha hydroxy acid
  - Lactic acid

PROTEINS (building muscles and bones)
- Whey protein
  - Alpha-lactalbumin
    - HAMLET (Human Alpha-lactalbumin Made Lethal to Tumour cells)
  - Lactoferrin
  - Many antimicrobial factors (see below)
- Casein
- Serum albumin

NON-PROTEIN NITROGENS
- Creatine
- Creatinine
- Urea
- Uric acid
- Peptides (see below)
- Amino Acids (the building blocks of proteins)
  - Alanine
  - Arginine
  - Aspartate
  - Clycine
  - Cystine
  - Glutamate
  - Histidine
  - Isoleucine
  - Leucine
  - Lycine
  - Methionine
  - Phenylalanine
  - Proline
  - Serine
  - Taurine
  - Theronine
  - Tryptophan
  - Tyrosine
  - Valine
  - Carnitine (amino acid compound necessary to make use of fatty acids as an energy source)
- Nucleotides (chemical compounds that are the structural units of RNA and DNA)
  - 5'-Adenosine monophosphate (5''-AMP)
  - 3',5'-Cyclic adenosine monophosphate (3',5'-cyclic AMP)
  - 5'-Cytidine monophosphate (5'-CMP)
  - Cytidine diphosphate choline (CDP choline)
  - Guanosine diphosphate (UDP)
  - Guanosine diphosphate - mannose
  - 3'- Uridine monophosphate (3'-UMP)
  - 5'-Uridine monophosphate (5'-UMP)
  - Uridine diphosphate (UDP)
  - Uridine diphosphate hexose (UDPH)
  - Uridine diphosphate-N-acetyl-hexosamine (UDPAH)
  - Uridine diphosphoglucuronic acid (UDPGA)
  - Several more novel nudeotides of the UDP type

FATS
- Triglycerides
  - Long-chain polyunsaturated fatty acids
    - Docosahexaenoic acid (DHA) (important for brain development)
    - Arachidonic acid (AHA) (important for brain development)
    - Linoleic acid
    - Alpha-linolenic acid (ALA)
    - Eicosapentaenoic acid (EPA)
    - Conjugated linoleic acid (Rumenic acid)
  - Free Fatty Acids
  - Monounsaturated fatty acids
    - Oleic acid
    - Palmitoleic acid
    - Heptadecenoic acid
  - Saturated fatty acids
    - Stearic
    - Palmitic acid
    - Lauric acid
    - Myristic acid
- Phospholipids
  - Phosphatidylcholine
  - Phosphatidylethanolamine
  - Phosphatidylinositol
  - Lysophosphatidylcholine
  - Lysophosphatidylethanolamine
  - Plasmalogens
- Sphingolipids
  - Sphingomyelin
  - Gangliosides
    - GM1
    - GM2
    - GM3
  - Glucosylceramide
  - Glycosphingolipids
  - Galactosylceramide
  - Lactosylceramide
  - Globotriaosylceramide (GB3)
  - Globoside (GB4)
- Sterols
  - Squalene
  - Lanosterol
  - Dimethylsterol
  - Methosterol
  - Lathosterol
  - Desmosterol
  - Triacylglycerol
  - Cholesterol
  - 7-dehydrocholesterol
  - Stigma-and campesterol
  - 7-ketocholesterol
  - Sitosterol
  - β-lathosterol
  - Vitamin D metabolites
  - Steroid hormones

VITAMINS
- Vitamin A
- Beta carotene
- Vitamin B6
- Vitamin B8 (Inositol)
- Vitamin B12
- Vitamin C
- Vitamin D
- Vitamin E
- a-Tocopherol
- Vitamin K
- Thiamine
- Riboflavin
- Niacin
- Folic acid
- Pantothenic acid
- Biotin

MINERALS
- Calcium
- Sodium
- Potassium
- Iron
- Zinc
- Chloride
- Phosphorus
- Magnesium
- Copper
- Manganese
- Iodine
- Selenium
- Choline
- Sulpher
- Chromium
- Cobalt
- Fluorine
- Nickel

METAL
- Molybdenum (essential element in many enzymes)

GROWTH FACTORS (aid in the maturation of the intestinal lining)
- Cytokines
  - interleukin-1β (IL-1β)
  - IL-2
  - IL-4
  - IL-6
  - IL-8
  - IL-10
  - Granulocyte-colony stimulating factor (G-CSF)
  - Macrophage-colony stimulating factor (M-CSF)
  - Platelet derived growth factors (PDGF)
  - Vascular endothelial growth factor (VEGF)
  - Hepatocyte growth factor -α (HGF-α)
  - HGF-β
  - Tumor necrosis factor-α
    - Interferon-γ
  - Epithelial growth factor (EGF)
  - Transforming growth factor-α (TGF-α)
  - TGF β1
  - TGF-β2
  - Insulin-like growth factor-I (IGF-I) (also known as somatomedin C)
  - Insulin-like growth factor- II
  - Nerve growth factor (NGF)
  - Erythropoietin

PEPTIDES (combinations of amino acids)
- HMGF I (Human growth factor)
- HMGF II
- HMGF III
- Cholecystokinin (CCK)
- β-endorphins
- Parathyroid hormone (PTH)
- Parathyroid hormone-related peptide (PTHrP)
- β-defensin-1
- Calcitonin
- Gastrin
- Motilin
- Bombesin (gastric releasing peptide, also known as neuromedin B)
- Neurotensin
- Somatostatin

HORMONES (chemical messengers that carry signals from one cell, or group of cells, to another via the blood)
- Cortisol
- Triiodothyronine (T3)
- Thyroxine (T4)
- Thyroid stimulating hormone (TSH) (also known as thyrotropin)
- Thyroid releasing hormone (TRH)
- Prolactin
- Oxytocin
- Insulin
- Corticosterone
- Thrombopoietin
- Gonadotropin-releasing hormone (GnRH)
- GRH
- Leptin (aids in regulation of food intake)
- Ghrelin (aids in regulation of food intake)
- Adiponectin
- Feedback inhibitor of lactation (FIL)
- Eicosanoids
  - Prostaglandins (enzymatically derived from fatty acids)
    - PG-E1
    - PG-E2
    - PG-F2
  - Leukotrienes
  - Thromboxanes
  - Prostacyclins

ENZYMES (catalysts that support chemical reactions in the body)
- Amylase
- Arysulfatase
- Catalase
- Histaminase
- Lipase
- Lysozyme
- PAF-acetylhydrolase
- Phosphatase
- Xanthine oxidase

ANTIPROTEASES (thought to bind themselves to macromolecules such as enzymes and as a result prevent allergic and anaphylactic reactions)
- a-1-antitrypsin
- a-1-antichymotrypsin

ANTIMICROBIAL FACTORS (are used by the immune system to identify and neutralize foreign objects, such as bacteria and viruses.)
- Leukocytes (white blood cells)
  - Phagocytes
    - Basophils
    - Neutrophils
    - Eoisinophils
  - Macrophages
  - Lymphocytes
    - B lymphocytes (also known as B cells)
    - T lymphocytes (also known as C cells)
- sIgA (Secretory immunoglobulin A) (the most important antiinfective factor)
- IgA2
- IgG
- IgD
- IgM
- IgE
- Complement C1
- Complement C2
- Complement C3
- Complement C4
- Complement C5
- Complement C6
- Complement C7
- Complement C8
- Complement C9
- Glycoproteins
  - Mucins (attaches to bacteria and viruses to prevent them from clinging to mucousal tissues)
  - Lactadherin
- Alpha-lactoglobulin
- Alpha-2 macroglobulin
- Lewis antigens
- Ribonuclease
- Haemagglutinin inhibitors
- Bifidus Factor (increases growth of Lactobacillus bifidus - which is a good bacteria)
- Lactoferrin (binds to iron which prevents harmful bacteria from using the iron to grow)
- Lactoperoxidase
- B12 binding protein (deprives microorganisms of vitamin B12)
- Fibronectin (makes phagocytes more aggressive, minimizes inflammation, and repairs damage caused by inflammation)
- Oligosaccharides (More Than 200 Different Kinds!)

FORMULA

WATER

CARBOHYDRATES
- Lactose
- Corn maltodextrin

PROTEIN
- Partially hydrolyzed reduced minerals whey protein concentrate (from cow's milk)

FATS
- Palm olein
- Soybean oil
- Coconut oail
- High oleic safflower oil (or sunflower oil)
- M. alpina oil (Fungal DHA)
- C.cohnii oil (Algal ARA)

MINERALS
- Potassium citrate
- Potassium phosphate
- Calcium chloride
- Tricalcium phosphate
- Sodium citrate
- Magnesium chloride
- Ferrous sulphate
- Zinc sulphate
- Sodium chloride
- Copper sulphate
- Potassium iodide
- Manganese sulphate
- Sodium selenate

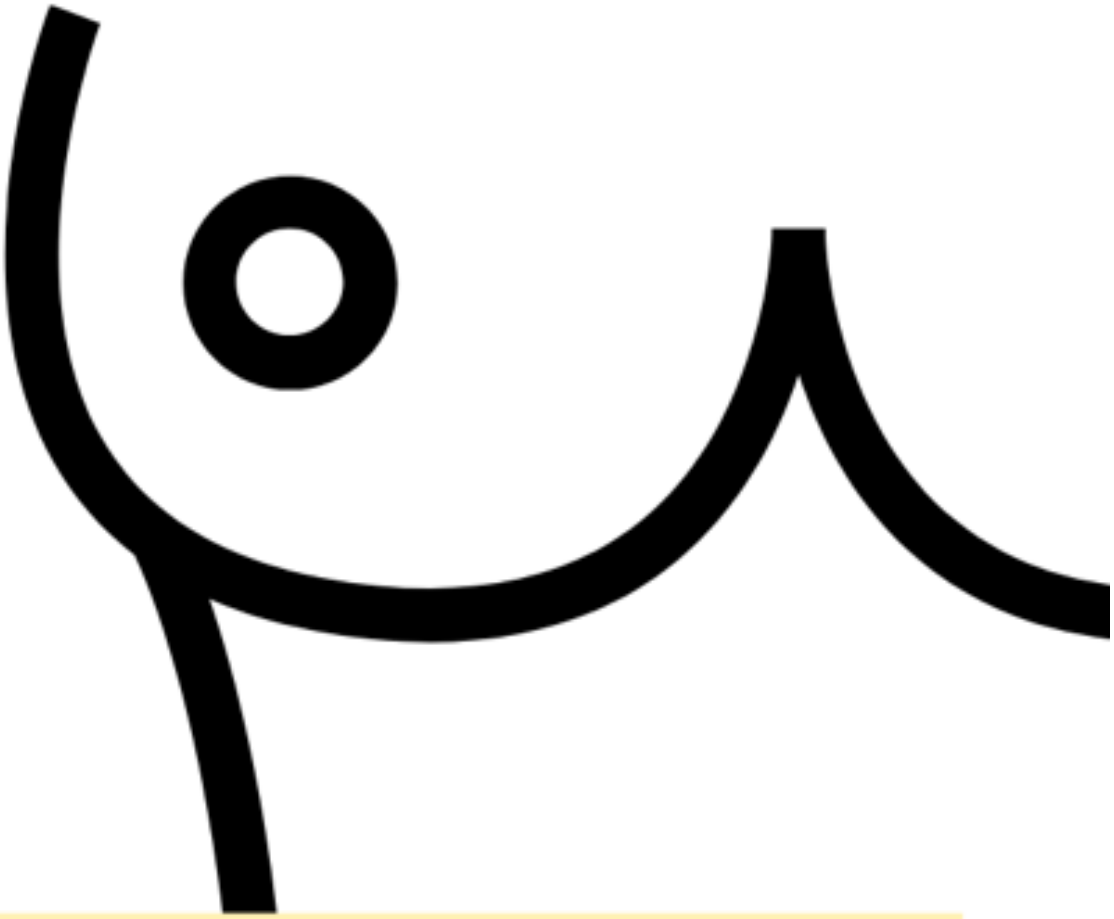
VITAMINS
- Sodium ascorbate
- Inositol
- Choline bitartrate
- Alpha-Tocopheryl acetate
- Niacinamide
- Calcium pantothenate
- Riboflavin
- Vitamin A acetate
- Pyridoxine hydrochloride
- Thiamine mononitrate
- Folic acid
- Phylloquinone
- Biotin
- Vitamin D3
- Vitamin B12

ENZYME
- Trypsin

AMINO ACID
- Taurine
- L-Carnitine (a combination of two different amino acids)

NUCLEOTIDES
- Cytidine 5-monophosphate
- Disodium uridine 5-monophosphate
- Adenosine 5-monophosphate
- Disodium guanosine 5-monophosphate
- Soy Lecithin

- See also https://www.human-milk.com/science.html



Ingredients

Fat, Carbohydrates, Proteins, Vitamins, Minerals, Water

Description in own words of actions e.g. factor that dulls pain, repairs body, promotes growth, programmes not to overeat, fight off infection, makes baby feel safe.

Extra vocab:
White blood cells ,Antibodies/ anti-microbial factors, Stem cells, enzymes, hormones, Growth factors

The Human Breast: 'Not a miracle, just evolution' KS3

Introduction

Breastfeeding is normal; in fact, it's amazing! But for reasons largely to do with lack of support most families in the UK today give up breastfeeding before they want to. That means lots of children growing up in the UK not seeing breastfeeding in their communities. And this puts these children at a disadvantage when they grow up and become parents. The Royal College of Paediatrics and Child Health, among others, have called for breastfeeding to be taught in schools as one way to fill this knowledge gap and contribute to the renormalisation of breastfeeding in the UK.

In this session, the children will be introduced to some of the key concepts around breastfeeding. They will come to understand the importance of the decision to breastfeed a child and learn the main differences between breastmilk and manufactured milk for infants. The children will gain an appreciation of the challenge of supporting mothers to breastfeed. Finally, the class will have the opportunity to develop promotional material related to breastfeeding.

A note to teachers:

There are as many personal experiences of feeding babies as there are people doing it and these experiences are often very meaningful for the people who have lived them. We expect many of you to be parents yourselves and thus to have personal experience of feeding babies or to have been around family or friends feeding their babies. Experiencing or witnessing breastfeeding getting off to a rough start, and perhaps not carrying on when you wish you had, is common given the lack of support many UK families struggle with. Maybe you supplemented your breastfed baby or babies with formula, either by choice or out of necessity. Or maybe breastfeeding wasn't for you and you are quite happy with the experience you had of exclusively formula feeding your baby. Your own experience might not look like any of these scenarios.

We know it can be challenging to talk to children about feeding babies in a way that doesn't match your personal experiences. We hope that this lesson will allow the children to learn about breastmilk and breastfeeding which in turn will contribute to their future confidence in breastfeeding and their ability to make informed decisions about feeding their children when the time comes.

Duration: 1 hour

Facilitator: Breastfeeding peer supporter or similar, with class teacher as co-facilitator

Arrangement of chairs/tables: to facilitate small group (5-6 students) table-top activity; note, the session also includes paired and whole group discussion as well as exposition

Other requirements: facility for showing two short video clips

Objectives:

1. To gain an understanding of the significance of the infant feeding decision
2. To learn the basic differences between breastmilk and formula
3. To appreciate the challenges of supporting mothers to breastfeed
4. To develop persuasive language in a public health context

	Type*	Duration (mins)	Resources	Discussion points
1	E	2		Peer supporter introduces themselves and explains why they are there. Includes basic summary of learning objectives.
2	SG with scribe	5	Big paper, pens	How are babies fed? What do we already know? (from our own families, our communities, online)
3	WG	5		Feedback from groups
4	WG	5	Photos 1 and 2	Why do breasts make us giggle? Is that a problem? What consequences can that have for parents?
5	WG	5	Photos 3 and 4 (or formula containers if available)	What is formula milk made from? What do the words on these labels mean? What food groups can we recognise? Where are the ingredients coming from?
6	WG	2	Graphic 1	How is breastmilk different?
7	E	1.5	https://humanmilkfoundation.org/the-science-bit/	Watch Dispatches clip from Human Milk Foundation site
8	E	3		Some key differences between formula milk and breastmilk. Formula does the food and drink but nothing else. Breastmilk contains hundreds of other components – hormones, antibodies, stem cells - which contribute to the healthy development of the child. Some stars of breastmilk: **Alpha – lactalbumin:** most common type of protein found in breastmilk. In the baby's stomach it binds with oleic acid to become HAMLET, which in laboratory studies has been shown to kill cancer cells! **Oligosaccharides:** complex sugars in breastmilk (of which there are lots of different types). Some types are undigestible and exist in breastmilk just to feed the friendly bacteria in the baby's stomach and intestines. **Antibodies:** breastmilk contains antibodies, produced by the mother's immune system, that pass to the baby to help the baby to fight off these same specific bacteria and viruses. **Oxytocin:** this hormone in breastmilk makes baby feel calm and relaxed. (To learn more, see the section "Further reading: What's in breastmilk" at the end of this document).

* (P=paired discussion, SG=small group discussion, WG=whole group discussion, E=exposition)

	Type*	Duration (mins)	Resources	Discussion points
9	WG	2	Photos 5, 6, 7	Do these photos make us feel uncomfortable? Why?
10	P	2		What emotions are the mums in these photos conveying?
11	WG	3	https://www.breastfedbabies.org (video is 40 seconds long)	Why did the government of Northern Ireland make that video?
12	WG	5		What makes it hard for mums?
13	E	5		Formula company advertising spend in the UK: estimated to be around 12.8 million USD in 2015[1]. WHO code: in 1981 the World Health Assembly adopted the WHO Code for the Marketing of Breastmilk Substitutes which prohibits companies from direct marketing to parents about breastmilk substitutes intended for children up to 3 years old (formula milk, bottles and teats, baby food). No magazine or telly adverts, no supermarket discounts, no free samples. Less than the full code has been adopted into UK law meaning that here in the UK it is only an offense to directly market to parents about formula milk intended for babies 6 months old and younger.
14	P, WG	10		In pairs, discuss: how can we help? Develop a couple of breastfeeding promotional slogans that could be aimed at dads, partners, grannies (not mums). Feed back to the whole group.
15	E	5		Summary, Q&A with peer supporter

* (P=paired discussion, SG=small group discussion, WG=whole group discussion, E=exposition)

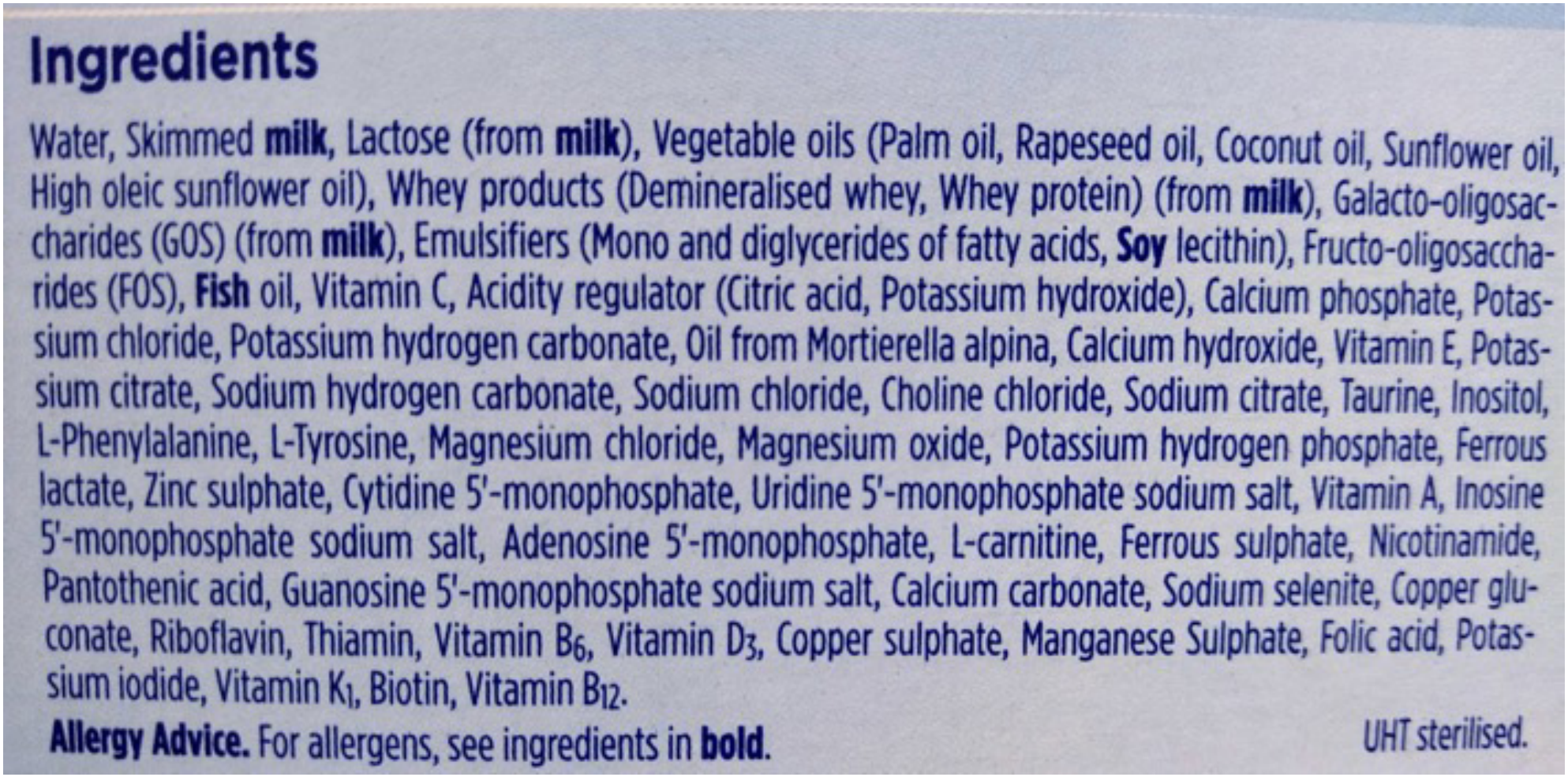
[1] https://www.savethechildren.org.uk/content/dam/gb/reports/health/dont-push-it.pdf

Photo 1

Photo 2

https://www.unicef.org.uk/babyfriendly/about/benefits-of-breastfeeding/

Photo 3[2]



Ingredients

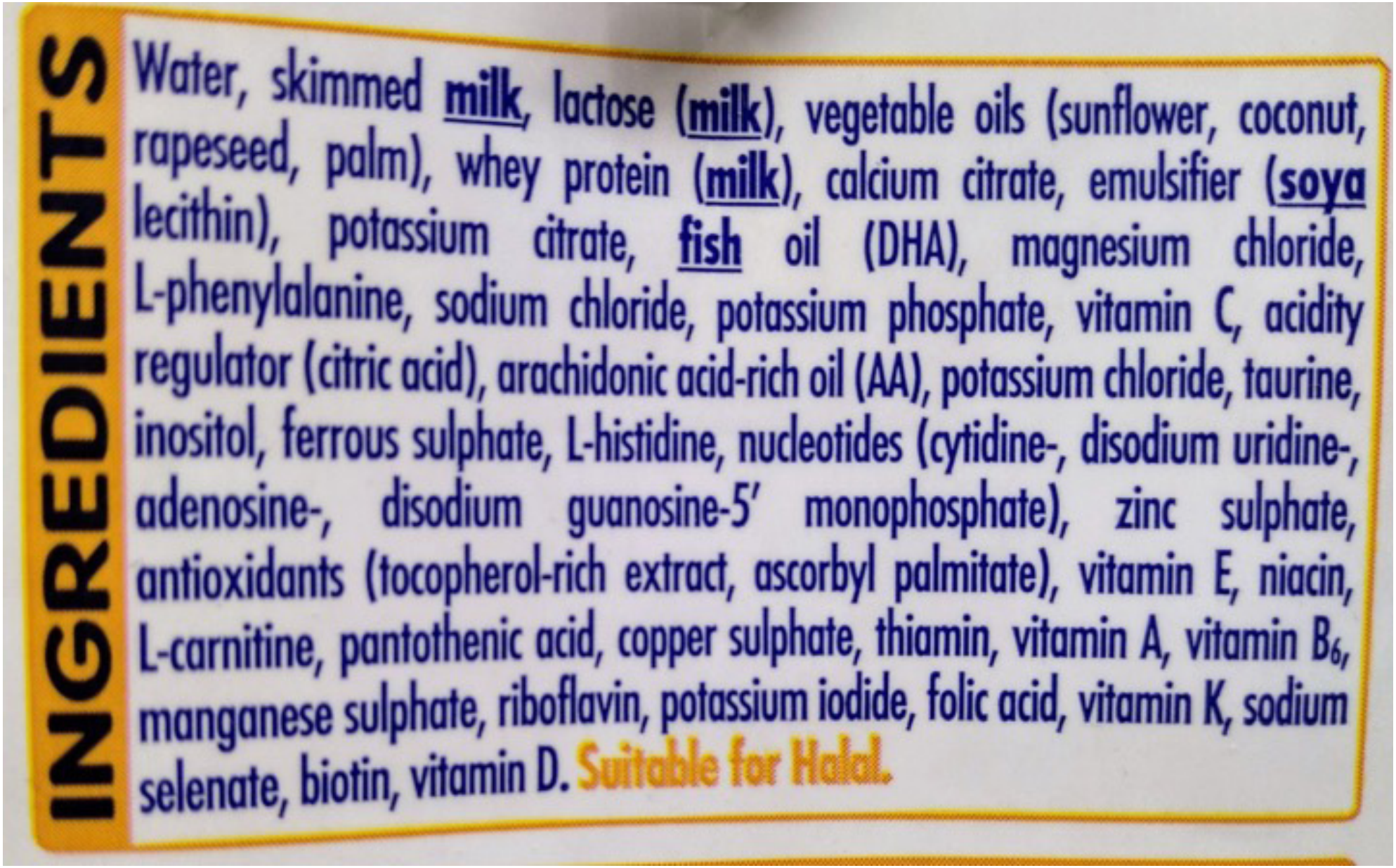
Water, Skimmed **milk**, Lactose (from **milk**), Vegetable oils (Palm oil, Rapeseed oil, Coconut oil, Sunflower oil, High oleic sunflower oil), Whey products (Demineralised whey, Whey protein) (from **milk**), Galacto-oligosaccharides (GOS) (from **milk**), Emulsifiers (Mono and diglycerides of fatty acids, **Soy** lecithin), Fructo-oligosaccharides (FOS), **Fish** oil, Vitamin C, Acidity regulator (Citric acid, Potassium hydroxide), Calcium phosphate, Potassium chloride, Potassium hydrogen carbonate, Oil from Mortierella alpina, Calcium hydroxide, Vitamin E, Potassium citrate, Sodium hydrogen carbonate, Sodium chloride, Choline chloride, Sodium citrate, Taurine, Inositol, L-Phenylalanine, L-Tyrosine, Magnesium chloride, Magnesium oxide, Potassium hydrogen phosphate, Ferrous lactate, Zinc sulphate, Cytidine 5'-monophosphate, Uridine 5'-monophosphate sodium salt, Vitamin A, Inosine 5'-monophosphate sodium salt, Adenosine 5'-monophosphate, L-carnitine, Ferrous sulphate, Nicotinamide, Pantothenic acid, Guanosine 5'-monophosphate sodium salt, Calcium carbonate, Sodium selenite, Copper gluconate, Riboflavin, Thiamin, Vitamin B_6, Vitamin D_3, Copper sulphate, Manganese Sulphate, Folic acid, Potassium iodide, Vitamin K_1, Biotin, Vitamin B_{12}.

Allergy Advice. For allergens, see ingredients in **bold**.

UHT sterilised.

[2] Aptamil First Infant Formula Ready to feed

Photo 4[3]

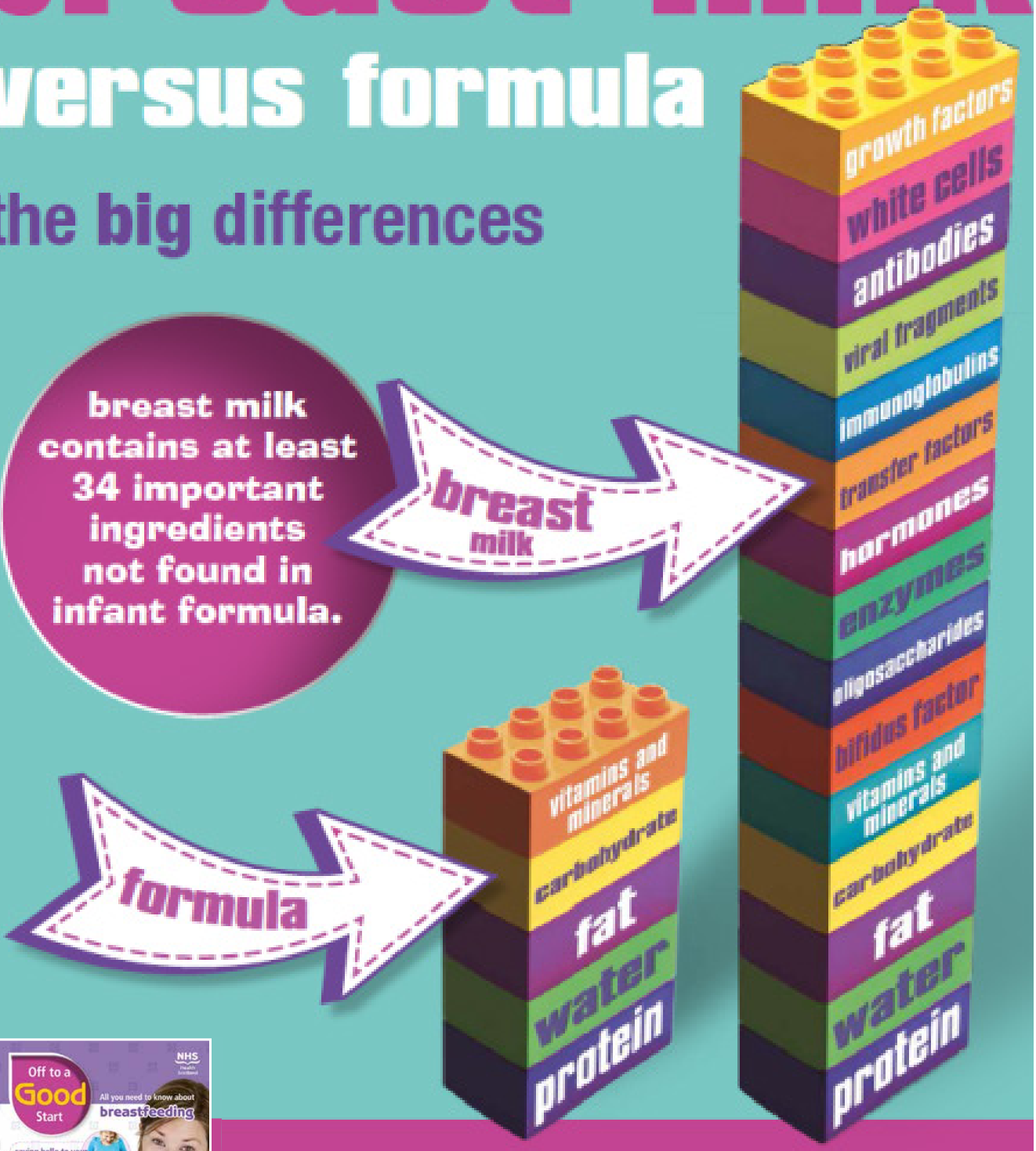


[3] SMA powdered First Infant Formula

breast milk versus formula

the big differences

breast milk contains at least 34 important ingredients not found in infant formula.



Ask your midwife or health visitor for more information.

www.feedgoodfactor.org.uk

NHS Health Scotland


#FEEDME
RÅNSTUDIO
Avenir Art
Art For Everyone
www.avenirart.com
abm
Association of Breastfeeding Mothers

Photo 6


#FEEDME
RÅNSTUDIO
abm
Association of Breastfeeding Mothers


#FEEDME
RÅNSTUDIO
abm
Association of Breastfeeding Mothers

DID YOU EVER WONDER WHAT'S IN... ?

BREASTMILK

WATER

CARBOHYDRATES (energy source)
- Lactose
- **Oligosaccharides (see below)**

CARBOXYLIC ACID
- Alpha hydroxy acid
  - Lactic acid

PROTEINS (building muscles and bones)
- Whey protein
  - Alpha-lactalbumin
    - HAMLET (Human Alpha-lactalbumin Made Lethal to Tumour cells)
  - Lactoferrin
  - Many antimicrobial factors (see below)
- Casein
- Serum albumin

NON-PROTEIN NITROGENS
- Creatine
- Creatinine
- Urea
- Uric acid
- Peptides (see below)
- Amino Acids (the building blocks of proteins)
  - Alanine
  - Arginine
  - Aspartate
  - Clycine
  - Cystine
  - Glutamate
  - Histidine
  - Isoleucine
  - Leucine
  - Lycine
  - Methionine
  - Phenylalanine
  - Proline
  - Serine
  - Taurine
  - Theronine
  - Tryptophan
  - Tyrosine
  - Valine
  - Carnitine (amino acid compound necessary to make use of fatty acids as an energy source)
- Nucleotides (chemical compounds that are the structural units of RNA and DNA)
  - 5'-Adenosine monophosphate (5''-AMP)
  - 3',5'-Cyclic adenosine monophosphate (3',5'-cyclic AMP)
  - 5'-Cytidine monophosphate (5'-CMP)
  - Cytidine diphosphate choline (CDP choline)
  - Guanosine diphosphate (UDP)
  - Guanosine diphosphate - mannose
  - 3'- Uridine monophosphate (3'-UMP)
  - 5'-Uridine monophosphate (5'-UMP)
  - Uridine diphosphate (UDP)
  - Uridine diphosphate hexose (UDPH)
  - Uridine diphosphate-N-acetyl-hexosamine (UDPAH)
  - Uridine diphosphoglucuronic acid (UDPGA)
  - Several more novel nudeotides of the UDP type

FATS
- Triglycerides
  - Long-chain polyunsaturated fatty acids
    - Docosahexaenoic acid (DHA) (important for brain development)
    - Arachidonic acid (AHA) (important for brain development)
    - Linoleic acid
    - Alpha-linolenic acid (ALA)
    - Eicosapentaenoic acid (EPA)
    - Conjugated linoleic acid (Rumenic acid)
  - Free Fatty Acids
  - Monounsaturated fatty acids
    - Oleic acid
    - Palmitoleic acid
    - Heptadecenoic acid
  - Saturated fatty acids
    - Stearic
    - Palmitic acid
    - Lauric acid
    - Myristic acid
- Phospholipids
  - Phosphatidylcholine
  - Phosphatidylethanolamine
  - Phosphatidylinositol
  - Lysophosphatidylcholine
  - Lysophosphatidylethanolamine
  - Plasmalogens
- Sphingolipids
  - Sphingomyelin
  - Gangliosides
    - GM1
    - GM2
    - GM3
  - Glucosylceramide
  - Glycosphingolipids
  - Galactosylceramide
  - Lactosylceramide
  - Globotriaosylceramide (GB3)
  - Globoside (GB4)
- Sterols
  - Squalene
  - Lanosterol
  - Dimethylsterol
  - Methosterol
  - Lathosterol
  - Desmosterol
  - Triacylglycerol
  - Cholesterol
  - 7-dehydrocholesterol
  - Stigma-and campesterol
  - 7-ketocholesterol
  - Sitosterol
  - β-lathosterol
  - Vitamin D metabolites
  - Steroid hormones

VITAMINS
- Vitamin A
- Beta carotene
- Vitamin B6
- Vitamin B8 (Inositol)
- Vitamin B12
- Vitamin C
- Vitamin D
- Vitamin E
- a-Tocopherol
- Vitamin K
- Thiamine
- Riboflavin
- Niacin
- Folic acid
- Pantothenic acid
- Biotin

MINERALS
- Calcium
- Sodium
- Potassium
- Iron
- Zinc
- Chloride
- Phosphorus
- Magnesium
- Copper
- Manganese
- Iodine
- Selenium
- Choline
- Sulpher
- Chromium
- Cobalt
- Fluorine
- Nickel

METAL
- Molybdenum (essential element in many enzymes)

GROWTH FACTORS (aid in the maturation of the intestinal lining)
- Cytokines
  - interleukin-1β (IL-1β)
  - IL-2
  - IL-4
  - IL-6
  - IL-8
  - IL-10
  - Granulocyte-colony stimulating factor (G-CSF)
  - Macrophage-colony stimulating factor (M-CSF)
  - Platelet derived growth factors (PDGF)
  - Vascular endothelial growth factor (VEGF)
  - Hepatocyte growth factor -α (HGF-α)
  - HGF-β
  - Tumor necrosis factor-α
    - Interferon-γ
  - Epithelial growth factor (EGF)
  - Transforming growth factor-α (TGF-α)
  - TGF β1
  - TGF-β2
  - Insulin-like growth factor-I (IGF-I) (also known as somatomedin C)
  - Insulin-like growth factor- II
  - Nerve growth factor (NGF)
  - Erythropoietin

PEPTIDES (combinations of amino acids)
- HMGF I (Human growth factor)
- HMGF II
- HMGF III
- Cholecystokinin (CCK)
- β-endorphins
- Parathyroid hormone (PTH)
- Parathyroid hormone-related peptide (PTHrP)
- β-defensin-1
- Calcitonin
- Gastrin
- Motilin
- Bombesin (gastric releasing peptide, also known as neuromedin B)
- Neurotensin
- Somatostatin

HORMONES (chemical messengers that carry signals from one cell, or group of cells, to another via the blood)
- Cortisol
- Triiodothyronine (T3)
- Thyroxine (T4)
- Thyroid stimulating hormone (TSH) (also known as thyrotropin)
- Thyroid releasing hormone (TRH)
- Prolactin
- Oxytocin
- Insulin
- Corticosterone
- Thrombopoietin
- Gonadotropin-releasing hormone (GnRH)
- GRH
- Leptin (aids in regulation of food intake)
- Ghrelin (aids in regulation of food intake)
- Adiponectin
- Feedback inhibitor of lactation (FIL)
- Eicosanoids
  - Prostaglandins (enzymatically derived from fatty acids)
    - PG-E1
    - PG-E2
    - PG-F2
  - Leukotrienes
  - Thromboxanes
  - Prostacyclins

ENZYMES (catalysts that support chemical reactions in the body)
- Amylase
- Arysulfatase
- Catalase
- Histaminase
- Lipase
- Lysozyme
- PAF-acetylhydrolase
- Phosphatase
- Xanthine oxidase

ANTIPROTEASES (thought to bind themselves to macromolecules such as enzymes and as a result prevent allergic and anaphylactic reactions)
- a-1-antitrypsin
- a-1-antichymotrypsin

ANTIMICROBIAL FACTORS (are used by the immune system to identify and neutralize foreign objects, such as bacteria and viruses.)
- Leukocytes (white blood cells)
  - Phagocytes
    - Basophils
    - Neutrophils
    - Eoisinophils
  - Macrophages
  - Lymphocytes
    - B lymphocytes (also known as B cells)
    - T lymphocytes (also known as C cells)
- sIgA (Secretory immunoglobulin A) (the most important antiinfective factor)
- IgA2
- IgG
- IgD
- IgM
- IgE
- Complement C1
- Complement C2
- Complement C3
- Complement C4
- Complement C5
- Complement C6
- Complement C7
- Complement C8
- Complement C9
- Glycoproteins
  - Mucins (attaches to bacteria and viruses to prevent them from clinging to mucousal tissues)
  - Lactadherin
- Alpha-lactoglobulin
- Alpha-2 macroglobulin
- Lewis antigens
- Ribonuclease
- Haemagglutinin inhibitors
- Bifidus Factor (increases growth of Lactobacillus bifidus - which is a good bacteria)
- Lactoferrin (binds to iron which prevents harmful bacteria from using the iron to grow)
- Lactoperoxidase
- B12 binding protein (deprives microorganisms of vitamin B12)
- Fibronectin (makes phagocytes more aggressive, minimizes inflammation, and repairs damage caused by inflammation)
- Oligosaccharides (More Than 200 Different Kinds!)

FORMULA

WATER

CARBOHYDRATES
- Lactose
- Corn maltodextrin

PROTEIN
- Partially hydrolyzed reduced minerals whey protein concentrate (from cow's milk)

FATS
- Palm olein
- Soybean oil
- Coconut oail
- High oleic safflower oil (or sunflower oil)
- M. alpina oil (Fungal DHA)
- C.cohnii oil (Algal ARA)

MINERALS
- Potassium citrate
- Potassium phosphate
- Calcium chloride
- Tricalcium phosphate
- Sodium citrate
- Magnesium chloride
- Ferrous sulphate
- Zinc sulphate
- Sodium chloride
- Copper sulphate
- Potassium iodide
- Manganese sulphate
- Sodium selenate

VITAMINS
- Sodium ascorbate
- Inositol
- Choline bitartrate
- Alpha-Tocopheryl acetate
- Niacinamide
- Calcium pantothenate
- Riboflavin
- Vitamin A acetate
- Pyridoxine hydrochloride
- Thiamine mononitrate
- Folic acid
- Phylloquinone
- Biotin
- Vitamin D3
- Vitamin B12

ENZYME
- Trypsin

AMINO ACID
- Taurine
- L-Carnitine (a combination of two different amino acids)

NUCLEOTIDES
- Cytidine 5-monophosphate
- Disodium uridine 5-monophosphate
- Adenosine 5-monophosphate
- Disodium guanosine 5-monophosphate
- Soy Lecithin

- See also https://www.human-milk.com/science.html

FREQUENTLY ASKED QUESTIONS

abm
Association of Breastfeeding Mothers

The Association of Breastfeeding Mothers (ABM) is a voluntary organisation founded in 1979 by mothers already experienced in breastfeeding counselling.

We became a charity in 1980 (registered no 280537). As well as supporting mums and families and offering training, we speak for breastfeeding families at a national advocacy level. We answer calls on the National Breastfeeding Helpline with volunteers from the Breastfeeding Network.

Further information can be found at abm.me.uk

Frequently asked questions

Q1. Can women with small breasts breastfeed?

A1. Yes. The amount of milk a mother can produce is not related to the size of her breasts. The more often the baby is breastfed, the more milk will be produced. The size of the breast is not due to the amount of milk-producing tissue but is mainly due to the amount of fat tissue present.

Q2. Can women with breast implants breastfeed?

A2. Generally speaking, a mother who has had breast implants can breastfeed although her success in doing so will depend on the surgical techniques that were used. Breast implants are usually placed behind the existing breast tissue and cause little or no interference with the milk-producing function of the breasts. Levels of silicone are more than ten times higher in formula and cow's milk than in the milk of mothers with silicone breast implants. In some cases, women may have had implants because of concerns about breast development in puberty and there may be underlying challenges, separate from the surgery, which can mean they need more support to breastfeed.

Women who have had breast-reduction surgery may find it harder to breastfeed if milk producing tissues and ducts have been removed or nerves damaged. Often it is nerve damage from breast surgery, rather than any damage to milk ducts, that adversely affects breastfeeding. The longer ago that the nerves were damaged, the better the chances that they have repaired themselves.

Q3. If men cannot breastfeed, why do they have nipples?

A3. As embryos, men and women have similar tissues and body parts. If anything, the embryo follows a 'female template'. That is why nipples are present in both sexes. The genes, the Y chromosome and the hormone testosterone masculinise the embryo. Testosterone promotes the growth of the penis and testicles. Because nipples are there before this process begins, the nipples remain. Male nipples and breast tissue have no function except, perhaps, to protect the heart and lungs from injury. A certain level of the female hormone oestrogen is present in all men. It is for this reason that men can get breast cancer.

(Reference: http://menshealth.about.com/od/conditions/a/Nipples_Men.htm)

Q4. What is lactation?

A4. Lactation is the formation or secretion of milk by the mammary glands.

Q5. Is it safe to drink alcohol when breastfeeding?

A5. Breastfeeding mothers can have occasional, small amounts of alcohol but should not drink regularly or heavily (e.g. binge drinking) without considering how to limit the baby's exposure. The level of alcohol in the milk will be approximately equal to the mother's blood alcohol level and will peak 30 to 90 minutes after consumption. To reduce exposure of the baby to alcohol, a mother could avoid breastfeeding for 2-3 hours after drinking. It is not necessary to express breastmilk off to clear it of alcohol because as the mother's blood levels fall the level of alcohol in the breastmilk will automatically decrease.

(Reference : https://www.breastfeedingnetwork.org.uk/wp-content/dibm/alcohol%20and%20breastfeeding%20%283%29.pdf)

Q6. Can babies be allergic to/react badly to breastmilk?

A6. Yes, but it's very uncommon. Rarely, some breastfed babies react to foods their mothers have been eating (dairy/soy, gluten) and some mums may change their diet to help their babies be more comfortable. Cow's milk protein allergy (CMPA) is a rare immune reaction to the protein in cow's milk and can produce varying degrees of adverse effects in babies. Lactose intolerance in babies is rarer than CMPA and is due to insufficient release of lactase (the enzyme that digests lactose). Lactose is the main sugar in breastmilk and is usually present in infant formula too. Primary lactose intolerance, i.e. apparent at birth, is very rare and is called galactosemia; babies with galactosemia can't breastfeed and will need specialist formula. Temporary lactose intolerance can occur in some babies after a tummy bug; when the gut repairs itself, the temporary intolerance resolves. In this latter case, mums don't need to change their diet.

Q7. For how long should a mother continue breastfeeding?

A7. For as long as she wants to! The World Health Organisation and Departments of Health around the world recommend that mothers be encouraged to breastfeed until their babies are two years old or older. This recommendation is based on research showing that the major health and nutritional advantages of breastfeeding are maximised the longer it continues. It is up to the woman to decide how long she wants to continue breastfeeding and every day, week or month is valuable. There is no need for a baby to move to formula or to use a bottle at any stage; babies are ready for the addition of other foods alongside breastmilk from around 6 months of age.

Q8. What is a breast pump and how is it used?

A8. A breast pump is a device (powered by hand or by electricity) that extracts milk from the breasts of a woman who is lactating. Breastfeeding mothers may use breast pumps to provide milk for their babies when they are separated from them, if for example the baby is ill or premature and has remained in hospital after the discharge of the mother, or if the baby's mother returns to work outside the home. Breastmilk is particularly important in treating sick babies as it contains protective antibodies against infections that they may be particularly prone to. When a breastfeeding mother is away from her baby, she needs to express her milk regularly to maintain her milk supply. The expressed breastmilk may be stored and later fed to a baby by cup or other means depending on their age. Expressed milk may be kept at room temperature (under 21 degrees Celsius) if it is going to be fed to the baby within six hours. It may be safely kept at the back of the refrigerator for six days, or in a freezer for up to 6 months (at a temperature of 0 degrees Fahrenheit or minus 18 degrees Celsius). Surplus expressed milk can be donated to a human milk bank which provides pasteurised breastmilk to premature babies and other high-risk infants whose mothers cannot provide breastmilk for them.

Q9. Is breastfeeding sore?

A9. Breastfeeding should not hurt if babies are attached to the breast correctly. While the mother is in the hospital after having her baby, she will be shown by the midwives how to do this. Babies do not nipple-feed, they breastfeed; while they are feeding, the mother's nipple is at the back of the baby's mouth. Some mothers may find the first few days a bit tender as the nipple is getting used to being stretched and because hormone levels make the nipples a little more sensitive than usual, or they may feel uncomfortable when their breasts are very full, but pain isn't normal.

Frequently asked questions

Q10. Does breastfeeding help the mother lose weight?

A10. Yes. Women can go back to their pre-pregnancy weight more quickly if they breastfeed for at least six months. The number of calories burnt daily varies but it is estimated that breastfeeding burns around 450 kcals per day.

The hormones released during breastfeeding also help the mother's uterus (womb) to shrink to its pre-pregnancy size, which helps guard against bleeding.

Q11. Do breastfeeding mothers have to eat a healthy diet to make adequate breastmilk?

A11. No. A breastfeeding mother does not need to eat or drink anything special to make milk that is ideal for her baby. The fats and vitamins in breastmilk may be made from fat on the mum's body that has been there a long time. It's not true that mums must eat a healthy diet every day. Skipping a meal, or eating a lot of cake, won't mean that your baby will miss out. However, being a new parent takes a lot of energy and eating well is something that benefits all of us. We all benefit from eating the right balance of protein, fats, carbohydrates, vitamins and minerals and drinking enough water so that our urine is pale, and we don't feel thirsty.

Q12. Should mothers stop breastfeeding when their babies get teeth?

A12. There is no need to stop breastfeeding a baby once they get teeth. Individual babies start getting teeth at different ages, but most will have a few teeth by their first birthday. This has no effect on breastfeeding since babies do not use their teeth while sucking and a baby's tongue covers their bottom teeth when they feed. After the baby is six months old, they will need more than just breastmilk and will start taking solid foods while continuing to breastfeed.

Q13. Can a mother breastfeed twins or triplets?

A13. Yes. Breastmilk is produced on a demand-supply basis. If the demand is increased, the supply will also increase. Thus, the amount of breastmilk a mother produces increases when it needs to as her baby grows and is also more when she has more than one baby.

Q14. How might you respond to an individual comment that is promoting bottle feeding?

A14. You could acknowledge that most breastfeeding families in the UK do some bottle feeding. It doesn't need to be formula in the bottle. It also doesn't need to be all or nothing. When a baby has a bottle, this can affect the mum's milk supply, especially in the early days when supply is ramping up (first 4-6 weeks). Sometimes babies do need supplementary feeding (in addition to feeding at the breast). This could be mum's own expressed milk, milk from another breastfeeding mother (donor milk) or formula (never homemade and never normal cow's milk before age 1). If the supplement isn't human milk, this puts baby at greater risk of infection and undermines the benefits of consuming only breastmilk.
If a child (or anyone) is offering their own experience of bottle feeding, it's important to offer acceptance of what is said (i.e. acknowledging the statement without agreeing or disagreeing). In some cases, it may be appropriate to offer information to expand the knowledge of the group. Sensitivity is paramount. Of course, some pupils may know mothers who struggle to breastfeed or are unable to breastfeed for other reasons.

Frequently asked questions

Q15. Can a mother take medication while she's breastfeeding?

A15. Taking medication does not usually mean that a mother has to stop breastfeeding temporarily or permanently. The Breastfeeding Network provides drug fact sheets for a wide range of conditions including hay fever/antihistamines, migraine, upset tummies, pain killers, dental treatment, mental health, emergency contraception etc. https://www.breastfeedingnetwork.org.uk/drugs-factsheets/ If a breastfeeding mother can't take a particular drug there is usually an alternative. Mums and doctors can get more information by asking a specialist pharmacist or by messaging the Drugs in Breastmilk information service Facebook page or emailing druginformation@breastfeedingnetwork.org.uk.

Q16. Can every woman breastfeed?

A16. Some women may not want to. More than 90% of women can make enough milk for their baby if they get the right support. For some women, breast- or hormone-related issues could make it difficult to make enough milk. Some women will struggle to make enough if baby hasn't been attached properly or hasn't been feeding often enough. With the right support from a trained person most women can increase their milk supply and it is always possible to breastfeed alongside giving other milk if that is what is needed. The other milk might be milk donated from another woman or formula milk.

Q17. How can I locate a breastfeeding peer supporter?

A17. The health visiting team from the council local to your school should be able to advise you.

You can also contact one of the main breastfeeding support organisations in the UK directly:

The Breastfeeding Network https://www.breastfeedingnetwork.org.uk/
(Try https://www.breastfeedingnetwork.org.uk/sample-page/ for details of local groups.)

The Association of Breastfeeding Mothers https://abm.me.uk/

The NCT https://www.nct.org.uk/local-activities-meet-ups

Or

La Leche League https://www.laleche.org.uk/find-lll-support-group/

Sources of further information

The Association of Breastfeeding Mothers https://abm.me.uk/breastfeeding-information/

The Breastfeeding Network https://www.breastfeedingnetwork.org.uk/breastfeeding-help/

La Leche League Great Britain https://www.laleche.org.uk/get-support/#bfinfo

The National Childbirth Trust https://www.nct.org.uk/baby-toddler/feeding

The UNICEF UK Baby Friendly Initiative https://www.unicef.org.uk/babyfriendly/support-for-parents/

Want to get in touch?

If you have questions not addressed above, or any feedback on the above or on the teaching materials themselves, please email **emmapickettibclc@gmail.com**.

Some answers here adapted from a 2008 FAQ document produced by the Department of Health and Children of Northern Ireland and HSE Population Health Directorate which was developed by researchers from Health Promotion, Training & Support Services and Elm Training.

Mini-milks

Breastfeeding and infant feeding awareness in schools

(Key Stage 2)

Association of Breastfeeding Mothers

Mini-milks

Objective: normalising breastfeeding for school-aged children

- 10-20 minute discussion sessions which can be timed flexibly
- Group, whole class or paired discussion
- Can also be used as writing prompts
- Notes section with extra information for teachers
- Created by a qualified teacher and IBCLC (board certified lactation consultant).

What can you tell me about this woman?

How does the food go to her baby?

What do bodies need to grow and be healthy?

What will the baby eat when it comes out?

Does anyone have a baby in their family at the moment?

What is this girl doing?

Does this picture make us giggle a bit? Why is that?

How else do children pretend to feed babies?

When real babies feed, they can get milk from their mums or milk from a bottle. Do you know where the milk in the bottle comes from?

Breastfeeding isn't just a way for babies to eat. Lots of other things are happening too when a baby breastfeeds. Like what?

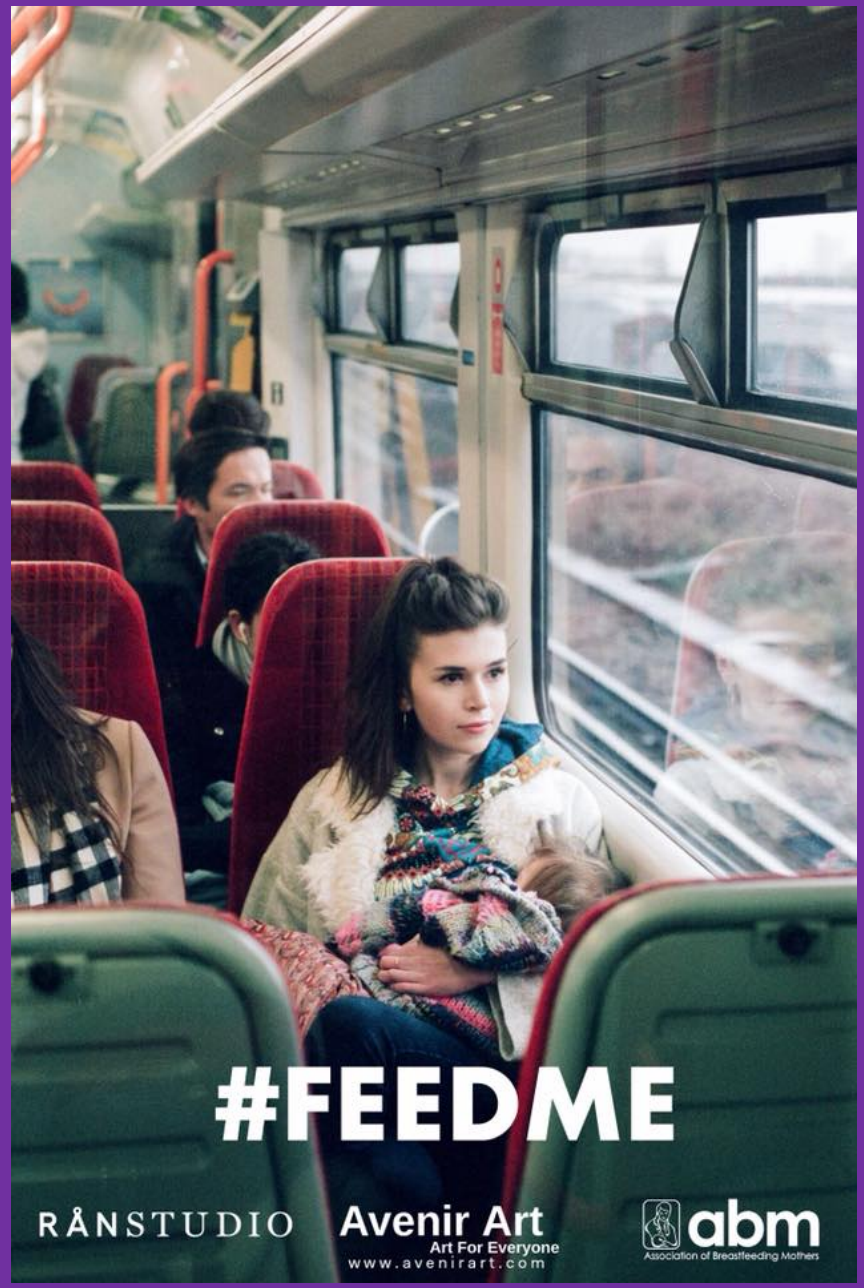
Some people think it's important that children are taught about breastfeeding. What do you think?

Breastmilk is special. It can protect a baby in lots of different ways.

Are there any words here you don't understand?

With your partner, you have 3 minutes to try and remember as many of these benefits as possible.

Now who is going to try and list them all without looking? Let's see if anyone can remember all of them!



This mum is travelling.
Breastfeeding makes that easier. How?

Have you ever seen someone breastfeeding out and about?

How do you think they felt the first time?

How did it make you feel?

What can we do to make it easier for new parents to be outside the home and breastfeed when they are out?

Can you feel your ribs? Where are the ribs on this picture?

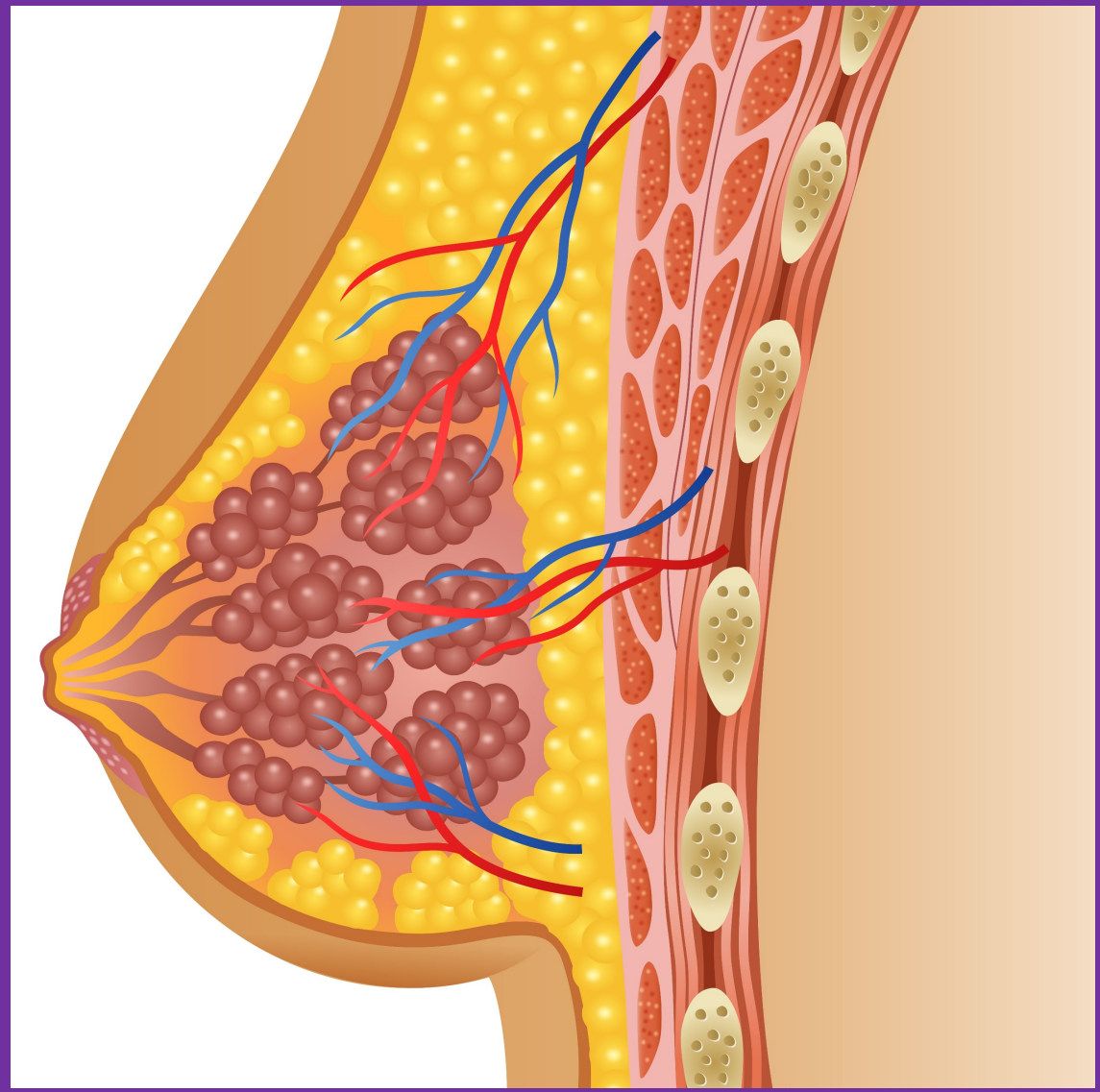
Where do you think the milk is made in this breast?

What are the red and blue wires? What job do they do?

What are the yellow balls? What are they doing?

How does the milk get to the baby?

Do you think bigger breasts make more milk than smaller breasts?



Twins!

This mum is breastfeeding her twins. Why do you think she chose to breastfeed them?

What do you think would happen if she had triplets?

How do you think a mum's body knows to make enough milk for twins?

Mums carry on breastfeeding while studying and working.

When breastfeeding mums can't be with their babies, what do their babies do for food?

Why do mums like to carry on breastfeeding even if they can't be with their baby all the time?

What words would you use to describe how this person is feeling?

Who do you think might be taking the photograph? How might they have supported this pair?

Sometimes it's hard for babies to breastfeed.

Can you think of some reasons why babies and mums might find breastfeeding difficult?

Do you know what happens when a baby is born early? How do we care for them?

What milk might be in the bottle?

Do you think this baby will breastfeed in the future?

Is this what life is always like when you have a new baby?

This mum looks peaceful and happy but sometimes being a new mum can be stressful. Why do think it can sometimes be hard?

Sometimes taking time to breastfeed can help a new mum to relax.

What do you do to relax? Do you have someone that you can talk to when you are feeling stressed?

How is this picture different from the last one?

This painting won a national portrait competition. Why do you think the judges gave it first prize?

The father of the baby painted this picture. Why do you think he chose this subject?

The mum, Virginia, is proud of this painting. Why do you think she feels that way?

If an artist was going to paint a portrait of you, what would you like to be doing? Where would you be?

This is an actress called Chrissy with her family. What is she doing?

She put this photograph on her social media. Why do you think she wanted people to see it?

What do you think she might say if she knew you were seeing it?

Does social media always give a true impression of women's bodies and what new mothers look like?

This couple are going to have their first baby soon. They are looking forward to caring for their baby.

What do you want them to know about feeding their baby?

What might they be worried about?

How can their family and their health care professionals help them?

If you were going to tell them just one thing about breastfeeding, what would you say?

This is going to be a new poster to educate people about breastfeeding. The NHS wants people to know that breastfeeding is normal, that it helps the mum and the baby and you can do it anywhere!

What slogan can you create to go across the top of the poster?

Teacher notes for mini-milks

Slide 3

The food is broken down as normal by her digestive system and micronutrients enter her blood stream and travel through the placenta to the baby. The placenta carries oxygen and food. And is attached to the baby by the umbilical cord.

What do bodies need? Oxygen, water, protein, carbohydrates, fats, vitamins and minerals. What about sleep, shelter, emotional care?

What will the baby eat? Only milk for around the first 6 months. Initially colostrum milk which is produced in the first 2-5 days. Mums actually start making it in pregnancy at around 16 weeks. It's very high in protein and immunological benefits. First off, quantities are very small. The first few feeds may only be a few teaspoons worth.

Someone may have a baby who drinks formula milk. At this stage, best to avoid any kind of discussion of whether breastmilk is 'better' and keep those discussions separate from conversations around individual families. Some babies have breast milk direct from mum, some have it in a bottle, some have formula milk which is made from cow's milk.

The line on the mum's belly is the 'linea nigra'. Pregnancy hormones are behind the appearance of the linea nigra (Latin for "black line"). The condition is the darkening of the linea alba, the "white line" of skin you'd probably never noticed that runs between your belly button and your pelvis. In fact, the skin all over the body becomes hyperpigmented, or darkened, during pregnancy (skin on the face may be darkening too, known as melasma, or the "mask of pregnancy," as well as newly darkened areolas). The linea nigra is likely to be more pronounced if you have darker skin.

Slide 4

This doll is a real product that comes with the holster top with flower shapes. It provoked lots of controversy (a Daily Mail fuss certainly) when it came out, yet feeding a baby doll with a bottle is not considered a problem.

Milk in a bottle may be expressed human milk. Mums can use breast pumps or their hands to take milk out and then put it in a bottle.

Formula milk contains protein from cow's milk but many other ingredients from plants and animals to help create the necessary recipe of micronutrients.

When a baby breastfeeds, it's also about the benefits to the immunity e.g. receiving tailor-made antibodies in response to pathogens in the environment. But there is also a big dimension which is about comfort, relaxation and relationship-building.

Human babies are born early in comparison to other mammals. We have a pelvis that needs to support as we stand upright and we have large brains. Babies are born 'early' to get round this problem. So they need a lot of comfort, warmth and care.

Teacher notes for mini-milks

Slide 5

Obesity means having too much body fat. Not quite the same as being 'heavy' or overweight. Obesity is increasing in our society due to our exercise and eating habits. It can increase your risk of having lots of different diseases.

Diabetes - https://www.cyh.com/HealthTopics/HealthTopicDetailsKids.aspx?p=335&np=285&id=1722

Diabetes is a disease that affects how the body uses glucose (say: GLOO-kose), a sugar that is the body's main source of fuel. It may be because your body isn't able to make enough insulin – what the body usually uses to help it process glucose and other sugars and carbohydrates.

Inflammation – a swelling or redness in the body that may be in response to an infection or injury.

Slide 6

In England, mums are protected to breastfeed in public by law. The Equality Act 2010 says it's against the law to prevent a mum from breastfeeding in a space where her and her baby are allowed to be. In Scotland, it's a criminal act to stop a mum breastfeeding.

We know new mums worry about feeding in public even if they never get a comment or an unkind remark. That might mean they don't leave their home when they want to.

https://www.theguardian.com/lifeandstyle/2015/nov/02/third-of-women-feel-embarrassed-breastfeeding-in-public-survey-finds

Check out this video from a Northern Ireland campaign on breastfeeding in public: https://www.youtube.com/watch?v=fis2D3WfurM #notsorrymums

Slide 7

Milk is made in the red balls. These are the alveoli which are bundled together in lobes. They look like bunches of grapes. Milk then travels down the milk ducts towards the baby when baby feeds.

The red and blue wires are the blood vessels that serve the breast. There are actually far more blood vessels than this. They bring food and oxygen to the breast tissue and take away waste. The blue 'represents' the waste being taken away but they aren't really blue. Blood is how the fats and carbohydrates and protein gets into the milk, through mum's blood. She eats food and the tiny parts of the food travel in her blood to the cells that make milk.

The milk gets to the baby through the milk ducts and duct openings at the nipple. There may be several. Milk doesn't just come out of one hole. Milk gets to baby, not just because the baby is 'sucking' but because the grape bits have muscles around them that actually squeeze the milk down towards baby. This is called the 'milk ejection reflex'.

The yellow balls are fat. They protect the milk-making tissue and support the breast.

Bigger breasts do not necessarily make more milk. They may just have more fat cells.

Teacher notes for mini-milks

Slide 8

Breastfeeding twins – cheaper, saves about £1000 of formula for first year. Twins are often smaller and may be premature or unwell and breastmilk gives them more protection. Can be easier to feed both at the same time, as holding two bottles and two twins not possible.

Triplets can also be breastfed. One just has to wait and then will probably take from both breasts. Breasts are never completely empty.

Breasts make more milk when more is demanded of them. So when babies suck more, and there are 2 babies, more milk is made. It's very clever!

Slide 9

A university graduation in California, America. Karlesha Thurman and her baby

Babies separated from mums might take breastmilk expressed on another day by a breast pump. Breastmilk can be kept for several days in the fridge or for months in a freezer. Mums might pump while they are at work. With a breast pump, it may only take 15 minutes or so. At work, mums can have breaks or pump at lunch and then take the milk home to give their baby another day.

Mums still breastfeed when they are with their baby – maybe in the morning or evening or overnight and at weekends. It helps them to feel connected to their baby and gives them a special cuddle and helps them to make more milk. (Remember the more we take out, the more we make).

Slide 10

This baby was born prematurely. Premature means born before 37 weeks. A baby that is 'full term' is inside their mum for 37-42 weeks.

Takes time to develop the skills needed to breastfeed. You need to have enough fat in your cheeks to create suction and be able to coordinate your suck/ swallow/breathe pattern.

Some mums find breastfeeding painful because the baby isn't attached onto the breast properly. Some mums are worried that the baby isn't getting enough milk because they can't see what's going on (although you can see baby is getting enough by looking at nappies and their weight gain). A very small number of mums may not make enough milk because of medical reasons (about 5%). That might be a hormonal issue like something to do with their thyroid. Or their breast tissue might not be very developed.

Milk could be the mum's expressed milk, formula milk OR donor milk. Milk banks collect donated milk from other mums and supply the milk to babies who need it across the country. Human milk is especially precious for premature babies as it protects them from a dangerous disease which attacks their intestines (necrotising enterocolitis)

http://heartsmilkbank.org/

Teacher notes for mini-milks

Slide 11

Being a new mum is HARD: recovering from birth, sleep deprivation, responsibility for another living person, learning how to breastfeed.

Artist unknown

Slide 12

Painting is 'Breech' by Benjamin Sullivan.

Slide 13

Caption said, "Luna making me feed her babydoll so I guess I have twins now."

3 million likes on Instagram.

She is keen to #normalisebreastfeeding and doesn't feel it should be a big deal.

Chrissy Teigen Instagram