CPD QTS MATERIALS

Tutor's Handbook

Part Time In-Service QTS Programme
Professional Studies

Course 1: How Children Learn

(5 days, 1 Credit)

South Sudan

Contents

It's important to see all five modules in overview and see how each connects with each other and the previous courses on how children learn.

Module 1:
Course Intro

This module explores the nature of the route to Qualified Teacher Status through this part-time, in-service training course. You will be introduced to the ways in which we will work and important aspects of accreditation and assessment.

Course 1: How Children Learn

Module 1: Course Intro

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Key Points:

- The curriculum is made up of a number of elements, not just a collection of facts.
- The Professional Studies Programme is made up of 8 interactive courses.
- Each Course within the programme has 5 modules, except course 7 which has 4.
- Assessments and certification leading to Qualified Teacher Status will be demonstrated through the use of a Professional Portfolio alongside visits and conversations with tutors and school leaders.
- This in-service CPD course is based on the Initial Teacher Training programme.
- This in-service course has been condensed from a full-time 2-year course into 60 days to be spread across 8 weeks of tutored courses and a further 20 days of study.

Outline

Session	Content
1	Welcome and introductions to the course • *Activity 1 Getting to know you*
2	Professional Standards for Teachers • *Activity 2 Applying standards in my school* • *Activity 3 General Education Act*
3	Rich Learning • *Activity 4 Describing Flowers in Science* • *Activity 5 Stories and Songs*
4	Assessment and Portfolio • *Activity 6 Assessment classification*

Resources

Curriculum Framework
ECD Curriculum and Guidance

Part Time QTS Programme

Course Structure

There will be a three-part route to QTS for unqualified serving teachers who have passed the access threshold for proficiency in English and basic subject knowledge.

Part 1	**Professional Studies**	40 Days (8 x 5 days)	8 Credits
Part 2	**Specialist subject study**	10 Days (5 days taught plus 5 days personal study)	2 Credits
Part 3	**Classroom practice**	10 Days (equivalent)	2 Credits

- **The Professional Studies Course** will cover the key parts of the Pre-Service Certificate Course. This will be divided into a number of modules. Each module will give the teachers something to implement in the classroom and evaluate before the next module is started.
- **The Specialist subject study** will enable the teacher to develop a specialism in a subject area or in the ECD. It will equate to the 'Personal Study' element of the Full-Time Certificate Course.
- **The Classroom practice** element will involve the teacher in planning, preparing, implementing and evaluating an aspect of the course in their classroom or school. This will give the opportunity for their teaching to be assessed, and this is a key factor in awarding QTS.

Course Outline

Proposed Professional Studies Course

1. How children learn	2. Curriculum expectations	3. Teaching and learning	4. Language development
5 days	**5 days**	**5 days**	**5 days**
1 Credit	**1 Credit**	**1 Credit**	**1 Credit**
Theory of learning – with a focus on young children – in the context of the curriculum	What are the key features of the SS School and ECD curriculum?	The art and science of teaching (pedagogy)	How do young children learn to speak, listen, read, and write?
a) Course introduction 1. Curriculum Framework and syllabuses 2. Learning theories 3. Knowledge, Skills and Understanding 4. Higher-Order Thinking Skills	1. The four Competencies 2. Syllabus format 3. Cross-cutting Issues and school programmes 4. Textbooks 5. First-hand experiences and active learning	1. The 3 principles of planning 2. Creating learning opportunities in an enabling environment 3. Encouraging creativity & independence 4. Questioning 5. A repertoire of strategies	1. Theory background & the importance of talk 2. Learning in a national language & the transition to English 3. Pre-reading & Pre-writing 4. Developing reading 5. Developing writing

5. Learning Areas and Subjects (1)	6. Learning Areas and Subjects (2)	7. Assessment	8. Inclusion
5 days	**5 days**	**5 days**	**5 days**
1 Credit	**1 Credit**	**1 Credit**	**1 Credit**
The background and key approaches to the language subjects and Learning Areas	The background and key approaches to the other primary subjects	How do we find out if learners have achieved the learning outcomes?	A focus on inclusion, special educational needs, and gender equity
1. ECD Areas 2. English P1-3 3. English P4-5 4. National Language 5. Religious Education	1. Maths 2. Science 3. Social Studies 4. Arts 5. PE	1. Principles of assessment 2. Assessment methods (including examinations) 3. Using assessment to improve learning 4. Keeping and analysing assessment records	1. Special educational needs and disabilities (SEND) 2. Gender equity 3. Creating inclusive environments 4. AES programmes

Professional Studies Outline

Course 1: How children learn	Course 2: Curriculum expectations	Course 3: Teaching and learning
• Understand the implications of the four aims for teaching and learning • Understand how the Curriculum Framework puts the subjects into a broader context • Understand how the Subject Overviews and Syllabus units set out the expected learning • Understand how ECD Curriculum and Guidance sets out learning for PP1 & PP2 • Understand the three key theories of learning • Understand how the theories underpin what happens in the classroom • Understand the nature of Knowledge, Understanding and Skills and the differences between them • Understand how each of these needs to be taught and learned, and plan learning activities appropriate to each • Understand why critical thinking and problem solving are key parts of the SS curriculum and to the learning process • Identify opportunities for critical thinking and problem solving in the syllabuses • Plan learning activities that promote critical thinking and problem solving	• Understand the four competencies and why they are in the ECD and Primary curriculum • Design learning activities that will promote the competencies in a range of Learning Areas and subjects • Understand how the subject syllabuses have been planned to identify key learning each year, and provide progress from P1 to S4 • Understand the importance of the three Cross-cutting Issues and how these relate to the subjects • Understand the reason for and scope of school programmes • Promote a school programme within a school • Understand the layout and design of the South Sudan textbooks and Teacher Guides • Relate the textbooks to the syllabus units and learning outcomes • Design lessons that include use of textbooks • Design some activities that extend learning beyond the textbooks • Understand why first-hand experiences and active learning are important within the SS curriculum • Design some learning activities that involve first-hand experiences and active learning	• Understand, apply, and design learning activities the three principles of planning • Understand the nature of learning opportunities for different forms of learning and the range that can be created • Create appropriate learning opportunities within the SS curriculum • Understand what is meant by creativity, and design some learning activities that promote creativity • Understand why it is important for learners to have some independence in their learning, and why the SS Curriculum Framework requires this • Design some learning activities that promote independent learning • Understand the importance of questioning and relate this to the theories of learning in Course 1 • Understand that there are different sorts of questions (open, closed etc.) • Devise some questions that promote the higher levels of learning in a range of situations • Understand why different strategies are needed for different situations • Identify the approaches needed for some different situations and parts of the curriculum • Design some strategies to address different needs

Course 4: Language development	Course 5: Learning Areas and Subjects (1)	Course 6: Learning Areas and Subjects (2)
• Be aware of the four key theories of language development, and understand why the semantic-cognitive theory is now most widely accepted • Be able to relate the theory to promoting language development in the classroom • Understand the reasons for learning to read and write in a national language before transitioning to English • Understand the key teaching and learning approaches for learning in a national language • Understand challenges facing young people in the transition to English and the language of instruction and how to support them • Understand the principles of pre-writing and pre-writing activities, and the advice given for these activities in the South Sudan ECD curriculum guidance • Understand that children of any age need these activities before they can learn to read and write • Plan pre-writing and pre-writing activities • Understand what is involved in the development of early writing skills and the requirements of the SS curriculum in terms of early writing • Plan some learning activities that will promote early writing skills • Make use of the SS textbooks to promote writing	• Be familiar with the seven ECD Learning Areas and the key approaches to each Area • Be able to design some activities within some of the Areas • Understand the key approaches and requirements of the teaching and learning of English in P1-3, and be familiar with the textbooks for the subject • Be able to design learning activities for reading, writing, speaking and listening in P1-3 • Understand the key approaches and requirements of the teaching and learning of English in P4-8 • Be familiar with the textbooks for the subject • Be able to design learning activities for reading, writing, speaking and listening in P4-8 • Understand the key approaches and requirements of the teaching and learning of a National Language • Be familiar with the textbooks for the subject • Be aware of the implications for other subjects • Understand the key approaches and requirements of the teaching and learning of Religious Education • Be aware of the implications for teaching and learning	• Understand the key approaches and requirements of the teaching and learning of Mathematics • Be familiar with the textbooks for the subject • Be able to design learning activities for Maths • Understand the key approaches and requirements of the teaching and learning of Science • Be familiar with the textbooks for the subject • Be able to design learning activities for Science • Understand the key approaches and requirements of the teaching and learning of Social Studies • Be familiar with the textbooks for the subject • Be able to design learning activities for Social Studies • Understand the key approaches and requirements of the teaching and learning of The Arts • Be able to design learning activities for the subject • Understand the key approaches and requirements of the teaching and learning of PE • Be able to design learning activities for the subject

Course 7: Assessment	Course 8: Inclusion
• Understand the different forms of learning and their implications for assessment • Be aware of the different purposes and types of assessment • Be aware of approaches such as “Authentic Assessment” and “Assessment for Learning” • Be able to apply the methods explained in the South Sudan Assessment Guidance booklet • Relate the methods to a range of Learning Outcomes in the Upper Primary syllabuses • Understand how examination papers are developed and the demands of the questions • Recognise where learning needs to be improved • Be able to give encouraging and effective feedback so that learners know what to do to improve • Design support to meet identified learning needs • Understand the requirements for keeping assessment records • Be able to analyse patterns in assessment records	• Identify different special needs they might encounter • Design programmes and approaches that can help address these needs • Be familiar with the issues surrounding gender equity in schools • Be aware of the programmes that exist to promote gender equity • Understand the key features and importance of an inclusive environment • Be able to create an enabling environment in the classroom. • Understand the nature of the Programmes and their importance in including all young people in education

National Professional Standards for Teachers in South Sudan (September 2012)

Introduction

These standards describe expectations for effective teachers in South Sudan. The term 'teacher' as used in this document means 'effective teacher' inclusive of the seven domains of the professional standards.

The standards are not intended to show isolated knowledge or skills and are not presented in order of importance. Teacher's knowledge and skills in each standard area will impact their ability to perform effectively in the other standard areas. Each of these standards is important for effective teaching.

Teaching and Learning

Standard 1: Knowledge of the learners and how they learn

Teachers should have a knowledge of the learners they teach: their growth and development, learning processes and use of this knowledge in planning lessons and facilitating their learning processes.

Description

Teachers must demonstrate a good understanding of learning processes, theories and principles and their application in the classroom. This enables them to design appropriate teaching and learning activities that are learner-centred. Teachers must connect their teaching to the learners' prior knowledge, needs and interests.

Application

1.1 Teachers must be knowledgeable of the development needs of the learner including physical, psychological, socio-economic and intellectual development

1.2 Teachers use knowledge of learning processes, theories and principles to plan and deliver lessons

1.3 Teachers demonstrate knowledge that learners have different learning capacities and use different learning methods to meet the diverse needs of learners in the classroom

1.4 Teachers demonstrate respect for learners' diverse cultures, religion, languages and experiences

1.5 Teachers know that all learners can achieve their full potential and guide plans of instruction towards this goal

1.6 Teachers treat learners with dignity; build good relationships and support their academic achievement.

Standards 2: Knowledge of the subject being taught

Teachers have mastery of the subject for which they have teaching responsibility.

Description

Effective teachers have a deep understanding of the subject matter and have confidence in communicating it to the learners. Teachers make content of the subject matter meaningful, relevant and applicable to real life experiences of learners.

Application

2.1 Teachers know the content they teach and use their knowledge of subject specific concepts, assumptions and skills to plan teaching and learning

2.2 Teachers understand and use a variety of teaching strategies to effectively teach the central concepts and skills of the discipline

2.3 Teachers have a good understanding of the national curriculum goals, priorities and subject standards.

2.4 Teachers demonstrate good knowledge about relationships among subjects

2.5 Teacher connect subject content to relevant life experiences (and career opportunities).

Standard 3: Teaching Methods

Teachers plan and deliver effective teaching that engages and advances the learning of the individual learner and the community. They apply appropriate teaching methods to different groups of learners.

Description

Teacher have high expectations for all learners, therefore, use a variety of teaching strategies that actively engage them and promote a love of learning. Teachers reflect on their teaching and learners' outcomes to make appropriate decisions which result in increased academic achievement. Techers correctly design a logical scope and sequence for learning.

Application

3.1 Teachers develop teaching objectives and activities that are in line with national education principles.

3.2 Teachers create and select activities designed to develop learners as independent learners and problem solvers and adapt their teaching to respond to learners' strengths and needs.

3.3 Teachers use relevant and appropriate teaching and learning materials from locally available resources effectively and make use of available technologies to enhance learning

3.4 Teachers use participatory teaching and learning activities relevant and meaningful to learners and relate them to everyday lives by using real life stories, local examples and materials

Standard 4: Assessment and Evaluation Methods

Teachers understand and use varied assessment tools to evaluate learners and use results to improve instruction.

Description

Teacher understand the meaning and purpose of assessment and use multiple assessment methods to learn about their learners, to evaluate learning and to plan and adjust instruction. They use formal and informal assessment to gauge learning and determined the academic progress of learners. They keep accurate records of learners' assessment results. Teachers report assessment results to parents, head teachers and other educational administrators.

Application

4.1 Teachers are able to design valid and reliable assessment instruments

4.2 Teachers use different assessment methods, and use the data generated from the assessment to improve teaching and learning.

4.3 Teachers apply (formal and) informal assessment in their lessons to gauge learners' progress on a regular basis.

4.4 Teachers keep accurate records and analyse the data to make decisions on learners' progress, to plan, to differentiate and to modify instruction accordingly.

4.5 teachers collaborate and communicate assessment results to learners, parents, their peers and school officials, school supervisors and inspectors.

Standard 5: Learning Environment

Teachers use the existing conditions to create child-friendly learning environments that are conducive to learning.

Description

Teachers treat all learners fairly and establish an environment that is respectfully, supportive, caring, and physically and emotionally safe. They create learning situations in which learners work independently, collaboratively or as a whole class, and motivate the learners to work productively and assume responsibility for the own learning. They maintain an environment that is conducive to learning for all learners.

Application

5.1 Teachers treat all learners fairly and establish an environment that is respectful, supportive and caring to include differences in gender, ethnicity, language, culture, religion and ability.

5.2 Teachers create learning environments that are physically and emotionally safe.

5.3 Teachers create learning situations in which learners work independently, collaboratively or as a whole class

5.4 Teachers maintain an environment that is conducive to learning for all learners including those with special needs

5.5 Teachers ensure disruptive behaviours and indiscipline are discouraged and managed.

Teaching as a Profession

Standard 6: Professional Responsibility and Growth

Teachers assume responsibility for their own professional growth as individuals and as members of a learning community.

Description

Teachers are professionals who must understand that they are in a unique and powerful position to influence the future of their learners and the communities. Teachers are continuously engaged in their own professional development and contribute to the teaching profession. Teachers serve their school and surrounding communities in various leadership roles. They ensure the transmission of cultural heritage, values, customs and tradition of their immediate community and of South Sudan as a whole. Teachers foster ongoing collaboration with their peers and serve as change agents in the learning communities.

Application

6.1 Teachers are continuously engaged in their own professional development at various levels.

6.2 Teachers contribute to ongoing collaboration with their peers and to the teaching profession.

6.3 Teachers are exemplary and service a model of good citizenship for their learners and the community.

6.4 Teachers seek knowledge about and contribute to the heritage, values, customs and traditions of South Sudanese society

6.5 Teachers are aware of the importance of psychological issues such as child abuse, forced labour at home, rights of learners, and take account of these in teaching

6.6 Teachers have a basic knowledge of the educational goals, as contributing factors to quality education in the context of national policies in South Sudan

Standard 7: Teachers' Code of Conduct and Professional Ethics

Teachers are aware of the South Sudan Professional Code of Conduct and exhibit high standards of personal integrity and professional ethics.

Description

Teachers shall all carry out responsibilities with a high degree of professionalism that promotes a high standard of learning; thus contributing towards achievement of the strategic goal of building an educated an informed nation. They must observe the standards of behaviour and conduct as established in the Ministry's Teachers' Code of Conduct. As role models in society, teachers must practice the highest standards of integrity, fairness and honesty.

Application

7.1 Teachers apply the rules and policies of the Ministry of General Education and Instruction.

7.2 Teachers have regard for the need to safeguard for the policies and practices of the school in which they teach

7.3 Teachers have proper and professional regard for policies and practices of the school in which they teach

7.4 Teachers promote and maintain effective relationships with parents, members of the school community, as well as persons and bodies outside the school that may have a stake or interest in the school

7.5 Teachers practice the highest standards of integrity, honesty, fairness and maintain high standards in their own attendance and punctuality

7.6 Teachers plan and execute duties with diligence, commitment, dedication, fairness and at all times observe proper boundaries appropriate to a teacher's professional position.

Professional Studies Assessment

Section 1: Background

Assessment of the Professional Studies element will be based on the school-based activities that participants will carry out between each course. Each 5-day course will have an assessment activity.

The focus of the QTS Programme (like the school curriculum itself) is on enabling participants to **apply** their learning in the school situation. Assessment will therefore focus on the ability to apply, rather than on being able to remember, aspects of the course.

During the final day of each course, time will be given to preparing the school-based activity and ensuring that participants understand the assessment requirements.

Evidence for the assessment will come from a **portfolio** or presentation that participants will submit that shows how they have applied particular parts of the course in school. The portfolios can be written or electronic, and can contain a range of relevant materials such as photographs, examples of learners' work, lesson plans, etc.

The requirements and grade descriptions for each assessment activity are set out below. These will be made available to all participants at the beginning of the course.

There will be three assessment classifications:

- **Distinction** – The portfolio covers each of the requirements very effectively and shows very good ability to apply the course in the school.
- **Credit** – The portfolio covers each of the requirements sufficiently and shows ability to apply the course in the school.
- **Re-submit** – The portfolio does not cover the requirements and gives insufficient evidence of ability to apply the course in the school.

The grade will be awarded on the basis of **best fit** with the criteria set for each course.

Each portfolio will be assessed by a tutor other than the one who has run the course, and assessment will be moderated by a lead tutor. Accreditation for each stage of QTS will be ratified by the Ministry of General Education and Instruction. Participants will be given written and oral feedback on their portfolios

Participants will be encouraged to work with their headteacher or other colleagues in preparing the portfolio. It should not be seen as traditional examination but as an opportunity for the participants to show how well they can apply their learning in the school situation.

Being asked to re-submit will not prevent a participant from taking part in the next course.

The Assessment Activities

Course	Assessment Activity
1. How children learn	**Simple written task.** Select at least four syllabus units and identify where there are opportunities for critical and creative thinking and relate these to the learning theories that have been studied.
2. Curriculum expectations	**Plan and implement learning activities** to promote student competencies in one or more subjects or Areas of Learning. The implementation could be in one lesson or in a series of lessons across a syllabus unit. They should plan the activity, specifying the learning outcomes sought, relating it to the learning theory, and taking account of what the challenges are in relation to implementation and what solutions can be developed.
3. Teaching and learning	**Plan, implement and evaluate** some learning activities that promote independent learning. The implementation could be in one lesson or in a series of lessons across a syllabus unit. They should plan the activity, specifying the learning outcomes sought, relating it to the learning theory, and taking account of what the challenges are in relation to implementation and what solutions they have developed.
4. Language development	***Either:*** **Plan, implement and evaluate** a series of pre-reading and pre-writing activities ***Or*** **Plan, implement and evaluate** a series of activities that will promote early reading and writing skills
5. Learning Areas and Subjects (1)	**Plan, implement and evaluate** a series of learning activities that take learning beyond the textbooks for one subject from Course 5
6. Learning Areas and Subjects (2)	**Plan, implement and evaluate** a series of learning activities that take learning beyond the textbooks for one subject from Course 6
7. Assessment	**Plan and implement assessment activities** and give feedback to learners according to the South Sudan Guidance. Present a portfolio that explains the process, illustrate it with learners' work where appropriate, relate it to the theory and identify the challenges faced.
8. Inclusion	As this is the final course, there is no between-course task. The assessment will be based on a **portfolio** that: • explains the steps a teacher and the school as a whole should take to promote gender equity. • sets out a plan for an ideal classroom that has a positive and helpful enabling environment, and explains how this relates to the guidance and theory. • Considers the challenges and solutions and relates this to the guidance and theory

The education system in the Republic of South Sudan shall be directed towards meeting the following goals:

a) Eradicate illiteracy, improve employability of young people and adults and promote lifelong learning for all citizens;

b) Provide equitable access to learning opportunities for all citizens to redress the past inequalities in education provision;

c) Achieve equity and promote gender equality and the advancement of the status of women;

d) Contribute to the personal development of each learner and to the moral, social, cultural, political and economic development of the nation;

e) Promote national unity and cohesion;

f) Enhance the quality of education and encourage a culture of innovation and continuous school improvement and effectiveness; and

g) Develop and promote a general scientific approach in education.

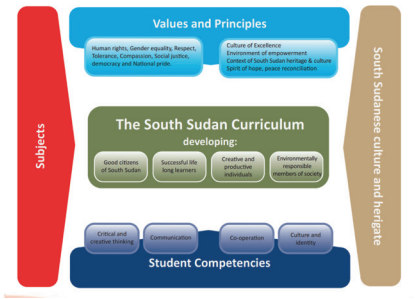
General Education Act, 2012

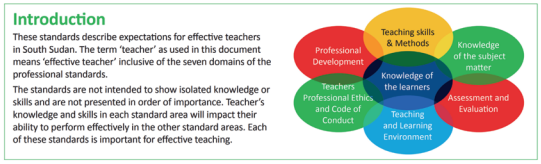
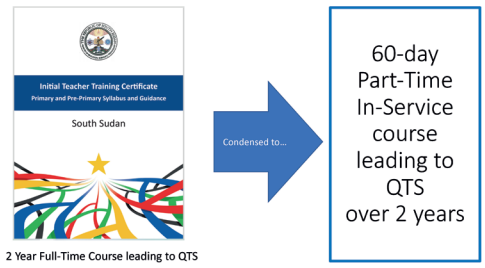
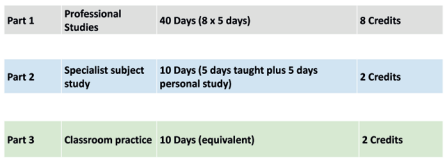
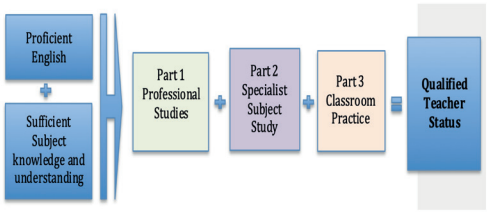
Tutor Course Notes

Key Messages and Approaches

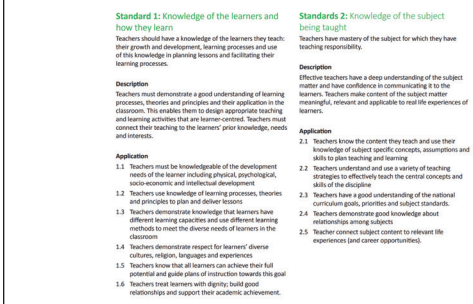
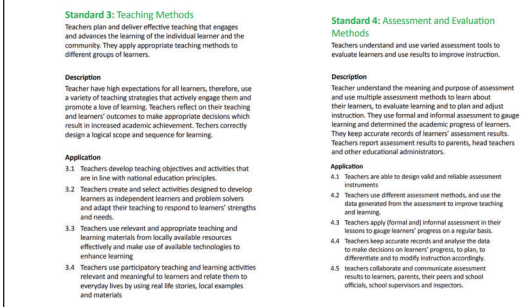
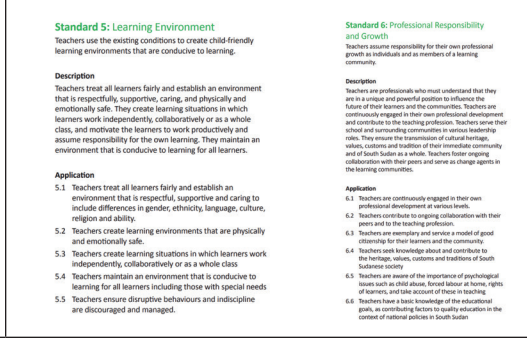
- This module introduces how the Professional Studies course will be delivered and how it will be assessed.
- This module is designed to be interactive and practical, with a focus on sharing ideas and talking about education and the curriculum in general terms.
- During this module, teachers will be expected to make notes in their Workbook, partly in preparation for their assessment and the development of the Professional Portfolio.
- Teachers should be encouraged to ask questions and to share their ideas openly. This means a culture of trust and mutual respect will need to be established. You can do this through active listening, careful negotiations within group work etc. and through the use of praise.
- This module sets the scene for the whole of the Professional Studies programme. It is important to ensure that everybody understands the importance of the commitment to these modules and courses.

Notes for Presenting

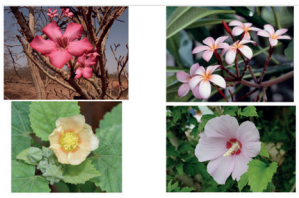
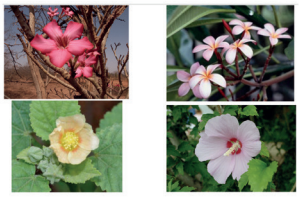
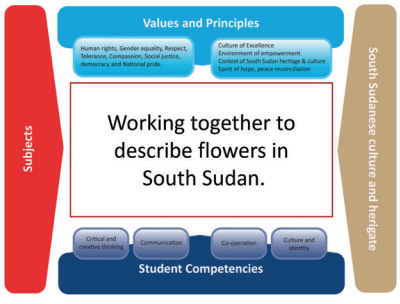
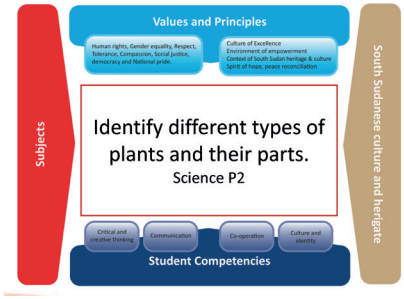
		Session 1
1		Title Slide. Welcome people as they arrive and provide them with the Workbook for Course 1. Suggest they speak to other teachers to find out about where they are from.
2		Explain that this course will help them to improve their teaching and help learners to be the best that they can be! Warmly welcome all teachers, asking them to introduce themselves briefly. Explain that this slide may or may not be familiar to them now… but that it will be very familiar by the end of the course! It summarises the important elements of the curriculum and it shows how they work together.

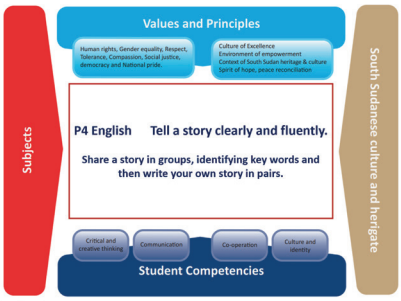
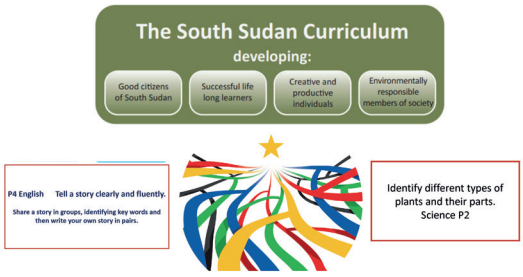
3		Ask teachers if they have seen this before. It outlines another important aspect of this course – the Professional Standards for Teachers. Qualified Teacher Status means that teachers can demonstrate competency in each of these areas.
4	 2 Year Full-Time Course leading to QTS	Explain briefly the way that the course has been created – by adapting the 2-year, full-time pre-service course into a shortened, part-time in-service course.
5	Structure of the overall CPD QTS programme 	This shows the content of the course. We call it the CPD QTS Programme.
6		Ask teachers to explain to you what they think this flow chart means. It is important to emphasise that this course relies on teachers speaking good English and having a good foundational knowledge of different curriculum subjects.
7	Qualified Teacher Status (QTS) **Professional Studies** There are 8 courses, each lasting 5 days. At the end of these courses you will be awarded QTS! There are a few jobs to do along the way. We are confident you will be successful.	This confirms what you have said so far about the course.

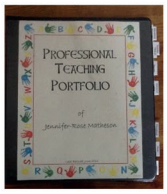
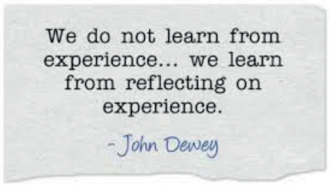
8	**8 Courses** Course 1: How Children Learn Course 2: Curriculum Expectations Course 3: Teaching and Learning Course 4: Language Development Course 5: Learning Areas and Subjects (1) Course 6: Learning Areas and Subjects (2) Course 7: Assessment Course 8: Inclusion and Course Review	Here is a summary of the 8 courses. Ask teachers which courses (areas of learning) they feel the most confident about already.
9	**Course 1: How Children Learn** Day 1 – Course Intro Day 2 – Curriculum Framework and Syllabus Day 3 – Learning Theories Day 4 – Knowledge, Understanding and skills Day 5 – Higher-Order Thinking Skills; School-based Task Preparation	This summarises Course 1, which they will be participating in this week. Read it through and explain that more details will follow!
10	**Workbook for Teachers** These contain all that you need to guide you through this programme. Each course has a new Workbook. You will use your Workbook to write notes and to follow the training. Each Workbook has materials for each module in the course, including some background information. At the end of each Workbook is a description of your assessment task.	Give teachers some time to look through their Workbook for Course 1. They should become familiar with how it is organised – particularly the places where they can write notes. Importantly – this book will not be assessed. It is purely for teachers to notes down ideas and record their thinking.
11	**Getting to know you!** It is important that we work in a supportive environment as we progress through this course and CPD Programme. **Work in pairs to discuss:** What do you have in common? What is different about your experiences? Why did you decide to be a teacher?	**Activity 1** Allow this activity to run for about 10 minutes before you ask for a few pairs to share their discussion. Explain that they will be given this opportunity at the start of the discussion time. During shared discussion, explain that this way of working (sharing ideas in small groups and then as a whole group) is a feature of the way this CPD QTS programme is designed, so teachers should get used to working in this way. Respect, listening skills and encouragement are very important, too. The programme values all teachers equally.
12	Time for a Break 	Time for a break! Make sure you circulate to talk to teachers who seem particularly less confident or who are standing on their own.

13	‘It is the supreme art of the teacher to awaken joy in creative expression and knowledge.’ ***Albert Einstein*** ‘Teaching is the highest form of understanding.’ ***Aristotle*** 	Read these quotes together. Ask teachers to explain what they think they mean. They were written a long time ago by these great thinkers… but do they still apply today? Why? Explore in particular the idea of creative expression and the idea of teaching being a ‘supreme art’. (Albert Einstein (born in 1879) was a German-born theoretical physicist who developed the theory of relativity) (Aristotle was a Greek Philosopher (born 384BC), taught by Plato. He believed that each thing or event has more than one ‘reason’ that helps explain what, why and where it is.)
14	 **Standard 1:** Knowledge of the learners and how they learn Teachers should have a knowledge of the learners they teach: their growth and development, learning processes and use of this knowledge in planning lessons and facilitating their learning processes. **Description** Teachers must demonstrate a good understanding of learning processes, theories and principles and their application in the classroom. This enables them to design appropriate teaching and learning activities that are learner-centred. Teachers must connect their teaching to the learners’ prior knowledge, needs and interests. **Application** 1.1 Teachers must be knowledgeable of the development needs of the learner including physical, psychological, socio-economic and intellectual development 1.2 Teachers use knowledge of learning processes, theories and principles to plan and deliver lessons 1.3 Teachers demonstrate knowledge that learners have different learning capacities and use different learning methods to meet the diverse needs of learners in the classroom 1.4 Teachers demonstrate respect for learners’ diverse cultures, religion, languages and experiences 1.5 Teachers know that all learners can achieve their full potential and guide plans of instruction towards this goal 1.6 Teachers treat learners with dignity; build good relationships and support their academic achievement. **Standards 2:** Knowledge of the subject being taught Teachers have mastery of the subject for which they have teaching responsibility. **Description** Effective teachers have a deep understanding of the subject matter and have confidence in communicating it to the learners. Teachers make content of the subject matter meaningful, relevant and applicable to real life experiences of learners. **Application** 2.1 Teachers know the content they teach and use their knowledge of subject specific concepts, assumptions and skills to plan teaching and learning 2.2 Teachers understand and use a variety of teaching strategies to effectively teach the central concepts and skills of the discipline 2.3 Teachers have a good understanding of the national curriculum goals, priorities and subject standards. 2.4 Teachers demonstrate good knowledge about relationships among subjects 2.5 Teacher connect subject content to relevant life experiences (and career opportunities).	**Activity 2** Give teachers time to read through the Professional Standards in their booklets. Ask them to identity 2 applications that were present in their teaching last week and 2 applications that they hope to improve during this course. They should work in pairs to discuss this.
15	 **Standard 3:** Teaching Methods Teachers plan and deliver effective teaching that engages and advances the learning of the individual learner and the community. They apply appropriate teaching methods to different groups of learners. **Description** Teacher have high expectations for all learners, therefore, use a variety of teaching strategies that actively engage them and promote a love of learning. Teachers reflect on their teaching and learners’ outcomes to make appropriate decisions which result in increased academic achievement. Techers correctly design a logical scope and sequence for learning. **Application** 3.1 Teachers develop teaching objectives and activities that are in line with national education principles. 3.2 Teachers create and select activities designed to develop learners as independent learners and problem solvers and adapt their teaching to respond to learners’ strengths and needs. 3.3 Teachers use relevant and appropriate teaching and learning materials from locally available resources effectively and make use of available technologies to enhance learning 3.4 Teachers use participatory teaching and learning activities relevant and meaningful to learners and relate them to everyday lives by using real life stories, local examples and materials **Standard 4:** Assessment and Evaluation Methods Teachers understand and use varied assessment tools to evaluate learners and use results to improve instruction. **Description** Teacher understand the meaning and purpose of assessment and use multiple assessment methods to learn about their learners, to evaluate learning and to plan and adjust instruction. They use formal and informal assessment to gauge learning and determined the academic progress of learners. They keep accurate records of learners’ assessment results. Teachers report assessment results to parents, head teachers and other educational administrators. **Application** 4.1 Teachers are able to design valid and reliable assessment instruments 4.2 Teachers use different assessment methods, and use the data generated from the assessment to improve teaching and learning. 4.3 Teachers apply (formal and) informal assessment in their lessons to gauge learners’ progress on a regular basis. 4.4 Teachers keep accurate records and analyse the data to make decisions on learners’ progress, to plans, to differentiate and to modify instruction accordingly. 4.5 teachers collaborate and communicate assessment results to learners, parents, their peers and school officials, school supervisors and inspectors.	Professional Standards
16	 **Standard 5:** Learning Environment Teachers use the existing conditions to create child-friendly learning environments that are conducive to learning. **Description** Teachers treat all learners fairly and establish an environment that is respectful, supportive, caring, and physically and emotionally safe. They create learning situations in which learners work independently, collaboratively or as a whole class, and motivate the learners to work productivtely and assume responsibility for the own learning. They maintain an environment that is conducive to learning for all learners. **Application** 5.1 Teachers treat all learners fairly and establish an environment that is respectful, supportive and caring to include differences in gender, ethnicity, language, culture, religion and ability. 5.2 Teachers create learning environments that are physically and emotionally safe. 5.3 Teachers create learning situations in which learners work independently, collaboratively or as a whole class 5.4 Teachers maintain an environment that is conducive to learning for all learners including those with special needs 5.5 Teachers ensure disruptive behaviours and indiscipline are discouraged and managed. **Standard 6:** Professional Responsibility and Growth Teachers assume responsibility for their own professional growth as individuals and as members of a learning community. **Description** Teachers are professionals who must understand that they are in a unique and powerful position to influence the future of their learners and the communities. Teachers are continuously engaged in their own professional development and contribute to the teaching profession. Teachers serve their school and surrounding communities in various leadership roles. They ensure the transmission of cultural heritage, values, customs and tradition of their immediate community and of South Sudan as a whole. Teachers foster ongoing collaboration with their peers and serve as change agents in the learning communities. **Application** 6.1 Teachers are continuously engaged in their own professional development at various levels. 6.2 Teachers contribute to ongoing collaboration with their peers and to the teaching profession. 6.3 Teachers are exemplary and service a model of good citizenship for their learners and the community. 6.4 Teachers seek knowledge about and contribute to the heritage, values, customs and traditions of South Sudanese society 6.5 Teachers are aware of the importance of psychological issues such as child abuse, forced labour at home, rights of learners, and take account of these in teaching 6.6 Teachers have a basic knowledge of the educational goals, as contributing factors to quality education in the context of national policies in South Sudan	Professional Standards

17	**Standard 7:** Teachers' Code of Conduct and Professional Ethics Teachers are aware of the South Sudan Professional Code of Conduct and exhibit high standards of personal integrity and professional ethics. **Description** Teachers shall all carry out responsibilities with a high degree of professionalism that promotes a high standard of learning; thus contributing towards achievement of the strategic goal of building an educated an informed nation. They must observe the standards of behaviour and conduct as established in the Ministry's Teachers' Code of Conduct. As role models in society, teachers must practice the highest standards of integrity, fairness and honesty. **Application** 7.1 Teachers apply the rules and policies of the Ministry of General Education and Instruction. 7.2 Teachers have regard for the need to safeguard for the policies and practices of the school in which they teach 7.3 Teachers have proper and professional regard for policies and practices of the school in which they teach 7.4 Teachers promote and maintain effective relationships with parents, members of the school community, as well as persons and bodies outside the school that may have a stake or interest in the school 7.5 Teachers practice the highest standards of integrity, honesty, fairness and maintain high standards in their own attendance and punctuality 7.6 Teachers plan and execute duties with diligence, commitment, dedication, fairness and at all times observe proper boundaries appropriate to a teacher's professional position.	Professional Standards
18	What would we like these children to say about their teacher? 	**Activity 3** Ask teachers what they hope children will say about them as teachers. Discuss as a whole class first, pulling out ideas from the Professional Standards. Then ask teachers to work in pairs to write some quotes in their workbooks about what they hope learners might say. Alternatively – they could write some comments about great teachers that they know.
19	The education system in the Republic of South Sudan shall be directed towards meeting the following goals: a) Eradicate illiteracy, improve employability of young people and adults and promote lifelong learning for all citizens; b) Provide equitable access to learning opportunities for all citizens to redress the past inequalities in education provision; c) Achieve equity and promote gender equality and the advancement of the status of women; d) Contribute to the personal development of each learner and to the moral, social, cultural, political and economic development of the nation; e) Promote national unity and cohesion; f) Enhance the quality of education and encourage a culture of innovation and continuous school improvement and effectiveness; and g) Develop and promote a general scientific approach in education. General Education Act, 2012	This is taken from the General Education Act of 2012. Discuss together how the Professional Standards reflect what is described here. What links can be seen?
20		These ribbons feature on all South Sudan curriculum documents. They represent the principle that all learning comes together to create 'success'. (the star!) Talk with teachers about the different elements discussed so far today that helps them work towards being a successful teach.
21	Time for a Break 	Time for a break.

22		These are all flower native to South Sudan. Can teachers name them? Or describe where they are found? Activity 4 is aimed at illustrating to teachers a particular way of working that reflects the overall aims of the National Curriculum.
23	 What is the same and what is different about these flowers? Which flower is the most beautiful? What scientific facts describe these flowers? What numbers could describe these flowers?	**Activity 4** Read through these questions and allow teachers time to discuss them in pairs. They key here is to begin to develop vocabulary through conversation in preparation for a writing task. Of course it is unlikely that you will agree on what the most beautiful flower is…but the conversations you will have around this question are what is important.
24	 Write a short passage about flowers in South Sudan to encourage learners to look out for them on their way to school.	This is a writing task that teachers should do independently. Ask a few teachers to read what they have written. Your feedback should be very positive – commenting particularly on key vocabulary.
25		This slide illustrates how Activity 4 reflects the curriculum framework. Discuss this with teachers.
26		This explains now how the learning outcome from the syllabus has been addressed through the flower activity. Discuss the difference between the learning outcome and the activity description in the previous slide.

27	**Stories and Songs** **P4 English Tell a story clearly and fluently.** What are some of your favourite stories? Maybe something from your childhood or a story that is popular in your community? Share stories together in groups of 4 or 5. Choose one story and prepare to share it with the rest of the group. Select 6 key words that are essential to the story.	**Activity 5** Read the questions and directions together and ask teachers to note down their ideas – in particular the 6 words for this task.
28	Choose one set of 6 words from a story you enjoyed and create a whole new story in pairs. 	Ask 5 or 6 groups to share their stories (not for too long thought!) and record if you can at the front of the room, the lists of key vocabulary. Now ask teachers to work in pairs to complete this activity, writing a new story but using key words from another story. Hopefully you will uncover some new ideas for stories in South Sudan! Ask a few pairs of teachers to share their stories – different teachers from earlier.
29		Here we have the description of the story activity and the related learning outcome in the curriculum frame once again. Talk with teachers about how this is similar and different to the flower activity.
30		This explains once again that learning works towards the curriculum aims overall and towards 'success'.
31	Time for a Break 	Time for a break.

32		Here we have a reminder of the different strands of the Professional Standards for teachers. What aspects have they been developing particularly through the previous flower and story activity?
33	Your Portfolio and Assessment  	Here you will explain the important aspect of how teachers will be assessed during this CPD programme as they work towards QTS. Tutors and school leaders will conduct some observations of their teaching, but also they will create a booklet – or a 'Portfolio' which illustrates what they have learnt about during this CPD programme and in particularly, how it has been applied in their classrooms with learners. This quote from John Dewey is important as it promotes the idea that you have to act on what you have learnt. (Born in 1859 - John Dewey was an American philosopher, psychologist, and educational reformer whose ideas have been influential in education and social reform. He was the founder of the philosophical movement known as pragmatism, a pioneer in functional psychology, and a leader of the progressive movement in education.)
34	**Professional Portfolio** Examples of: Assessment tasks Learners' Work Reflections/Diary Assessment Records Annotated plans Photos of learners in action Questions or comments from parents, other teachers, inspectors    	This is a description of what might be in a portfolio. It might be that including photo and copies of children's work is not possible, but at the very least, teachers can use the portfolio as a dairy of learning. The notes on the Workbook for Teachers are a useful practice for creating portfolios, but the Workbook will not be assessed. A digital Portfolio would also be acceptable.
35	School-Based Assessment Tasks The focus of the QTS Programme (like the school curriculum itself) is on enabling participants to **apply** their learning in the school situation. Assessment will therefore focus on the ability to apply, rather than on being able to remember, aspects of the course. Participants will be encouraged to work with their headteacher or other colleagues in preparing the portfolio. It should not be seen as traditional examination but as an opportunity for the participants to show how well they can apply their learning in the school situation. 	Now we move onto looking at the other aspects of assessment and the assessment classifications. Read this slide together.

<table>
<tr>
<td>36</td>
<td>
<table>
<tr><th>Course</th><th>Assessment Activity</th></tr>
<tr><td>1. How children learn</td><td>Simple written task.
Select at least four syllabus units and identify where there are opportunities for critical and creative thinking and relate these to the learning theories that have been studied.</td></tr>
<tr><td>2. Curriculum expectations</td><td>Plan and implement learning activities to promote student competencies in one or more subjects or Areas of Learning. The implementation could be in one lesson or in a series of lessons across a syllabus unit. They should plan the activity, specifying the learning outcomes sought, relating it to the learning theory, and taking account of what the challenges are in relation to implementation and what solutions can be developed.</td></tr>
<tr><td>3. Teaching and learning</td><td>Plan, implement and evaluate some learning activities that promote independent learning. The implementation could be in one lesson or in a series of lessons across a syllabus unit. They should plan the activity, specifying the learning outcomes sought, relating it to the learning theory, and taking account of what the challenges are in relation to implementation and what solutions they have developed.</td></tr>
<tr><td>4. Language development</td><td>Either:
Plan, implement and evaluate a series of pre-reading and pre-writing activities
Or
Plan, implement and evaluate a series of activities that will promote early reading and writing skills</td></tr>
</table>
</td>
<td>The next two slides list descriptions of the assessment tasks at the end of each course.
Activity 6 Give teachers some time to read through these for themselves in their background information. They should discuss what might be included in their portfolio for each task.</td>
</tr>
<tr>
<td>37</td>
<td>
<table>
<tr><td>5. Learning Areas and Subjects (1)</td><td>Plan, implement and evaluate a series of learning activities that take learning beyond the textbooks for one subject from Course 5.</td></tr>
<tr><td>6. Learning Areas and Subjects (2)</td><td>Plan, implement and evaluate a series of learning activities that take learning beyond the textbooks for one subject from Course 6.</td></tr>
<tr><td>7. Assessment</td><td>Plan and implement assessment activities and give feedback to learners according to the South Sudan Guidance. Present a portfolio that explains the process, illustrates it with learners' work where appropriate, relates it to the theory and identifies the challenges faced.</td></tr>
<tr><td>8. Inclusion</td><td>As this is the final course, there is no between-course task. The assessment will be based on a portfolio that:
• explains the steps a teacher and the school as a whole should take to promote gender equity.
• sets out a plan for an ideal classroom that has a positive and helpful enabling environment and explains how this relates to the guidance and theory.
• considers the challenges and solutions and relates this to the guidance and theory.</td></tr>
</table>
</td>
<td>Same as above.</td>
</tr>
<tr>
<td>38</td>
<td>
Three assessment classifications:

• Distinction – The portfolio covers each of the requirements very effectively and shows very good ability to apply the course in the school.
• Credit – The portfolio covers each of the requirements sufficiently and shows ability to apply the course in the school.
• Re-submit – The portfolio des not cover the requirements and gives insufficient evidence of ability to apply the course in the school.
</td>
<td>Each assessment task will have specific criteria which will be shared with teachers at the start and conclusion of each course. Talk about the differences between these classifications.</td>
</tr>
<tr>
<td>39</td>
<td>  </td>
<td>Ask teachers to tell you what they think is happening in this slide.</td>
</tr>
<tr>
<td>40</td>
<td> 
</td>
<td>Ask teachers to tell you what is happening in this slide. Now compare the slides. One thing to draw out is the fact that the teacher could be showing the learner how to do something in the first picture…we hope the teacher is not doing the task for the child instead though! In the second picture the learner has become the teacher! This is a useful reference point because we want learners to be able to explain to other what they can do!</td>
</tr>
</table>

41	Tomorrow is Module 2 The Curriculum Framework and Syllabuses  41	A summary about tomorrow.
42	*Thank you.* This is the end of the training today.  42	Closing slide.

Module 2:
The Curriculum Framework & Syllabuses

This module introduces the curriculum framework and how it provides an integrated curriculum.

Course 1: How Children Learn

Module 2: The Curriculum Framework & Syllabuses

This module introduces the curriculum framework and how it provides an integrated curriculum.

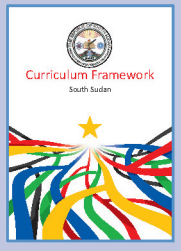
Learning Outcomes

By the end of the module, teachers will be able to:

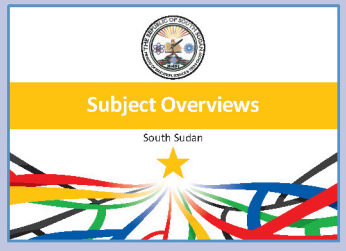
- understand the implications of the four aims for teaching and learning
- understand how the Curriculum Framework puts the subjects into a broader context
- understand how the Subject Overviews and Syllabus units set out the expected learning
- understand how ECD Curriculum and Guidance sets out learning for PP1 & PP2
- understand the role played by the Cross-cutting Issues

Key Points:

- The curriculum is underpinned by four aims
- The attainment of these aims requires particular teaching and learning approaches (which may be different from traditional ones)
- The curriculum is more than subjects
- The other elements are:
  - Student competencies
  - South Sudan's heritage and culture
  - Cross-Cutting Issues
- These other elements have been built into the subject syllabuses
- The subjects are divided into strands
- These strands form the structure for setting out the expected learning outcomes across the years (P1-S4)
- The ECD curriculum is set out differently, with "Stepping Stones" setting out progression
- The subject syllabus units are based on the expected learning outcomes of the Subject Overviews
- The key documents for this module are:

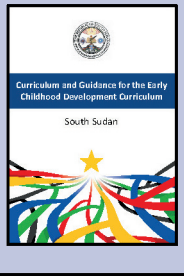


The Curriculum Framework



Subject Overviews

Sets of Syllabus Units

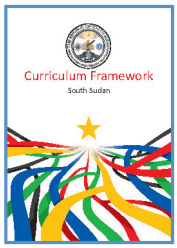
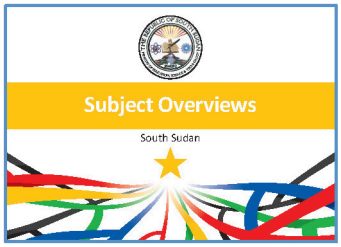
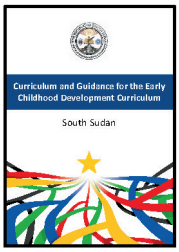


ECD Curriculum and Guidance

Outline

Session	Content
1	Slides – The Framework and the 4 Aims • *Activity 1 - Discuss your own aims* • *Activity 2 - Sort the titles and descriptions* • *Activity 3 - If we want … then …* • *Activity 4 - If we want … then … (different aim)* Slides – South Sudanese heritage and culture • *Activity 5 – What are the key features and importance?*
2	Slides – The competences • *Activity 6 – sort competencies* Slides – The subjects • *Activity 7 – Similarities & differences between ECD and Primary* • *Activity 8– Similarities & differences between Primary and Secondary* Slides –ECD • *Activity 9 – Discuss language expectation in PP1 &2* • *Activity 10 – Discuss Maths expectation in PP1 & 2*
3	Slides – Subject scope and sequence • *Activity 11 – Identify strands in subjects* • *Activity 12 - Expectations in National Language from P1 to P8* • *Activity 13 - Expectations in Maths from P1 to P8* Slides – ECD Stepping Stones • *Activity 14 – Stepping stones*
4	Slides – Syllabus Units • *Activity 15 – Locate syllabus unit in the Subject Overview* • *Activity 16 – How the Learning Outcomes fit with the "Learn About" section.* Slides - Cross-Cutting Issues • *Activity 17 – How **Peace Education** develops across the years* • *Activity 18 – How **Life Skills** develops across the years* • *Activity 19 - How **Environment and Sustainability** develops across the years*

Background information

	**The Curriculum Framework** This is the key curriculum document that applies from ECD to S4. It puts the subjects into a broader context, and sets out all the key requirements: • Aims, values, principles • Subjects at each stage • Student competencies • South Sudan heritage and culture • Cross-cutting issues • Integrated subjects • Approaches to teaching, learning and assessment • Approaches to gender equity and special educational needs
	**The Subject Overviews** These set out the: • Expected learning outcomes for all subjects from P1 to S4 • Subject strands • Key approaches to each subject • Details of cross-cutting issues and integrated subjects
	**The Subject Syllabuses** These give the detail to the learning outcomes set out in the subject overviews. Each unit is based on one or more learning outcome, and sets out: • Key Inquiry Questions – for learners to investigate (not for assessment!) • Learn About – suggesting teaching and learning approaches • Learning Outcomes • Contribution to the competencies • Links to other subjects
	**ECD Curriculum and Guidance** A comprehensive document setting out the expected learning outcomes for PP1 and PP2. It also gives much guidance about teaching and learning approaches and sets out ways of designing practical first-hand learning activities that will engage the interest of young learners. It is important that primary teachers understand the ECD curriculum, because they will then understand the learning background of their own learners, even if they do not teach pre-primary children.

Tutor Course Notes

Key Messages and Approaches

This module is an introduction to the South Sudan curriculum. There will be further modules that will look at it in more detail, so the presentation can be at a general level. It is important that participants have this general overview before the next modules on Learning Theories, because this will prepare them to link the theories to the curriculum. Then, when they have studied the theory, they will return in later modules to study the curriculum in more detail because they will then understand its theoretical underpinning.

The key text is on the slides, but also in the various curriculum documents:

- The Curriculum Framework
- The Subject Overviews
- The ECD Curriculum and Guidance
- A selection of primary syllabus units

Participants can read from either the slides or the documents themselves. It is usually best to read the slides aloud, stopping to check that participants understand, or get some participants to read a section in turn.

When looking at curriculum documents and syllabus units, it is always better for participants to share these rather than have one each, because this encourages discussion.

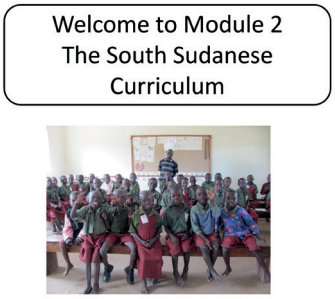
Nearly all the activities are discussion-based. Participants should be put into pairs, and the pairs put together into groups of four or six. If there is an uneven number of participants, then some will need to work in a three.

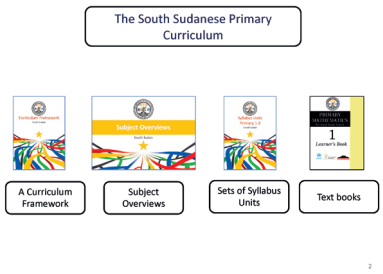
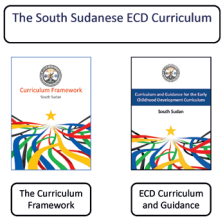
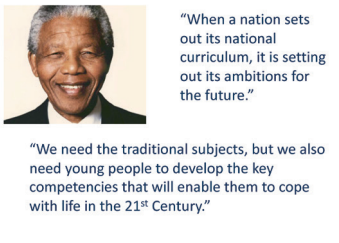
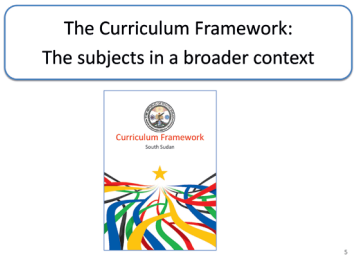
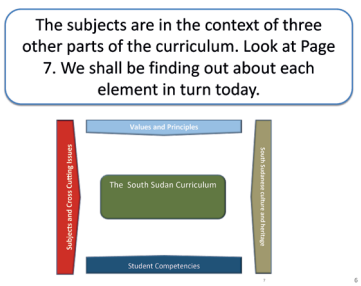
Participants should be invited to discuss each question in pairs, then prepare to report back to the larger group or the class.

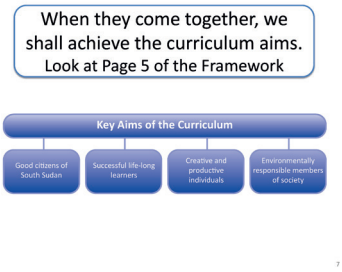
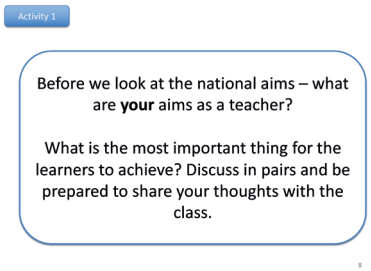
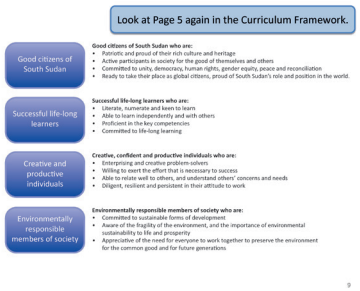
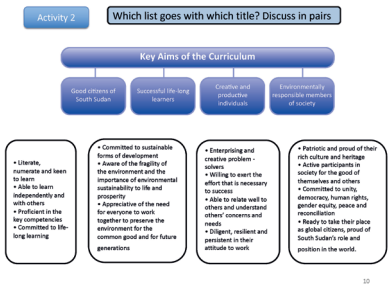
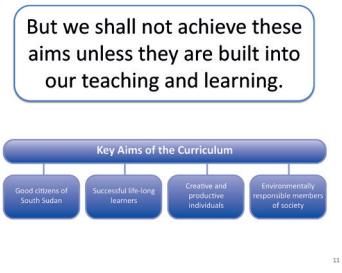
Depending on the size of the class, it may not be possible for every group to report back on every activity. So it will be necessary to ensure that every group gets a chance during the day, and also that it is not always the same person who speaks on behalf of the group.

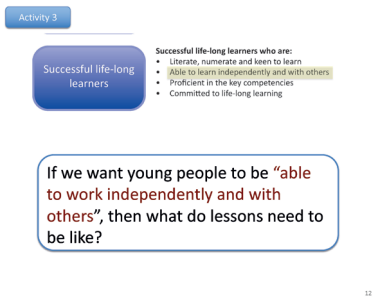
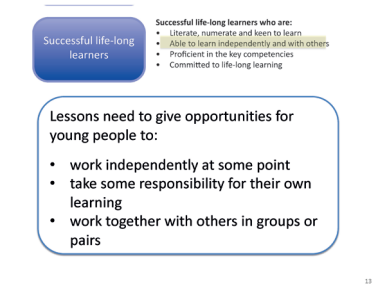
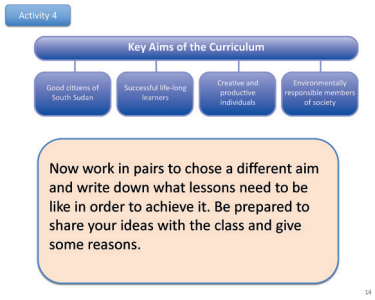
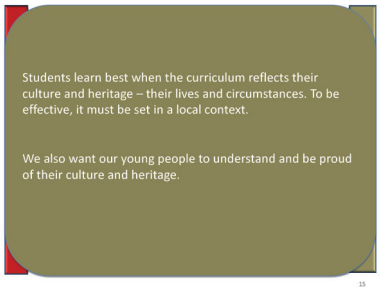
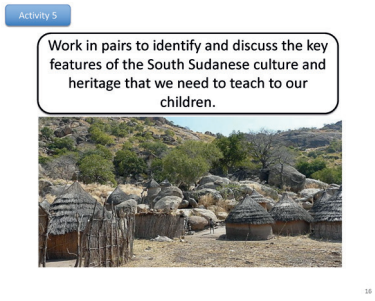
The slide showing the coffee cup is the signal that it is time for a break!

Presenting the Slides

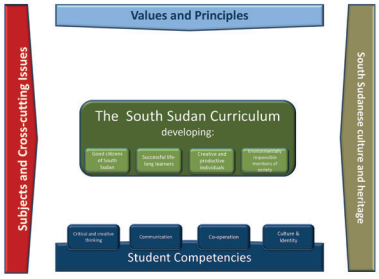
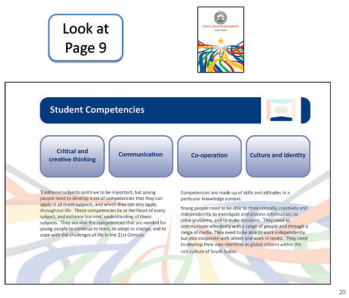
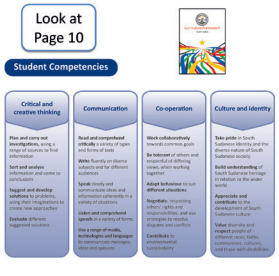
		Session 1
1		Introductory slide – show during arrival.

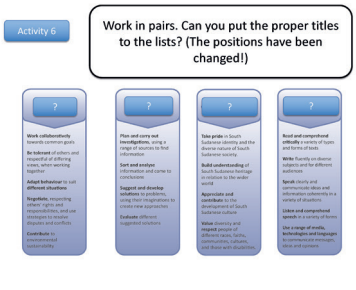
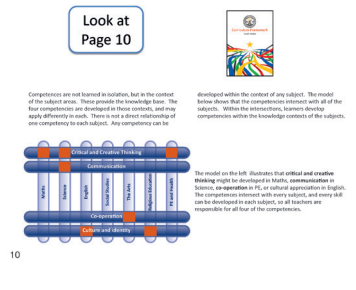
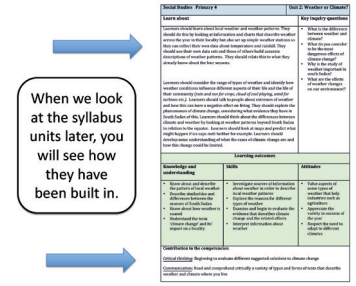
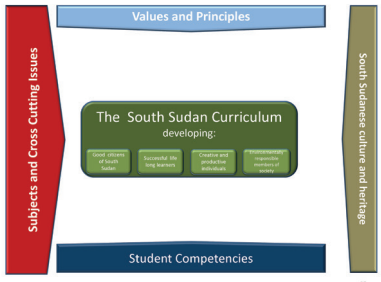
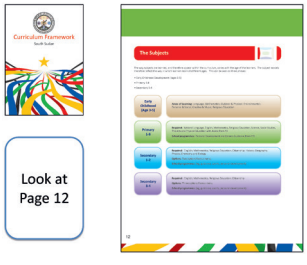
2		These are the key documents for the primary curriculum (these should be available in hard copy – so you can hold them up.)
3		These are the key documents for the ECD curriculum (Hard copy as above).
4		All participants will guess who this is! But they may not know what he said about the curriculum. The "key competencies" are a key feature of the SS Curriculum.
5		The subjects are there – but part of a broader picture. We shall find out what the other elements are.
6		Look at Page 7. There are four elements forming the framework (like a picture frame). Ask the participants to read them out.

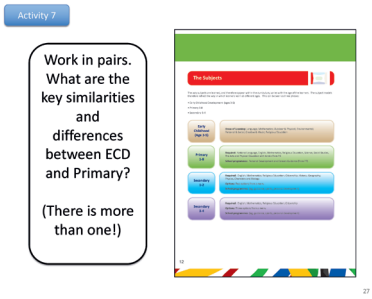
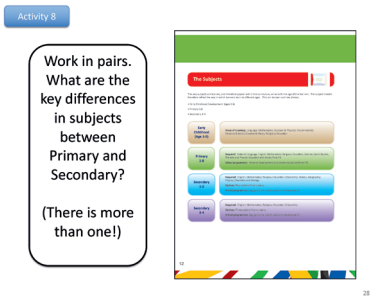
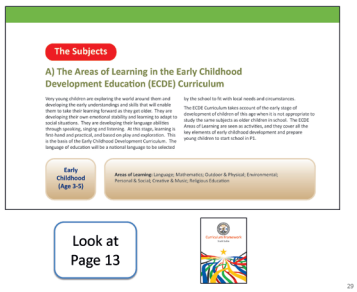
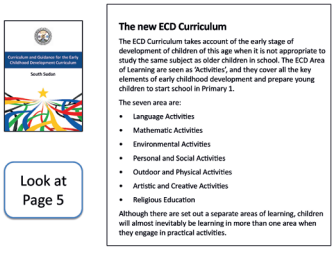
7		All four elements are needed for the full curriculum – and to achieve its aims. Now look at Page 5. Here are the four aims. *(Don't read them out yet!).*
8		**Activity 1** Group or pair discussion. First, get the participants to work in pairs to discuss their own aims. The point is to get participants thinking about what they see as the purpose of education and talking to share their ideas.
9		Look at Page 5 again. Ask the participants to work in pairs to read through the bullet points and discuss their meaning. There is no need to go into detail at this point, because we shall look at detail later.
10		**Activity 2** Pairs sorting task. The bullet points have been mixed up. Ask the participants to sort them out with the correct aims. *The point is to help the participants look closely at the detail of the aims.*
11		This slide introduces the next activity. They have to **do** something in order to achieve the aims.

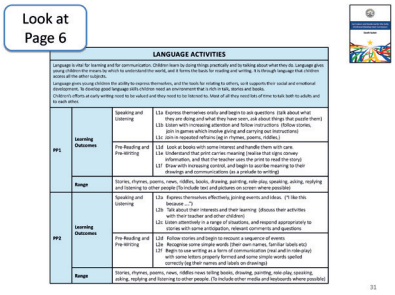
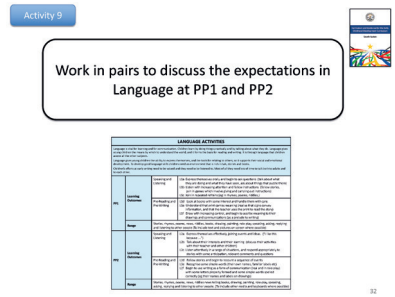
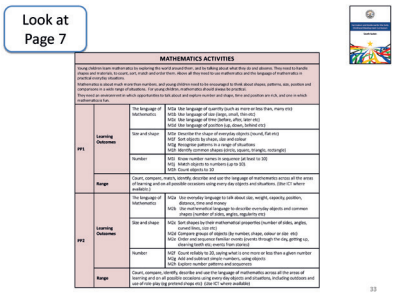
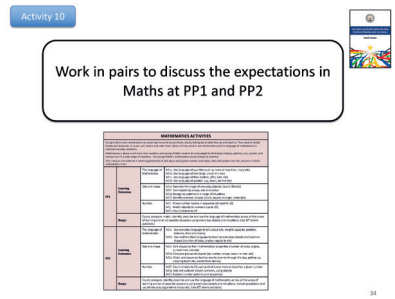
12		**Activity 3** Group or pair discussion. Ask participants to think about what lessons would need to be like if we want learners to be "able to work independently and with others". Ask for a few suggestions first, and discuss these, then ask them to work in pairs. Ask pairs to share their suggestions. *(The next slide will give some suggestions).*
13		Here are some suggestions. Did participants suggest any of these? *There is no "right and wrong" – but there is some logic to the suggestions on the slide.* Discussing the slide will help participants with the next activity.
14		**Activity 4** Group or pair discussion. Ask participants to work in pairs to choose a different aim and write down what lessons need to be like in order to achieve it. When they have finished, ask them to share their ideas with the class and give some reasons. Ask them how much of this they do now, and what would be new.
15		This slide introduces the next topic – South Sudan's heritage and culture. Ask someone to read each of the two reasons why this is important to the curriculum.
16		**Activity 5** Group or pair discussion. Ask participants to work in pairs to discuss what the key features are of the South Sudanese culture and heritage that we need to teach to our children. When they have finished, ask them to share their ideas with the class and give some reasons. Ask how this can be included.

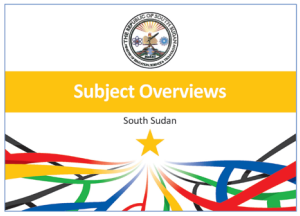
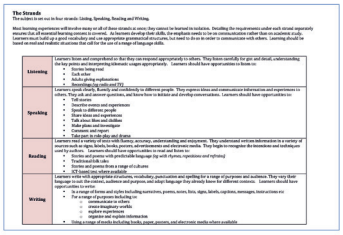
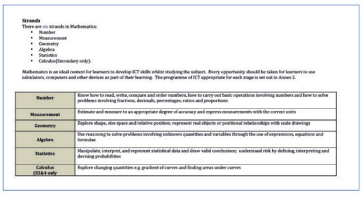
17		Time for a break.

		Session 2
18		This is an introductory slide – participants should recognise it! Emphasise the second quotation. This introduces the session, which is about the competencies. *(Mandela called these "21st Century Competencies" – the South Sudan Curriculum calls them "Student Competencies")*
19		This is the same as the model on Slide 6 – but with one change. Ask participants what it is. (The answer is that the aims have been added!). The slide is animated and goes on to show the four student competencies. Read them out.
20		Ask participants to look at Page 9 in the Curriculum Framework. Ask some people to read out the paragraphs. Point out that the first para makes the link to Mandela's "21st Century Competencies". The final para gives the purpose.
21		Ask participants to look at Page 10 in the Curriculum Framework, and work in pairs to read them through. These give the detail of the competencies.

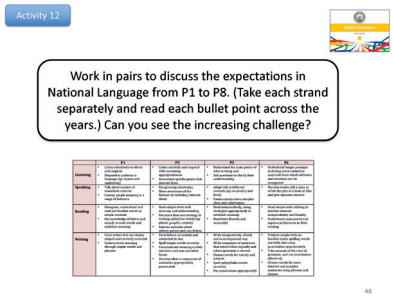
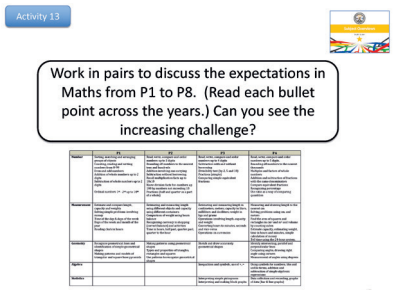
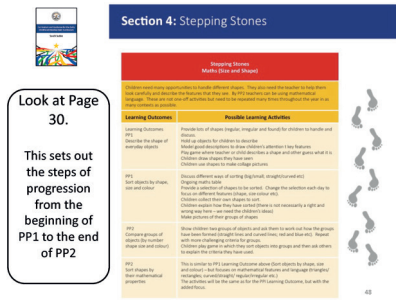
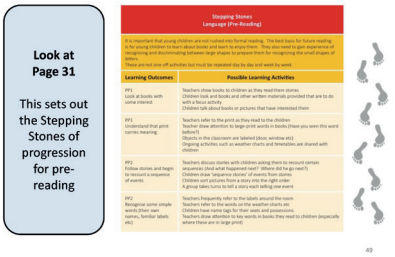
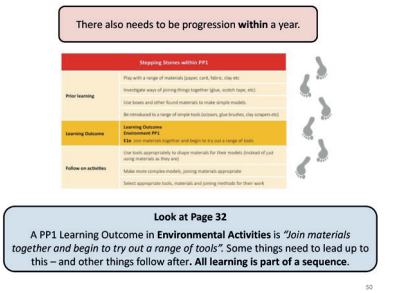
22		**Activity 6** Group or pair discussion. Ask participants to work in pairs to put the proper titles to the lists. Point out that the order has been changed!
23		Ask participants to look at Page 10 in the Curriculum Framework again, and work in pairs to look at the model that shows how the competencies are integrated into the subjects.
24		Tell participants that when we look at the syllabus units later, they will see how they have been built in. They are listed in the "Links to the competencies", and are also evident in the "Learn About" section. ***Do not go into these in detail at this point – this comes later – this slide is just to introduce the idea.***
25		Back to the Framework model. This time one is missing. Ask if anyone can tell which is missing. Yes, this time we shall be looking at the subjects and cross-cutting issues. *(The slide is animated, and these animations will appear on the click)*
26		Ask participants to look at Page 12 in the Curriculum Framework. This page sets out the subjects from ECD to S4. Ask participants to read them through then talk together in pairs.

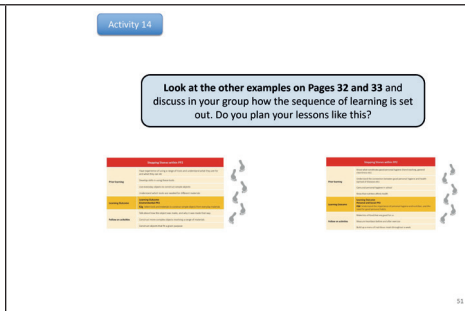
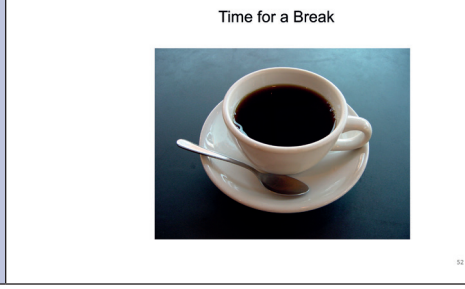
27		**Activity 7** Group or pair discussion. Ask participants to work in pairs to discuss the similarities and differences between EDC and Primary. Some of the differences are: • ECD has areas of learning – Primary has subjects • There are 7 ECD Areas and 8 Primary subjects (plus Arabic from P5) • Primary has "school programmes" • Maths and RE are in both
28		**Activity 8** Group or pair discussion. Ask participants to work in pairs to discuss the similarities and differences between Primary and Secondary. Some of the differences are: • Secondary has "options" (often called "elective subjects") • National Language becomes optional • Primary science is split into Physics, Chemistry and Biology at Secondary level • Primary Social Studies is split into Geography, History and Citizenship at Secondary level • There are only four compulsory subjects in S3-4 • English, Maths and RE are compulsory throughout primary and secondary
29		Ask participants to look at Page 13 in the Curriculum Framework. This explains the ECD Areas of Learning and why they are called "activities" rather than subjects.
30		Ask participants to look at Page 5 in the **ECD Curriculum and Guidance**. This page sets out the seven Areas of Learning.

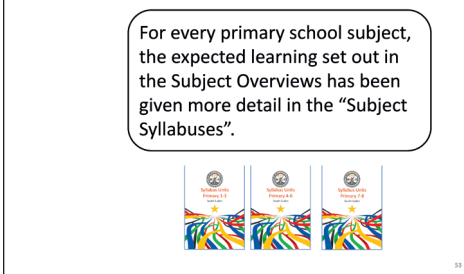
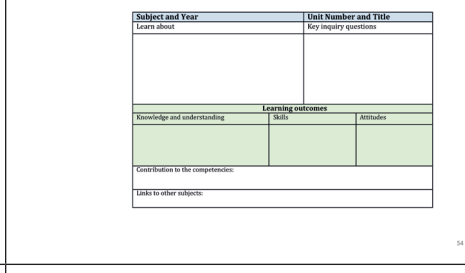
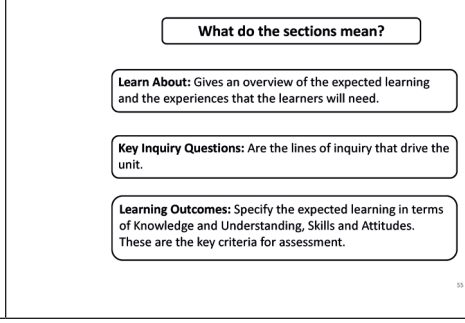
31		Ask participants to look at Page 6 in the **ECD Curriculum and Guidance**. This shows the details expectation for Language Activities in PP1 and PP2.
32		**Activity 9** Group or pair discussion. Ask participants to work in pairs to discuss the expectations in Language at PP1 and PP2. ***Suggest that they look particularly at what it says for reading and writing***. Ask pairs to report back what they have noticed and discuss as a group.
33		Ask participants to look at Page 7 in the **ECD Curriculum and Guidance**. This shows the details expectation for Mathematics Activities in PP1 and PP2.
34		**Activity 10** Group or pair discussion. Ask participants to work in pairs to discuss the expectations in Language at PP1 and PP2. ***Suggest that they look particularly at what it says for adding, subtraction and other calculations***. Ask pairs to report back what they have noticed and discuss as a group.
35		Time for a break.

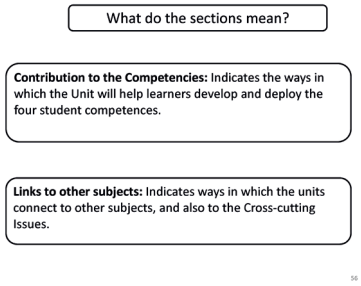
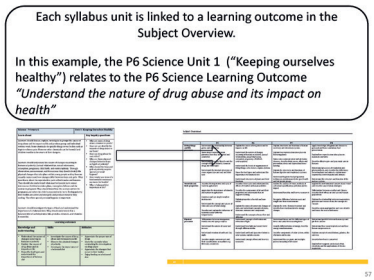
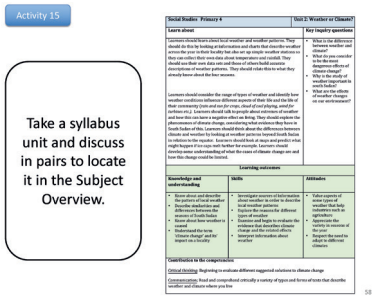
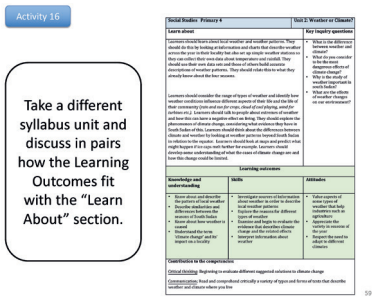
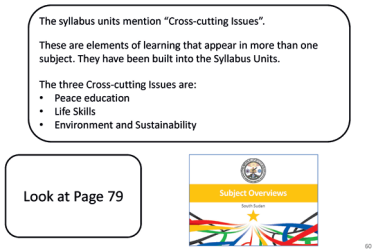
		Session 3
36		This is an introductory slide. In this session, we shall look at the **Subject Overviews**.
37	These set out the learning expectations for every subject from P1 to S4. They therefore form an overall 'scope and sequence' outline.	These set out the learning expectations for every subject from P1 to S4. They therefore form an overall 'scope and sequence' outline of all the learning expectations (or "learning outcomes". Technically, they are "expectations " when the curriculum is designed and "outcomes" when the learners complete the syllabus. But the documents refer to "outcomes".) They also show how subjects are structured into "strands".
38	Look at Page 19 For example: National Languages 	Ask participants to look at Page 19 in the **Subject Overviews**. Do not read these in detail – but draw attention to the four **strands**: Listening, Speaking, Reading and Writing.
39	Look at Page 29 For example: Mathematics 	Ask participants to look at Page 29 in the **Subject Overviews**. Again, do not read these in detail – but draw attention to the six **strands**: Number, Measurement, Geometry, Algebra, Statistics and Calculus.
40	Activity 11  Work in pairs to identify and discuss the strands in the other primary subjects. Make a list	**For the rest of this day, activities are discussion focused and don't require too much written work in Workbooks. However, teachers should be encouraged to note their answers down briefly if it helps them to track what they are learning.** **Activity 11** Identifying Strands. Ask participants to work in pairs to identify the strands in the other primary subjects. When they have finished, compare the lists as a class activity. Ask which subject has the most strands, which the fewest etc.

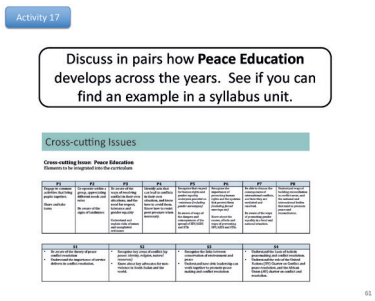
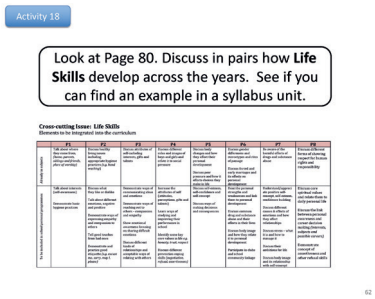
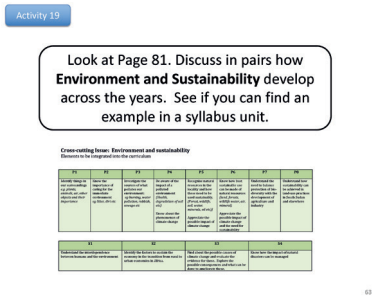
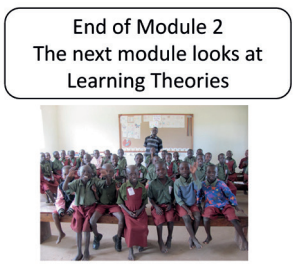
41	The strands form the structure for the overviews. 41	The strands form the structure for the overviews. (The meaning of this is clear in the next slide)
42	Look at Page 20 National Languages 42	Ask participants to look at Page 20 in the Subject Overviews. This shows how the four strands of National Languages form the structure for setting out the learning expectations year by year. This slide shows P1 to P4.
43	Look at Page 21 National Languages 43	Now look at Page 21. This shows P5 to P8.
44	Look at Page 30 Maths 44	Ask participants to look at Page 30 in the Subject Overviews. This shows how the five strands of Maths form the structure for setting out the learning expectations year by year. This slide shows P1 to P4. *Note that there are no expectations for the "Statistics" strand for P1 & P2.*
45	Look at Page 31 Maths 45	Now look at Page 31. This shows P5 to P8.

46		**Activity 12** Progression through the National Language Strands. Ask participants to work in pairs to discuss the expectations in National Language from P1 to P8. Ask them to read each bullet point across the years. Can they see the increasing challenge?
47		**Activity 13** Progression through the Maths Strands. As above - ask participants to work in pairs to discuss the expectations in National Language from P1 to P8. Ask them to read each bullet point across the years. Can they see the increasing challenge?
48		**We now look at the ECD Curriculum**. Ask participants to look at Page 30 in the **ECD Curriculum and Guidance**. This uses the format of "Stepping Stones" to set out the progression of expected learning outcomes from PP1 to PP2. Ask pairs to read this through.
49		Now ask participants to look at Page 31 in the **ECD Curriculum and Guidance**. These pre-reading expected learning outcomes are set out as stepping stones from PP1 to PP2. Ask pairs to read this through.
50		Now ask participants to look at Page 31 in the **ECD Curriculum and Guidance**. Point out there is progression **within** a year as well as progression from PP1 to PP2. In this example, the PP1 Learning Outcome in **Environmental Activities** is *"Join materials together and begin to try out a range of tools"*. Some things need to lead up to this – and other things follow after. **All learning is part of a sequence**.

51		**Activity 14** Progression in the ECD Curriculum. Ask participants to work in pairs to look at the other examples on Page 32 & 33 and discuss how these sequences of learning are set out. Ask if participants plan their lessons like this!
52		Time for a break.

		Session 4
53		The final session is about the syllabus units. Copies should be available. Remind participants that this is just an introduction – we shall be looking at these in more detail in subsequent modules.
54		This slide shows the format used in the primary units. (ECD is different – as we have seen). Ask participants to read the headings and tell them these will be explained.
55		This gives the explanations: • **Learn About:** Gives an overview of the expected learning and the experiences that the learners will need. • **Key Inquiry Questions:** Are the lines of inquiry that drive the unit. • **Learning Outcomes:** Specify the expected learning in terms of Knowledge and Understanding, Skills and Attitudes. These are the key criteria for assessment.

56		The remaining explanations: • **Contribution to the Competencies:** Indicates the ways in which the Unit will help learners develop and deploy the four student competencies. • **Links to other subjects:** Indicates ways in which the units connect to other subjects, and also to the Cross-cutting Issues.
57		Each syllabus unit is built on one or more of the Learning Outcomes in the Subject Overviews. In this example, the P6 Science Unit 1 ("Keeping ourselves healthy") is built on the P6 Learning Outcome *"Understand the nature of drug abuse and its impact on health"*.
58		**Activity 15** Locating the units. Ask participants to work in pairs to take a syllabus unit and try to locate it in the Subject Overview. (The heading gives a clue!)
59		**Activity 16** Locating the units. Now do the same with a different unit.
60		**Cross-Cutting Issues**. Point out that these are elements of learning that appear in more than one subject. They have been built into the Syllabus Units. The three Cross-cutting Issues are: • Peace education • Life Skills • Environment and Sustainability

61		**Activity 17** Peace Education. Ask participants to work in pairs to discuss how **Peace Education** develops across the years. Ask them to see if they can find an example in a syllabus unit.
62		**Activity 17** Life Skills. Now do the same with Life Skills.
63		**Activity 18** Environment and Sustainability. Now do the same with Environment and Sustainability.
64		This sums up the documents that set out the curriculum we have been looking at today. Remind participants that today was only an introduction to the curriculum – we shall be looking at these in much more detail as the course progresses.
65		Final slide – time to go home!

Module 3:
Learning and Memory Theories

This module explores the three main theories of learning (Behaviourist, Constructivist and Social Constructivist), relates these to more recent research on the brain, and considers how they impact on classroom practice.

Course 1: How Children Learn

Module 3: Learning and Memory Theories

This module explores the three main theories of learning (Behaviourist, Constructivist and Social Constructivist), relates these to more recent research on the brain, and considers how they impact on classroom practice.

Key Points:

- To know how to teach well, we need to understand how people learn
- Human beings try to make sense of their experiences (construct meaning)
- We develop 'mind maps' or schema of how things fit together
- Learning takes place in a social context and talk is essential to learning
- Early childhood experiences are crucial to later learning
- Recent research on the brain confirms this
- The new curriculum is based on this approach

Outline

Session	Content
1	Slides – Piaget • *Activity 1 – Discuss what contributed to a successful lesson* • *Activity 2 – Discuss behaviours that fit with the four stages* Slides - Vygotsky • *Activity 3 – Discuss key differences between Piaget and Vygotsky*
2	Slides – Pavlov • *Activity 4 – Discuss:* *- Can we infer human learning from animal studies?* *- Does this explain how children learn to read?* Slides – Skinner • *Activity 5 – Discuss the implications for teaching* Slides – Ausubel & Montessori • *Activity 6 – Discuss the implications of learning by mistakes*
3	Slides – Goswami • *Activity 7 – Each group should identify at least three points and be prepared to report back.*
4	Slides – Intro to activities • *Activity 8 – Identify theories in syllabus units* • *Activity 9 – Plan lessons from a syllabus unit using the theory*

Background information

Learning and Memory Theories		
Type	**Who**	**Main ideas**
Constructivist	Piaget	Human beings try to make sense of the world. They do not just react unthinkingly to stimuli, but always try to construct meaning from their experiences. Children go through four stages in their development of learning (cognitive development): *Sensory-motor, Pre- Operational, Concrete Operational, Formal)*.
Social Constructivist	Vygotsky	Human beings construct meaning in a social setting by talking and interacting with others. They learn from other people who are older or more experienced *("more experienced others")*. They need to have sufficient prior knowledge to acquire new learning. He called this the *"zone of proximal development" (ZPD)*. This is very different from Piaget's fixed stages.
	Montessori	Early childhood is important. Children learn through play. They need independence and to be allowed to make mistakes.
Behaviourist	Pavlov	**Classical Conditioning:** A stimulus leads to a response. Some responses can be conditioned. Learning is linear, with one thing being learned after another.
	Skinner	**Operant Conditioning:** A stimulus needs reinforcement (some sort of reward) in order to become established. Rewards are effective in stimulating learning. Punishments are ineffective and hinder learning.
Social Constructivist	Ausubel	Showed that Skinner's rat actually had a 'mind map' or "schema' of the maze.
Recent brain research	Goswami	Learning happens when physical changes take place in the brain. The brain processes the information that it receives. Learning is not linear but networked.

Constructivism

Jean Piaget

- Human beings try to make sense of the world
- They construct meaning from their experiences
- These meanings form schemas in their minds (mind maps, or understandings of how things fit together)
- They do this by assimilating new information into their schemas, and, where necessary, accommodating (altering) their schemas to fit new information
- Children go through four stages in their development of learning (cognitive development):
  - *Sensory-motor*
  - *Pre-operational*
  - *Concrete Operational*
  - *Formal*

Piaget is one of the most influential cognitive theorists. He pointed out that people construct knowledge (or meaning), rather than receive it. This changed the way in which people saw the learning process. It now underpins education across the world.

He said that the construction of meaning is based on a person's experiences, which in turn are influenced by their emotional and mental stage of development. By "experiences" he means anything a person sees, hears, reads etc.

He pointed out that young children learn best by doing things rather than by sitting and listening. They should be allowed to learn from their mistakes because this is how they 'construct meaning'. A teacher's focus should be on the process of learning, and not just the outcome.

His four stages of cognitive development are:

Typical Age Range	Description of Stage	Developmental Phenomena
Birth to nearly 2 years	*Sensorimotor* Experiencing the world through senses and actions (looking, touching, mouthing)	•Object permanence •Stranger anxiety
About 2 to 6 years	*Preoperational* Representing things with words and images but lacking logical reasoning	•Pretend play •Egocentrism •Language development
About 7 to 11 years	*Concrete operational* Thinking logically about concrete events; grasping concrete analogies and performing arithmetical operations	•Conservation •Mathematical transformations
About 12 through adulthood	*Formal operational* Abstract reasoning	•Abstract logic •Potential for moral reasoning

People no longer believe that the stages are fixed, but the general idea that younger children learn differently from adults is not questioned. Up to the age of about eleven years old, children cannot learn well by sitting still and listening. They need to have actual objects to touch and manipulate in order to understand the ideas behind them.

For example, if you tell a young child that “a triangle has three sides”, he or she will not be able to envisage what a triangle looks like from these words. The child needs to see a picture of a triangle, or better still, to have a physical triangle to touch or hold.

Adaptation	What it says: adapting to the world through assimilation and accommodation.
Assimilation	The process by which a person takes material into their mind from the environment, which may mean changing the evidence of their senses to make it fit.
Accommodation	The difference made to one's mind or concepts by the process of assimilation. Note that assimilation and accommodation go together: you can't have one without the other.
Classification	The ability to group objects together on the basis of common features.
Class Inclusion	The understanding, more advanced than simple classification, that some classes or sets of objects are also sub-sets of a larger class. (E.g. there is a class of objects called dogs. There is also a class called animals. But all dogs are also animals, so the class of animals includes that of dogs).
Conservation	The realisation that objects or sets of objects stay the same even when they are changed about or made to look different.
Decentration	The ability to move away from one system of classification to another one as appropriate.
Egocentrism	The belief that you are the centre of the universe and everything revolves around you: the corresponding inability to see the world as someone else does and adapt to it. Not moral "selfishness", just an early stage of psychological development.
Operation	The process of working something out in your head. Young children (in the sensorimotor and pre-operational stages) have to act, and try things out in the real world, to work things out (like count on fingers): older children and adults can do more in their heads.
Schema (or scheme)	The representation in the mind of a set of perceptions, ideas, and/or actions, which go together.
Stage	A period in a child's development in which he or she is capable of understanding some things but not others.

Social Constructivism

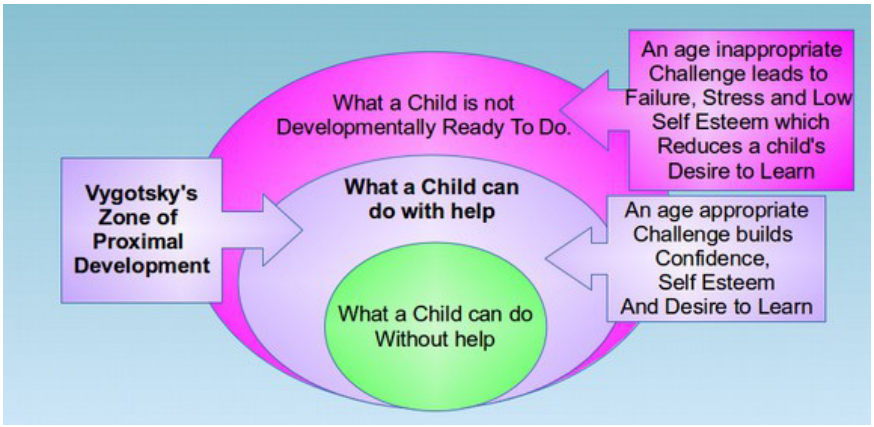
Lev Vygotsky

- **Similar to Piaget about:**
  - Construction of meaning
  - Schemas, assimilation, and accommodation
  - Learning through doing
- **Differs from Piaget because:**
  - Meaning is constructed in a social setting where the role of language is essential
  - The stages of cognitive development are not set
  - Early childhood experiences essential to later learning
  - People's schemas need to be close to a new one for new understanding to be developed (Zone of Proximal Development - ZPD)

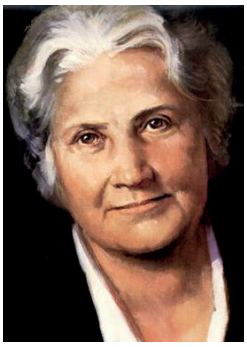
Vygotsky was born in the same year as Piaget, but they never met. They shared a constructivist view of cognitive development, but Vygotsky stressed the importance to learning of language and a social setting: "learning is fundamentally a social process and not solely in the learner's head". He identified the importance of learners talking about their learning and discussing new ideas. This helps them form their new understandings or "schemas.

He saw cognitive development as a continuous progression rather than Piaget's fixed stages of development. He believed that learning drives the stages rather than vice versa. Early experiences as babies and very young children lay the basis of future learning. The key period for development and education is from birth to the age of seven.

To acquire new understandings (or schemas), a learner's present understanding must already be close. There is a point at which children can understand and do things by themselves, and then a point where they can understand or do something only if someone helps. This is the "zone of proximal development" (ZPD) – and is where teaching and learning takes place. Beyond the ZPD are things that a learner is not ready to understand or do, even with help.



Maria Montessori



- Early childhood is the most important stage of learning
- Children learn through play
- They need some independence in their learning
- They learn through talking about what they are doing
- They learn though mistakes
- Their learning environment is very important
- They have “absorbent minds” and learn even when we think they are not doing so

Montessori’s emphasis on the importance of childhood, play and independence has been very influential on education. Her thinking is within the social constructivist approach because she sees the importance of learning from experience and also of the learner talking about their experience.

Learning through mistakes goes with independence. It means that mistakes or errors should not be punished but seen as opportunities for learning. It often shows that they are learning in their “Zone of Proximal Development”!

Behaviourism

Ivan Pavlov

- A stimulus generates a response
- A conditioned response occurs when an unrelated stimulus becomes associated with a response
- This is called classical conditioning
- Some people mistakenly see this as the explanation of how we learn to read

When most animals (including humans) eat something, they produce saliva in their mouths to help swallowing and digestion. Pavlov noticed that dogs start to produce saliva before they start to eat because they have learned that the sight or smell of food means that they are going to eat. He therefore performed an experiment.

He showed food to a dog and noticed that it salivated. He rang a bell next to the dog and noticed that the dog did not salivate. Then, every time he fed the dog, he rang the bell first, and then showed it the food. After a few times, the dog started to salivate when it heard the bell (before it saw the food).

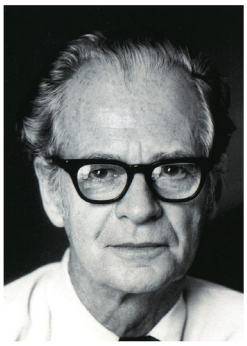
So, Pavlov concluded that the dog had learned to associate the bell with being fed. He called this type of learning **conditioning**, and the response is a **conditioned response**.

Implications of Pavlov

Some people believe this explains how human beings learn to read. When a child first sees a written word (a stimulus) they make no response. If someone says the word to them every time they see it, then they are conditioned to associate the written word with the sound. Few people still believe this is the right explanation and we shall see why later.

The major implication of Pavlov and conditioning is associated with **phobias** (unreasonable fears). For the dog, the bell was a pleasant association, but many people have developed unpleasant associations with other stimuli. These have the same effect as Pavlov's bell in that they trigger a response, but in the case of phobias they are unpleasant. For example, if a child has been hit by a stick, then they might always be frightened of sticks. Pavlov's ideas have given us a way of helping people with a phobia. This is called "cognitive therapy".

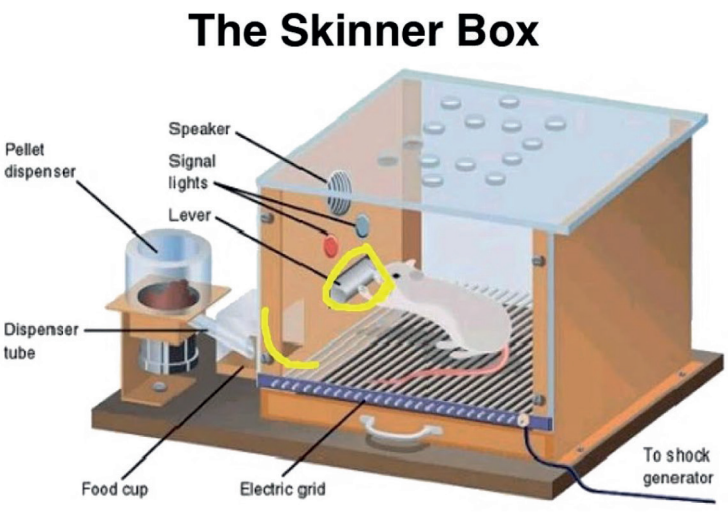
BF Skinner



- A response to a stimulus is reinforced by a reward
- This is called operant conditioning
- Animals can be trained by rewarding a series of separate steps towards the desired behaviour
- Rewards are much more effective than punishments
- Punishment leads to stress and loss of learning

Skinner took Pavlov's ideas a stage further and noted that animals learned to act in a particular way if that learning was reinforced by a reward. If there was no reward, the animal did not learn.

He checked this in a famous experiment in which he put a rat into a specially prepared box. The rat moved around, exploring the box, and when it accidentally touched a lever, some food came into the box. The rat soon learned to press the lever. Skinner called this "operant conditioning". It is different from Pavlov's bell because the rat discovered the lever for itself.



Skinner also experimented with the opposite of a reward. So, instead of giving the rat food when it did something right, he gave it a mild electric shock when it did something wrong. He found that rats learned very little through punishment. In fact, they became stressed and seemed to forget things they had learned already.

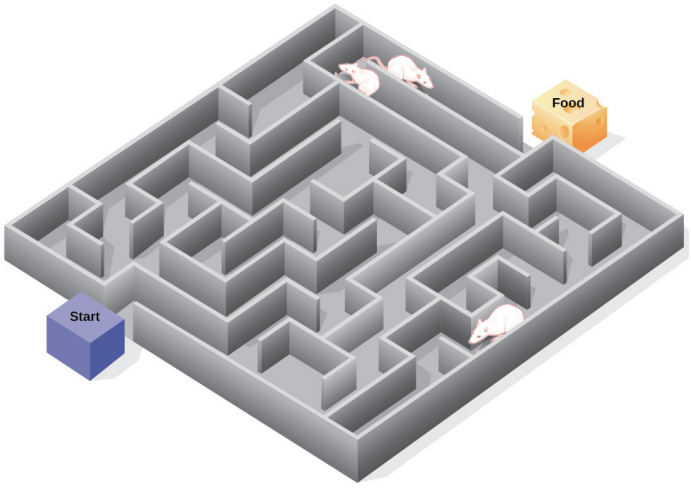
Skinner used this reward idea to train rats to remember a route through a maze.

He did this with a simple maze at first, and one step at a time: putting food at the first left turn encouraged the rat to turn left. Putting food at the right turn encourage it to turn right, and so on.

The rat remembered the route even after the food was no longer there.

According to Skinner, the response (turning) had been conditioned by the reward.

Gradually, Skinner taught the rat to find its way through a much more complex maze. Once it had learned the route through a series of 'stimulus and reward' steps, the rat could remember the way through every time. Skinner repeated this experiment with many different rats and with many different mazes. It always worked.



Skinner also tried the experiment the other way round. Instead of rewarding the rat for taking the right turn, he punished it (by giving it a mild electric shock) for taking the wrong route. He found that rats did not learn well through punishment. In fact, they became stressed and confused, and many refused to move at all for fear of the electric shock.

Behaviourism = Learning as a series of small steps

The important thing about Skinner's interpretation of learning is that he saw it as a series of individual steps. So, he recommended that all school learning should be like this. Every piece of learning, however complex, should be broken down into a series of smaller steps (sometimes called "bite-sized pieces").

You may have come across this approach. It is sometimes called "programmed learning". You now know that it comes from Skinner.

The problem is that Skinner's interpretation turned out to be wrong!

Social Constructivism

David Ausubel

Ausubel did not believe that a rat (or even a human being) could remember so many separate turns in order to find its way through a maze. So he thought of a way to prove this.

He made a change to the maze that a rat had learned by blocking a path where the rat had been trained to turn right but giving it an alternative turn.

The rat took the alternative turn and then recognised the proper route and was able to go to the end.

If Skinner was right, and the rat had learned the route through the maze as a series of separate steps, then it could not have completed the maze after the change. So Ausubel concluded that the rat had actually formed a “mind picture” (or schema) of the maze.

Ausbel’s experiments confirmed the interpretations of Piaget and Vygotsky that human beings (and even rats) form “mind maps’ or “schemas’, which are the ways in which we construct meaning from our experiences.

He showed that teaching programmes based on a number of separate steps are not the best way of teaching or learning. The human mind tries to make sense of the steps anyway and sees them as a whole.

Recent research on the human brain confirms this.

Social Constructivism and Recent Brain Research

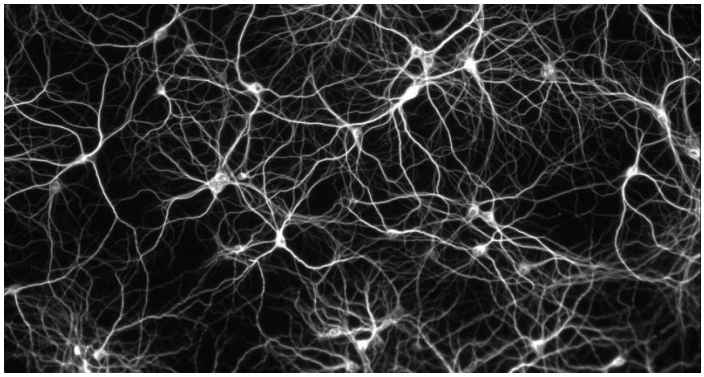
Usha Goswami

- Learning is an actual physical change in the brain
- When we learn something new, fibre connections are formed in our brain. These are called “synapses”
- As we learn more, these synapses join together to form neural networks
- The more we learn, the more complex these networks become
- The more complex the networks become, the more we can understand

Recent neuro-scientific research gives us a different way of understanding learning. We see it now in terms of the development of ‘neural networks’ that become increasingly complex as we learn more and as extra neural connections are made.

Usha Goswami suggests that “As we learn language and attach labels to concepts, the neural networks become more complex, and as we learn new information via language, fibre connections will form in response that encode more abstract information and therefore more abstract concepts.”

In short, as we learn more (i.e. have more experiences), so the neural networks become more complex, and when they are more complex, we are enabled to understand more.



This is the neurological or medical explanation of what Piaget and Vygotsky suggested long before it was possible to do such brain research. As Vygotsky said, as we learn more, so our schemas become more complex, and as they become more complex, so we can learn more.

Tutor Course Notes

Key Messages and Approaches

This module is inevitably theoretical with quite a lot of written material, but it is essential to an understanding of teaching and learning.

The key text is on the slides, but also in the Course Handbook, so participants can read from either. It is usually best to read the slides aloud, stopping to check that participants understand, or get some participants to read each section in turn.

Some activities require looking at curriculum documents and syllabus units. It is always better for participants to share these rather than have one each, because this encourages discussion.

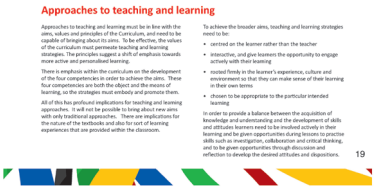
Nearly all the activities are discussion-based. Participants should be put into pairs, and the pairs put together into groups of four or six. If there is an uneven number of participants, then some will need to work in a three.

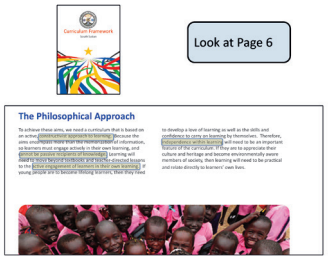
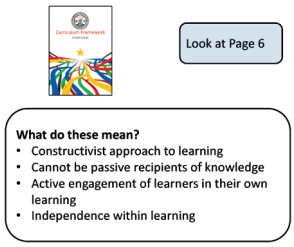
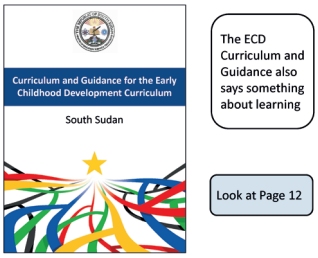
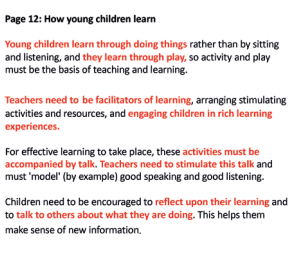
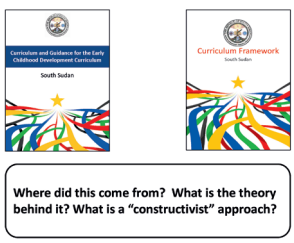
Participants should be invited to discuss each question in pairs then prepare to report back to the larger group or to the class.

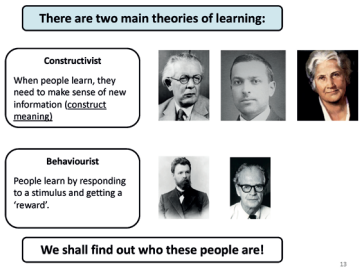
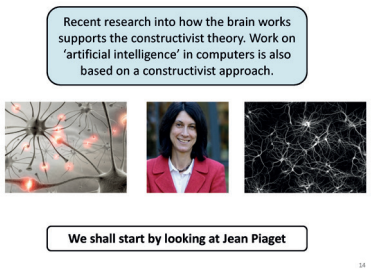
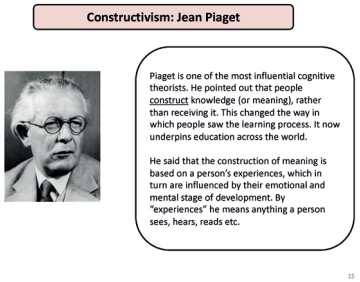
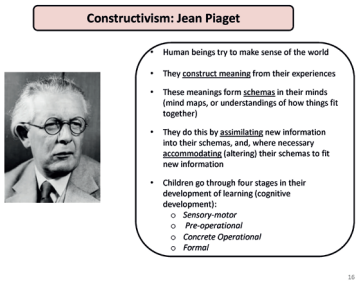
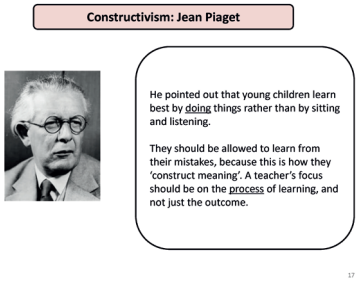
Depending on the size of the class, it may not be possible for every group to report back on every activity. So, it will be necessary to ensure that every group gets a chance during the day, and also that it is not always the same person who speaks on behalf of the group.

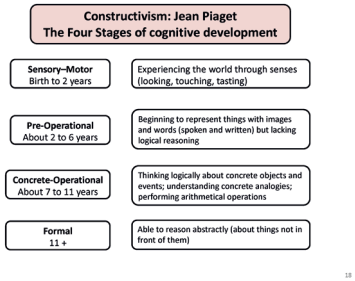
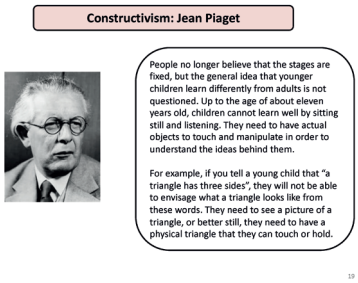
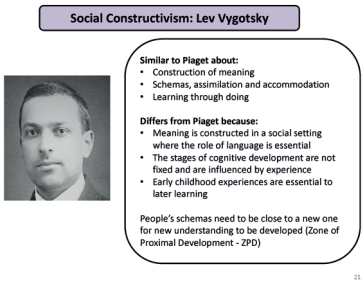
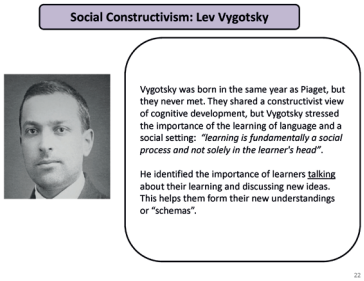
Presenting the Slides

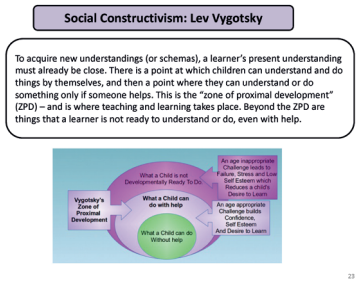
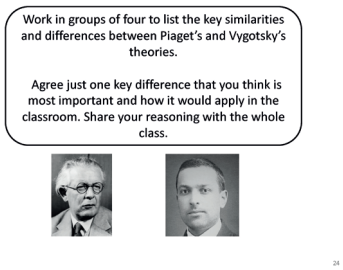
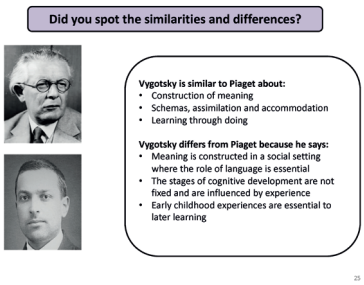
		Session 1
1	Welcome to Module 3 How we learn 	Introductory slide – show during arrival
2	How do children learn? 	Introductory slide – Ask teachers the question ‘Do children learn in a different way from adults?’

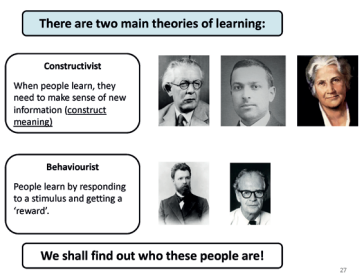
3	Talk about a really successful example of learning from one of your own classes. What made it successful? 	**Activity 1** Group or pair discussion. The point is to get participants talking and thinking about what contributed to the success. Share some of the ideas and try to get participants to think about what it was that made it easy for the learners to learn.
4	What does the Curriculum Framework say about teaching and learning? Look at Page 19. 	Intro slide to Framework.
5		People can read this from the screen – but should also have it in the Framework Booklet (page 19). You could read it aloud as people follow – or get some participants to take turns. Don't worry about the meaning of each word – this comes up in the next slide.
6	 There are many terms here that we shall be looking at during this course: • Centred on the learner • Interactive • Rooted firmly in the learner's experience so they can make sense of their learning • Learners need to be involved actively in their learning Does anyone want to suggest what they think any of these mean?	The meanings of these words will become apparent during the day – but invite participants to discuss these in pairs and then suggest meanings to the group.
7	 Look at Page 6 	Now look at Page 6. Again, you can read this out or get some participants to do so.

8		This slide just highlights some phrases – no need to go over these, they are on the next slide.
9		Don't expect participants to know what these mean (this is the point of the module!) but it would be good to get them to talk in pairs and then make some suggestions. Don't try to 'correct' their ideas – just say that the meanings will become apparent as we go through the day.
10		Get them to look at page 12 in the "ECD Curriculum and Guidance" booklet.
11		This slide gives the relevant passage. Read it through.
12		This question is the introduction to the next section of slides, which are about the "constructivist approach". Don't try to answer the question!

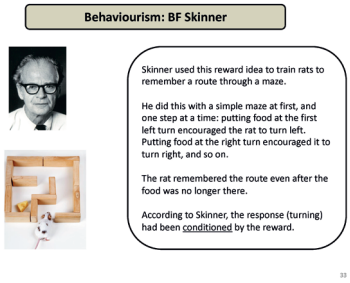
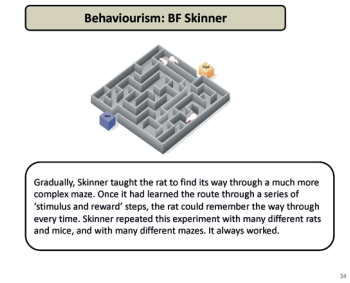
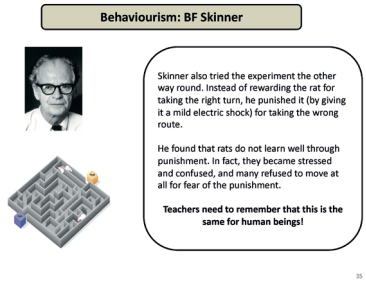
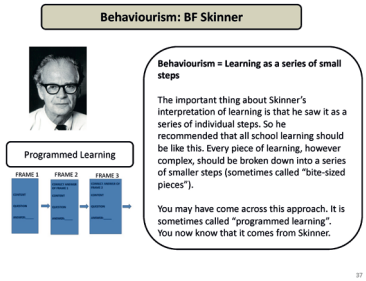
13		Here are the two theories of learning that we shall be looking at. (The people are those behind the theory).
14		We shall also be looking at the most recent research on the brain and how learning happens. (The centre photo is of Professor Usha Goswami of Oxford University – an expert on neurology. The other photos are enlargements of parts of the brain!).
15		Here is the main man! The slide is self-explanatory – participants also have this in their coursebooks. Get participants to read it out. The important point is that "construct meaning" is a thought process. It means "making sense" of the world and linking our various experiences together. Children (and adults) try to make sense of things in terms of how they link together.
16		Read these through as before. The important points are: • The term: "schema," which is just a technical term for an overall understanding. For example, a simple schema is the understanding that antelope eat grass and lions eat antelope. It is the understanding of how one thing relates to another • The four stages of development
17		Read as before. The important points are: • children (and adults!) learn by doing things – not just sitting and listening • we learn from our mistakes (so mistakes are not 'bad'!)

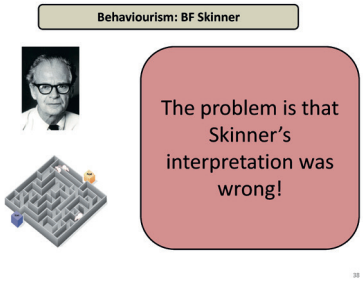
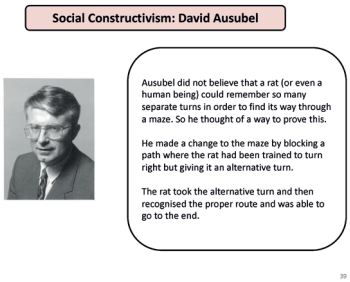
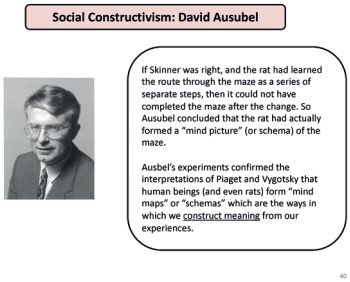
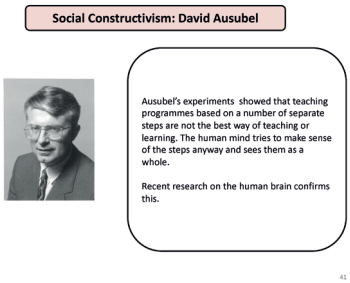
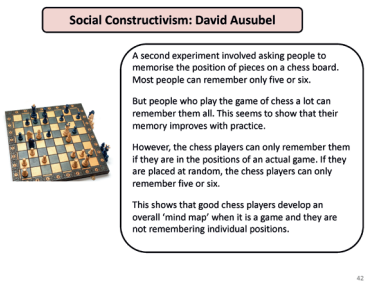
18		Read as before. Note that Piaget suggests that children up to the age of 11 can only think about actual objects or pictures in front of them. (Does this explain why some children find it hard to learn when we just talk to them?)
19		Read as before. The slides expand on the idea of having actual objects or visual aids in order to learn.
20		**Activity 2** Discussion Ask participants to discuss the four stages in pairs or a small group and report back.
21		Read as before. Vygotsky added "social" to constructivism. This means that we learn from and by talking to others. Piaget saw children as isolated individuals. Emphasise the similarities and differences.
22		Read as before. Stress the importance of language and talk.

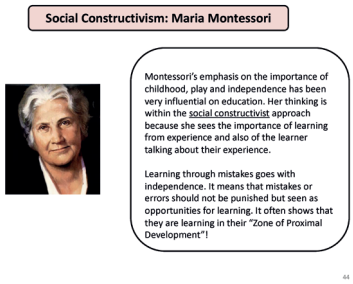
23		Read as before. Vygotsky's "Zone of Proximal Development" is very important. Learners need to be ready for the next stage of learning. Some things they are not ready for, even if you help them. But there is a zone where they cannot understand or do things – but can do so with help. This is where they learn. It is of fundamental importance to teachers.
24		**Activity 3** Follow the instructions on the slide.
25		This is a repeat of slide 1, which set out the similarities and differences. Participants can check what they said.
26		Coffee cup. Time for a break!

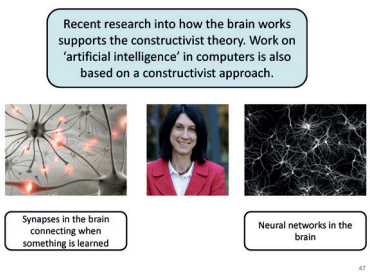
		Session 2
27		Introductory slide. (This has been shown before, so it is just a reminder – and reinforcer!)

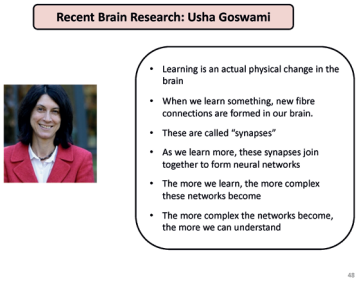
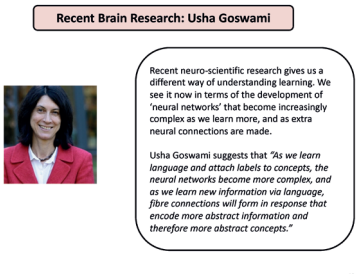
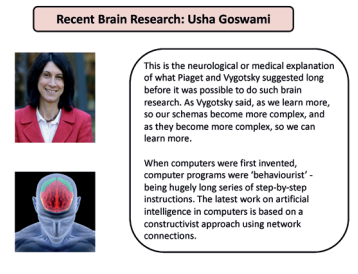
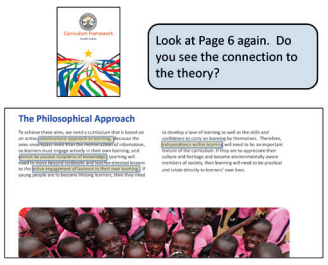
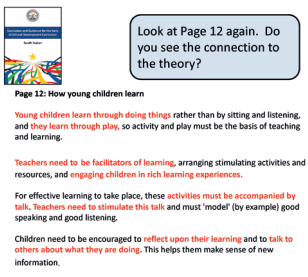
28	**Behaviourism: Ivan Pavlov**  Pavlov was a scientist investigating the digestive system in animals. But he came across something that had implications for learning. He described the way in which animals react to a stimulus (such as seeing or smelling food) with a physical response (in this case salivating). He found that animals could be conditioned to react to something that was unrelated to the original stimulus. This is called classical conditioning. 28	Read as before. Now we look at the second of the theories – behaviourism. This is Ivan Pavlov, who started the idea. No need to spend too long on this – but the idea of a "stimulus and response" is quite important.
29	**Behaviourism: Ivan Pavlov**   In Pavlov's classic experiment, he showed food to a dog and noticed that it salivated. He rang a bell next to the dog and noticed that the dog did not salivate. After that, every time he fed the dog, he rang the bell first, and then showed it the food. After a few times, the dog started to salivate when it heard the bell (before it saw the food). It was reacting to the stimulus of the bell as if it were the food. 29	Read as before. Go through this classic experiment (there is more detail in the coursebook)
30	**Behaviourism: Ivan Pavlov**  ***Implications of Pavlov*** Some people believe this explains how human beings learn to read. When a child first sees a written word (a stimulus), they make no response. If someone says the word to them every time they see it, then they are conditioned to associate the written word with the sound. (Few people still believe this is the right explanation and we shall see why later.) The importance of Pavlov to education is really in the way that his work was built on by BF Skinner 30	Read as before. Explain how Pavlov related this to learning to read. Remind participants that we no longer believe this.
31	Before we look at Skinner, discuss in your group: • Do you think that we can find out about how human beings learn by observing animals? (Think back to Vygotsky!) • Do you think this explains how children learn to read? Why is this now not widely believed?  31	**Activity 4** Discussion. Two questions to discuss in pairs or a small group, and then report back to the class: • Do you think that we can find out about how human beings learn by observing animals? (Think back to Vygotsky!) • Do you think this explains how children learn to read? Why is this now not widely believed?
32	**Behaviourism: BF Skinner**   The Skinner Box Skinner took Pavlov's ideas a stage further and noted that animals learned to act in a particular way if that learning was reinforced by a reward. If there was no reward, the animal did not learn. He checked this in a famous experiment in which he put a rat into a specially prepared box. The rat moved around exploring the box and when it accidentally touched a lever, some food came into the box. The rat soon learned to press the lever. Skinner called this "operant conditioning". It is different from Pavlov's bell because the rat discovered the lever for itself. 32	Read as before. This is the second (and more recent) proponent of Behaviourism. We shall look at his ideas of 'reinforcement by reward' and 'operant conditioning'.

33		Read as before. You may need to explain what a "maze" is. The point is that by always putting the food to the right at a particular point, he taught the rat to always turn right there.
34		Read as before. He then taught the rat a series of turns so that it could find its way through a complex maze as a series of separate steps. (It is the separateness of the steps that is the important point)
35		Read as before. The key point is that punishment (whether it is the mild electric shock for a rat or the "telling off" of a child) actually prevents learning.
36		**Activity 5** Group discussion. Each group should list some implications from Pavlov and Skinner and be prepared to report back to the class. Ask them to think in particular of reward and punishment.
37		Read as before. The important part is that he sees learning as a series of separate steps – and this links to various classroom approaches such as 'programmed learning' and learning in 'bite-sized pieces'.

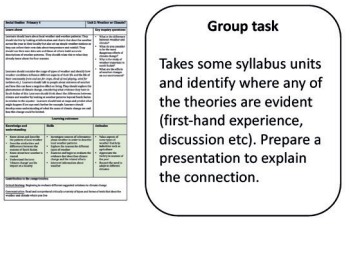
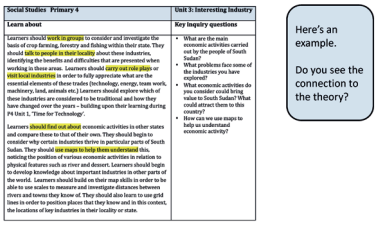
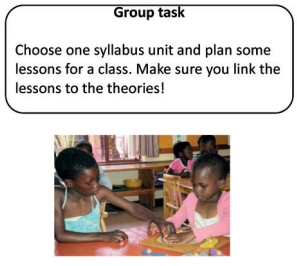
38		Read as before. This merely introduces the next slides.
39		Read as before. You can ask participants what they think this shows. The answer is on the next slide.
40		Read as before. This slide is very important. Ausubel's experiment showed that the rat did not remember the route through the maze as a set of separate steps – otherwise it would have kept going wrong. So, although Skinner had **taught** the rat in separate steps, it had **learned** as an overall pattern (like Piaget and Vygotsky's "schemas").
41		Read as before. This sets out the implications for schools, and the justification of the Constructivist approach.
42		Read as before. There may be some participants who are not familiar with chess – so some explanation of pieces may be necessary. The key point is that the reason that good chess players can remember more pieces is because they understand the patterns – not because they have better memories per se. This shows that better memories come from better understanding.

43		Read as before. We are now looking at another Social Constructivist – famous for her work with young children (and the many Montessori Nurseries around the world). This slide summarises her approach. If there is time, ask participants to discuss some of her points.
44		Read as before. This leads into the next activity which is about 'learning from mistakes'.
45		**Activity 6** Ask participants to discuss in pairs or a small group and identify at least one key implication, and then report back to the class.
46		Coffee cup. Time for a break (You can ask the participants if they feel like Pavlov's dog – every time they see this picture they start to salivate for the coffee!)

		Session 3
47		Introductory slide (same as Slide 14). Our brains are composed of **neurons**. These are fibres that physically connect to each other when we learn something. The ends of these neurons are **synapses** that form the connections. The neurons join together to form **networks**.

48		Read as before. This sets out what happens in the brain when we learn.
49		Read as before. This relates what happens in the brain to what happens in the classroom.
50		Read as before. This links the research to the theory. The neural networks confirm the constructivist theory that we construct meaning as we learn through forming schemas. The link to computer programs is interesting because programmers have stopped using long step-by-step instructions and are now using electronic networks – just like the brain and like the constructivist approach!
51		We have already seen this slide (Slide 8). Now ask if participants can see the connection to the theories of the highlighted phrases.
52		We have also already seen this slide (Slide 11). Again, ask if participants can see the connection to the theories of the highlighted phrases.

53		**Activity 7** Each group should identity at least three points and be prepared to report back.
54		Coffee cup. Time for a break.

		Session 4
55		The final session is composed of two group tasks. **Activity 8** The first is to take some syllabus units and identify where any of the theories are evident. The next slide gives an example.
56		This slide illustrates how to do the first task. Look at the highlighted phrases in turn and ask what parts of the theory they relate to. E.g. "work in groups" is **social constructivist** because it involves talk and learning from others. "Talk to people in the locality" is the same. "Visit local industries" relates to **first-hand experiences**. Participants should now do the same with some other units.
57		**Activity 9** The second task is to work in a small group and take a syllabus unit to plan some lessons for a class. This will take some time. Participants should be able to explain how the learning activities they have chosen relate to the theory when they present their work to the class.

58	End of Module 3 The next module looks at types of learning 	Closing slide. That's it – time to go home!

Module 4:
Knowledge, Understanding and Skills

This module explores the three main forms of learning:

• Knowledge • Understanding • Skills

The module looks at the implications of these for learning and for teaching.

Course 1: How Children Learn

Module 4: Knowledge, Understanding and Skills

This module explores the three main forms of learning:

- Knowledge
- Understanding
- Skills

The module looks at the implications of these for learning and for teaching.

Key Points:

- The three forms require different approaches to teaching and learning
- Knowledge is the most straightforward to acquire and to assess
- Understanding involves putting knowledge into a context of meaning (a schema) and takes a range of experiences to develop
- Skills are the ability to **do** something, whether mental or physical, and are developed through practice.

Outline

Session	Content
1	Knowledge, understanding and skills as forms of learning • *Activity 1: Identifying k, u, & s in the old syllabuses* • *Activity 2: Identifying k, u, & s in the new syllabuses* • *Activity 3: Tracking k, u, & s from syllabus to textbook*
2	Developing knowledge, understanding and skills through learning experiences • *Activity 4: Identifying in the Pilot materials the learning experiences that develop k, u, & s* • *Activity 5: Identifying progression of these experiences in the Pilot materials*
3	Developing knowledge, understanding and skills in the textbooks • *Activity 6: Identifying in the textbooks the learning experiences that develop k, u, & s* • *Activity 7: Developing learning experiences to promote k, u, & s in ECD*
4	Developing knowledge, understanding and skills in the classroom • *Activity 8: Developing a range of activities to promote the same k, u, & s*

Resources

3 pages of old syllabus
Sample of new syllabus units
Textbooks and Teacher Guides to go with the sample units
ECD Curriculum and Guidance
Curriculum Pilot materials

Background information

If you look at any subject syllabus, you will see that the learning prescribed tends to fall into three categories:

- knowledge
- understanding
- skills

These are the three main 'building blocks' of a syllabus, and so of a curriculum.

The three terms denote different forms of learning:

Knowledge	refers to the possession of information
Understanding	Putting knowledge into a context of meaning. A single piece of understanding is a 'concept'. When these are fitted into the comprehension general principles that form a structure of meaning, then it becomes a "schema".
Skill	refers to the ability to perform an operation (either mental or physical). It is basically the ability to do **something**.

Example 1

The difference between these can be seen in the example of a child learning about capital cities.

- The ability to recall, for example, that Kampala is the capital city of Uganda is a piece of **knowledge**.
- Explaining why one city rather than another is the capital *(Why is Abuja the capital of Nigeria when Lagos is much bigger? or Why does South Africa seem to have three capitals?)* involves **understanding** the concept of capitals.
- The ability to find out what a country's capital city is, if you did not already know *(What is the capital of Mongolia?)*, would involve a **skill** such as using an atlas or the Internet.

Knowledge	What is the capital city of Uganda?
Understanding	Why is Lagos not the capital of Nigeria?
Skill	Find out what the capital of Mongolia is

Knowledge is reasonably straightforward to acquire and to assess and involves the retention of information. There is a further dimension to learning: the extent of a learner's knowledge about capitals. There is extent in terms of range *(e.g. How many capitals do they know?)* and there is extent in terms of depth *(e.g. How well do they know this range? Do they just know the names, or could they recognise the city from a photograph?)*

The teacher can find out if knowledge has been acquired by asking a simple question *(e.g. What is the capital city of Uganda?)*

Understanding is less straightforward both to acquire and to assess. It is not separate from knowledge, and it usually requires the acquisition of a range of knowledge before the structure of meaning (or schema) becomes apparent. For example, one piece of understanding (or "concept") in biology is that plants growing under the shade of trees tend to be taller than plants growing in the open. To understand why this is the case, a learner needs a range of knowledge about how plants grow and what they need to thrive. Only then can one understand why plants in the shade grow taller.

Finding out whether or not a learner has fully understood something is usually done by asking the learner to explain the concept. So the question might be straightforward *(Why are plants growing in the shade taller than those in the open?)* but the learner's response will be more complex, and

two learners with equal understanding might not give the answer in exactly the same words. Hence, assessment is less straightforward. More of this in the assessment section!

Skills, whether they are mental or physical, are about being able to **do** something (the technical term is *"able to perform an operation"*). Skills are acquired over time through practice.

It is important to note that the distinction between knowledge, skills and understanding is key to curriculum design because they each involve a different type of learning that teachers need to take account of in their teaching and in their design of the curriculum.

Example 2

Another example comes from Physics. An example of knowledge in Physics is that "metals expand when heated". But knowing that metals expand when heated is not the same as understanding why they do so. The skill associated with this is the ability to calculate how much a particular metal will expand if heated by a set amount.

- The ability to recall the fact that metals expand when heated is **knowledge**.
- Understanding why metals expand when heated involves knowledge about the nature of heat, atomic structure, and the effect of vibrations of atoms on physical structures. It is putting all these elements together in a framework of meaning that gives understanding. (For any non-scientist wondering what atoms have to do with this - heat is produced by the vibration of atoms. In metals, as atoms vibrate more, they move farther apart, and so the metal expands.)
- The skill is being able to use the coefficient of linear expansion to calculate by how much a particular metal would expand by any rise in temperature. This is not knowledge because no-one can remember how much every metal will expand for every possible temperature rise. The only way is to perform a calculation – which is a skill.

Knowledge	What happens to metals when they are heated?
Understanding	Why do metals expand when heated?
Skill	How much would copper expand if heated by 5 degrees Centigrade?

There has been much recent debate about the importance of knowledge within the curriculum, and this arises because the term 'knowledge' is used in a variety of ways in education: from 'knowing that' (simple information to be recalled) to 'knowing how to' (which implies skills) and 'knowing about' (which implies understanding). In this book, we shall use the term in its purest sense of "information to be recalled".

Implication for syllabuses

When we look at syllabuses, we find that there are certain key words that denote the sorts of learning being prescribed. These are usually the **verb** that introduces the desired learning:

Knowledge	know that, identify, state, name
Understanding	explain, recognise why
Skill	investigate, carry out, explore, construct, calculate

Here is an example from a unit on 'urbanisation' from Standard 8 Social Studies of the Kenyan Primary School Curriculum. Can you work out which objectives involve knowledge, understanding or skills?

Specific Objectives By the end of this topic, a learner should be able to:

a) explain factors influencing growth of towns
b) identify the functions of the major towns in Kenya
c) identify problems facing urban centres
d) appreciate the attempts being made to solve the problems in urban centres

Yes, the key is in the verb introducing the "specific objective" (in other countries these might be called "learning objectives" or "learning outcomes"). So:

a) "explain" suggests understanding

b) "identify" refers to already-held knowledge (you cannot identify someone if you do not know them!)

c) "identify" again. It sounds as if learners will be told what the problems are and expected to name them – so it is knowledge. This is very different from understanding what the problems are and being asked to explain them.

d) "appreciate" suggests understanding. (But it could also indicate an attitude – more of which later.)

Tutor Course Notes

Key Messages and Approaches

This module is much more practical than Module 2, with a lot of paired and group work looking at the sorts of learning experiences that are needed to develop knowledge, understanding and skills.

The key text is on the slides. It is usually best to read the slides aloud, stopping to check that participants understand, or get some participants to read a section in turn. There is supplementary text in the 'Workbook for Teachers'.

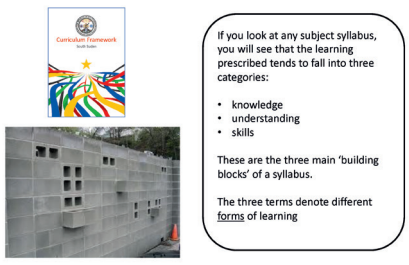
Some activities require looking at syllabus units and textbooks. It is always better for participants to share these rather than have one each, because this encourages discussion.

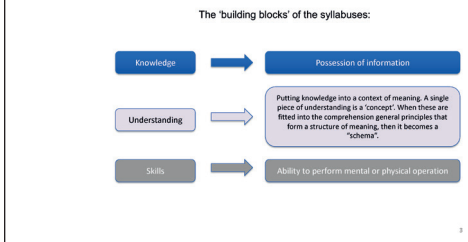
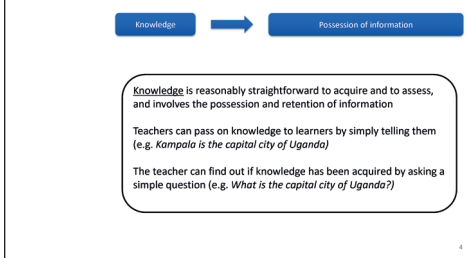
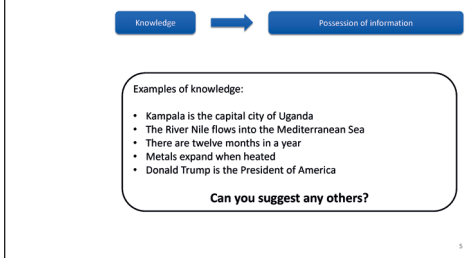
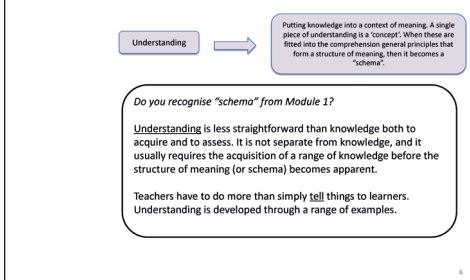
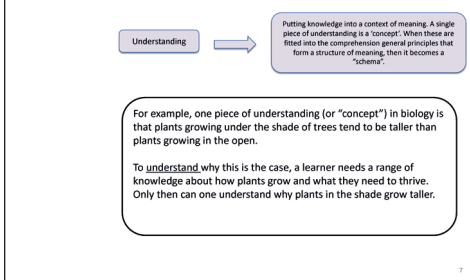
Nearly all the activities are discussion-based. Participants should be put into pairs, and the pairs put together into groups of four or six. If there is an uneven number of participants, then some will need to work in a three.

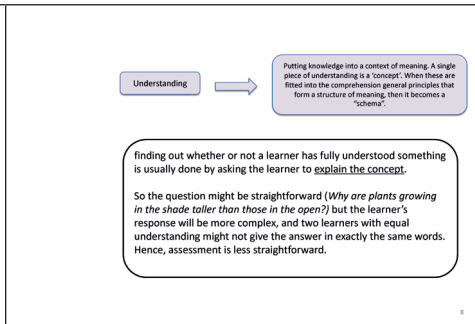
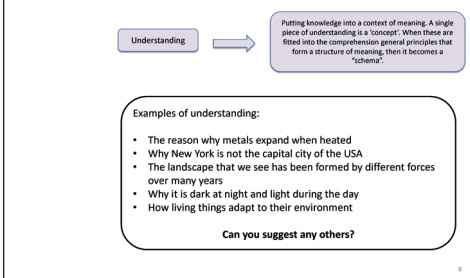
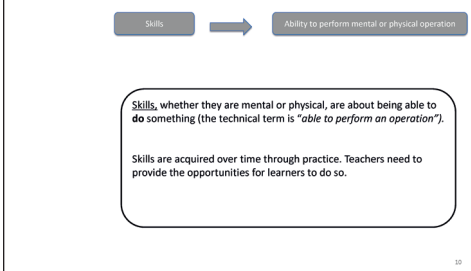
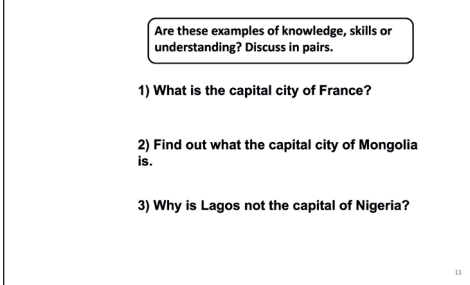
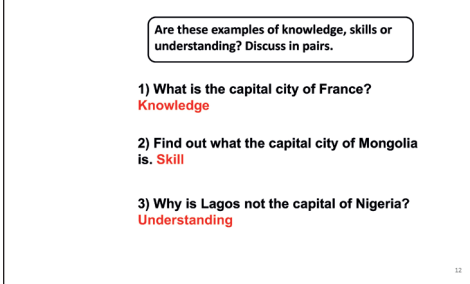
Participants should be invited to discuss each question in pairs, then prepare to report back to the larger group or to the class.

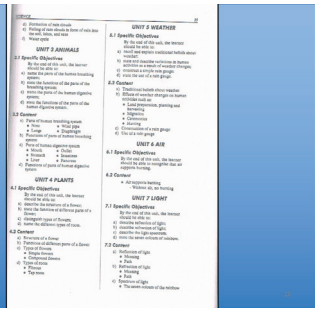
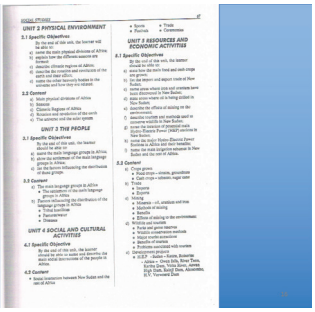
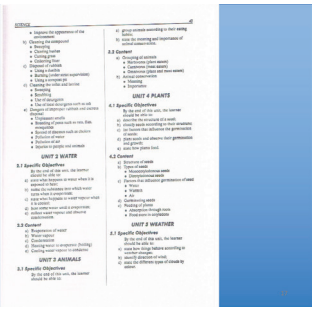
Depending on the size of the class, it may not be possible for every group to report back on every activity. So, it will be necessary to ensure that every group gets a chance during the day, and also that it is not always the same person who speaks on behalf of the group.

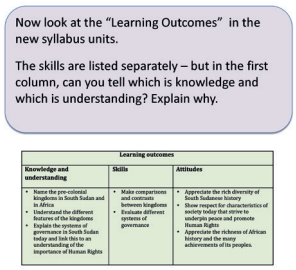
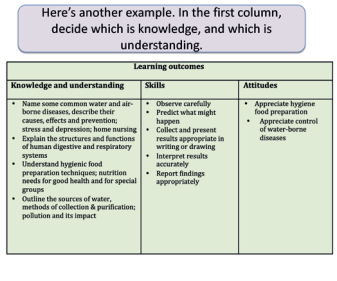
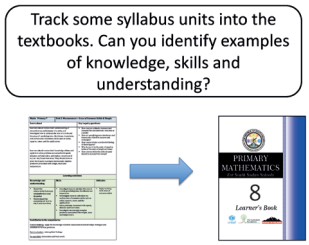
Presenting the Slides

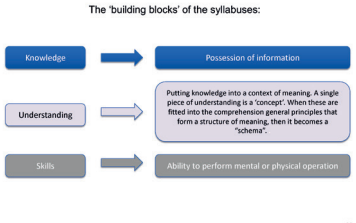
		Session 1
1		Introductory slide – show during arrival.
2		Participants can read this from the screen, or you could read it aloud as participants follow – or get some participants to take turns. Don't worry about the meaning of each word – this comes up through the day. Buildings are made up of different types of building blocks – the curriculum is made up of things to know, things to understand and things to be able to do.

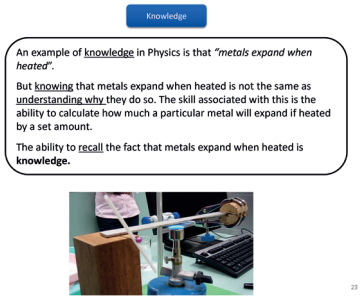
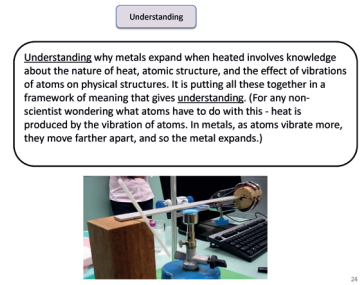
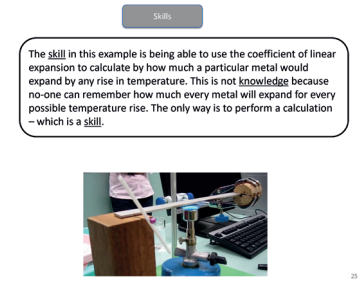
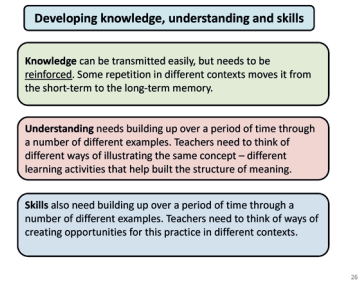
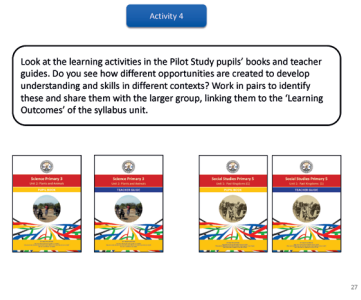
3		Read as before. The slide is animated – so you need to click right through! Don't worry about the exact meaning of each word at the moment. The next slides give details.
4		Read as before. This explains what knowledge is – the next slide gives examples.
5		Read as before. Go through the examples – and ask for some more from the participants.
6		Read as before. This explains understanding. Emphasise the link to schema (Piaget and Vygotsky).
7		Read as before. On the whole, plants growing under trees tend to grow taller because they are trying to get to the light. This concept involves the knowledge that plants need sunlight in order to grow and also that they are "phototropic" (meaning that they can control their growth towards the light). The wider schema is about plants adapting to their immediate environment in a variety of ways.

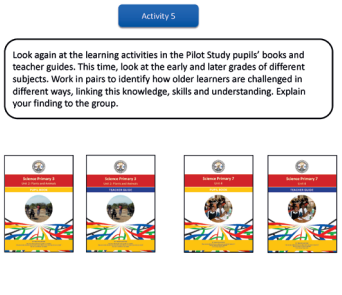
8		Read as before. It will help participants to understand understanding (!) and to think about how it is assessed. How do we know whether something has been understood?
9		Read as before. Here are some examples of concepts or understanding. Discuss each one and invite participants to suggest others.
10		Read as before. This explains skills. Being *"able to perform an operation"* means being able to do something.
11		Here's a quiz. Ask participants to discuss in pairs and then ask them for answers.
12		And here are the answers!

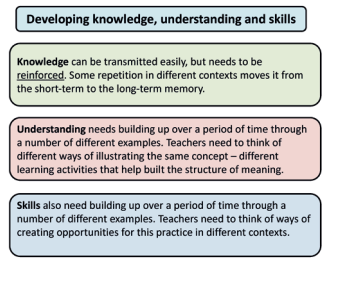
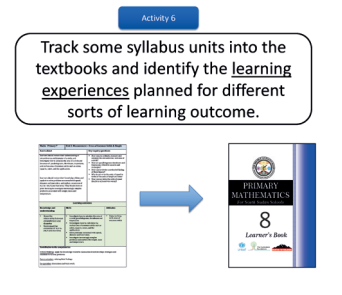
13	Key Words The Curriculum Foundation **Knowledge:** state, name, list, describe, label, write, recall ... **Understanding:** explain, compare, understand, predict outline ... **Skills:** be able to, construct, perform, investigate, carry out ... 13	These are the sorts of words used in syllabuses that denote the three forms of learning. Read them out section by section.
14	The Curriculum Foundation Work in pairs to take one page of the old syllabus and look at the "Specific Objectives", and: • If the objective is asking for knowledge, mark it "K" • If it is understanding, mark it "U" • If it is a skill, mark it "S" 14	**Activity 1** Identifying k, u & s in the old syllabus. Participants will work in pairs to look at the "Specific Objectives" section of the old South Sudan syllabus. • If the objective is asking for knowledge, mark it "K". • If it is understanding, mark it "U". • If it is a skill, mark it "S" The next three slides show the pages from the old syllabus. Participants will have these on paper.
15	P6 	**Activity 1** First example. Go through the first "Specific Objectives" section as a class. The 4 Specific Objectives of Unit 3, Animals, are all **knowledge** - the first words are: "a) name, b) state, c) name, d) state". These indicate knowledge.
16	P7 	**Activity 1** Second example. Pairs will do these on paper.
17	P4 	**Activity 1** Third example. Pairs will do these on paper. When they have finished, go over these quickly by asking for a suggested answer.

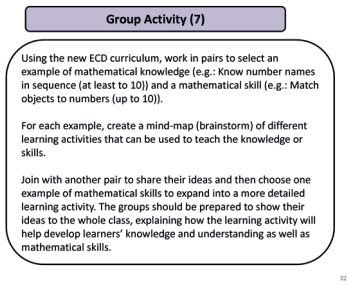
18		**Activity 2 Example 1** Identifying k, u & s in the new syllabus. There is no need to look for the skills – these are listed separately in the new syllabus. But the knowledge and understanding are grouped together – so ask the participants which is which. (The answers are: 1) Name = knowledge; 2) Understand = understanding (obviously!); 3) Explain = understanding.
19		**Activity 2 Example 2** The answers are: 1) name = knowledge; 2) Explain = understanding; 3) Understand = understanding; 4) Outline = understanding. This last one leaves scope for discussion – but to be able to outline something one needs to understand it.
20		**Activity 3** Track the syllabus units into the textbooks. Ask participants to work in pairs to identify examples of knowledge, skills and understanding. They will need both the syllabus units and the corresponding textbook for this. When they have finished, go over what they have found, discussing their answers. NB We shall use these same units and textbooks again later (Slide 31) for **Activity 6** when we shall look at the learning experiences in the textbooks.
21		Coffee Cup. Time for a break!

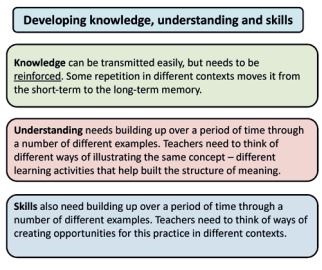
		Session 2
22		This repeats **Slide 3** to introduce the session. No need to read it through again.

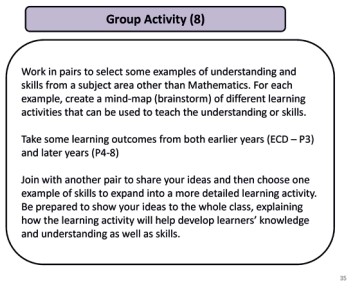
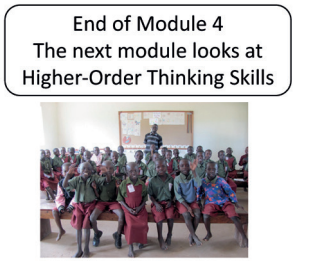
23		Read as before. This introduces a new example that illustrates the three forms of learning. This slide illustrates knowledge through the example of "knowing that metals expand when heated".
24		Read as before. This slide illustrates what **understanding** means in this same context. It involves putting together knowledge about atoms, how the vibration of atoms is heat, and how the vibration of atoms moves them apart. This then becomes a concept.
25		Read as before. The skill in this context is using the 'co-efficient of linear expansion' to calculate the amount of expansion for a given rise in temperature.
26		This slide looks at how knowledge, understanding and skills are developed. Read each one separately.
27		**Activity 4** Give participants a sample of Pilot Study pupils' books and teacher guides. Ask them to look for the different opportunities that are created to develop understanding and skills in different contexts. Ask them to work in pairs to identify these and share them with the larger group, linking them to the 'Learning Outcomes' of the syllabus unit.

28		**Activity 5** This time the focus is on progression between earlier and later years. Give them Pilot Study pupils' books and teacher guides for the same subject at an earlier and later year. Ask them to work in pairs to identify how older learners are challenged in different ways, linking this knowledge, skills and understanding. Explain their findings to the group.
29		Coffee Cup. Time for a break! (Do they remember Pavlov's dog?)

		Session 3
30		This repeats **Slides 3** & 22 to introduce the session. No need to read it through again.
31		**Activity 6** Give each group some syllabus units and the textbook and teacher guide in which they appear. Ask them to track some syllabus units into the textbooks and identify the learning experiences planned for different sorts of learning outcome (k, u & s). They should feed back to the class.

32		**Activity 7** Give each group a copy of the ECD Curriculum and Guidance. Ask them to select an example of mathematical knowledge (e.g. Know number names in sequence (at least to 10)) and a mathematical skill (e.g. Match objects to numbers (up to 10)). For each example, they should create a mind-map (brainstorm) of different learning activities that can be used to teach the knowledge or skills. Join with another pair to share their ideas and then choose one example of mathematical skills to expand into a more detailed learning activity. The groups should be prepared to show their ideas to the whole class, explaining how the learning activity will help develop learners' knowledge and understanding as well as mathematical skills.
33		Coffee cup. Time for a break!

		Session 4
34		It's the same introductory slide again. No need to read it.

35		**Activity 8** Ask each pair to select some examples of understanding and skills from a subject area other than Mathematics. For each example, create a mind-map (brainstorm) of different learning activities that can be used to teach the understanding or skills. Take some learning outcomes from both earlier years (ECD – P3) and later years (P4-8). Join with another pair to share your ideas and then choose one example of skills to expand into a more detailed learning activity. Be prepared to show your ideas to the whole class, explaining how the learning activity will help develop learners' knowledge and understanding as well as skills.
36		Final Slide. Time to go home!

Module 5:
Higher-Order Thinking Skills (HOTS)

This module explores the concept of critical thinking and problem solving, the thought processes that are involved and how these can be encouraged and developed.

Course 1: How Children Learn

Module 5: Higher-Order Thinking Skills (HOTS)

This module explores the concept of critical thinking and problem solving, the thought processes that are involved and how these can be encouraged and developed.

Key Points:

- Bloom and Webb set out ways of understanding Higher-Order Thinking Skills
- Thinking and problem solving are key parts of the SS curriculum
- These are important to the learning process within subjects
- Opportunities for critical thinking and problem solving need to be identified in the syllabuses
- Learning activities that promote critical thinking and problem solving need to be planned

Outline

Session	Content
1	Bloom's Taxonomy and its hierarchy of learning • *Activity 1: Identifying Bloom's hierarchy in the old syllabuses* • *Activity 2: Identifying Bloom's hierarchy in the new syllabuses*
2	Webb's Depth of Knowledge analysis • *Activity 3: Identifying Webb's DOK in the old syllabuses* • *Activity 4: Changing a learning outcome to reflect Webb's DOK* • *Activity 5: Identifying Webb's DOK in the new syllabuses*
3	Critical and creative thinking in the student competencies • *Activity 6: Line up the competency with Bloom* • *Activity 7: Line up the competency with Webb* • *Activity 8: Identify HOTS in the new syllabuses*
4	Developing knowledge, understanding and skills in the classroom • *Activity 9: Plan post-course task*

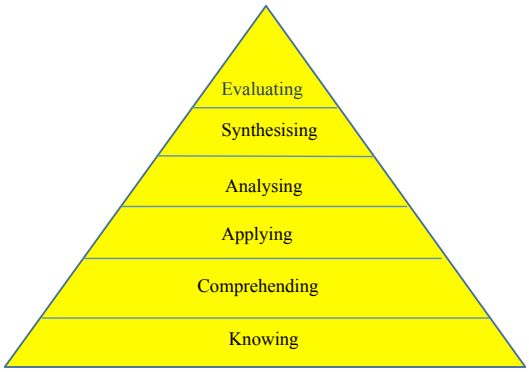
Resources

3 pages of old syllabus
Sample of new syllabus units
Curriculum Pilot materials

Background information

Blooms' Taxonomy

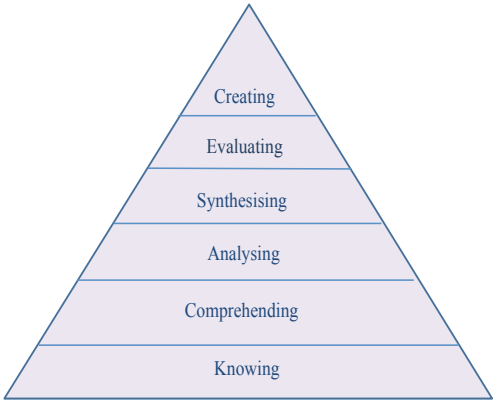
It was over sixty year ago that Benjamin Bloom wrote his "Taxonomy of Learning Objectives" (Bloom 1956) but it is still influential today. The model is always presented as a triangle:



Bloom's original model

The taxonomy suggests that within the cognitive domain, there is a hierarchy of processes with 'knowledge' as the first or lowest level and comprehending (or "understanding") next. The other four are all skills because they refer to mental operations.

One of Bloom's pupils, Lorin Anderson, amended this model in 2001 by adding "creating" and by removing "applying". He thought that analysing, synthesising and evaluating were all forms of applying.



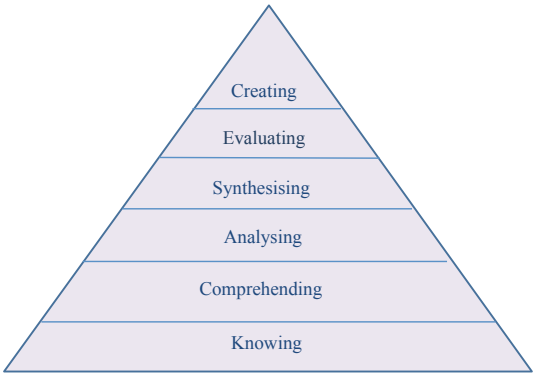
Anderson's amended model

Analysing means to examine something methodically and in detail in order to explain and interpret it. It is almost to take something apart to see what the constituent parts are.

Synthesising is the opposite, meaning to put different things together, usually to make something new – to link different ideas in a new way.

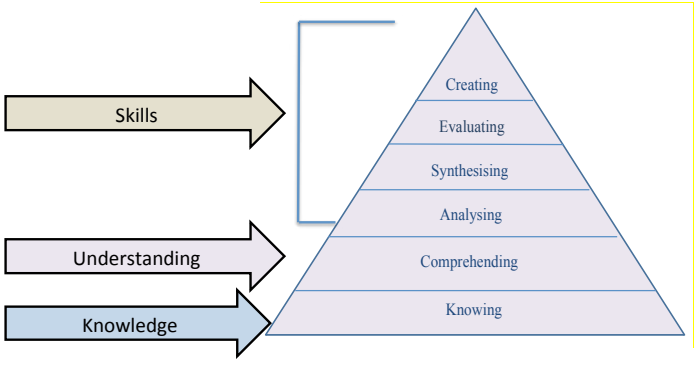
Evaluating is to make a judgement about the worth of something. This can only be done when there is understanding, and the matter has been analysed.

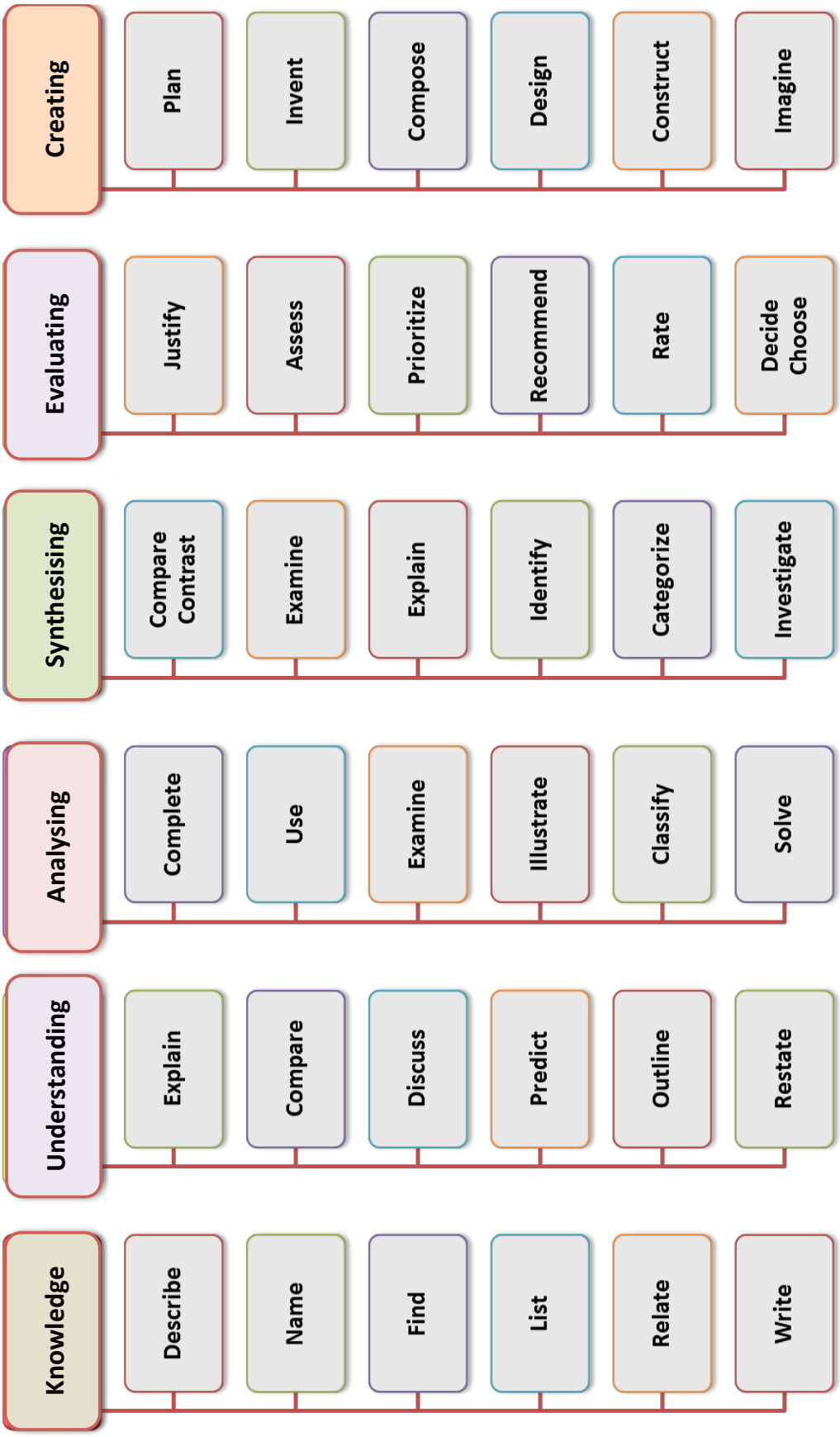
Creating, as it suggests, is the ability to come up with something entirely new: new ideas, new interpretations, new products.



The competency-based model

Application of learning is at the heart of a competency-based curriculum, and so the key implication for curriculum design is how well the curriculum is focused on these higher levels of learning. How can we ensure that learners not only acquire knowledge and develop understanding, but also learn to apply their learning by analysing, synthesising, evaluating, and creating? How do we build that into the curriculum?




Creating
Plan
Invent
Compose
Design
Construct
Imagine
Evaluating
Justify
Assess
Prioritize
Recommend
Rate
Decide
Choose
Synthesising
Compare
Contrast
Examine
Explain
Identify
Categorize
Investigate
Analysing
Complete
Use
Examine
Illustrate
Classify
Solve
Understanding
Explain
Compare
Discuss
Predict
Outline
Restate
Knowledge
Describe
Name
Find
List
Relate
Write

Webb's "Depth of Knowledge" Anaylsis (DoK)

A more recent approach was put forward by Prof Norman Webb of Wisconsin University in 1997. This saw four levels of 'Depth of Knowledge' (DOK).

Knowledge is used here in a wider sense that encompasses understanding and the ability to process and apply that knowledge. "Knowing how to ..." and "Knowing about ..." as well as "knowing that ...".

Webb's DOK has become the basis of the entrance exams for universities in the USA – as well as for a wide range of assessment of deeper understanding and application in other countries, including South Sudan and Uganda.

Webb's Depth of Knowledge Analysis (DoK)	
Level 1	**Recall and reproduction** Recall of a fact, information, or procedure
Level 2	**Application of skills and concepts** Use of information or conceptual knowledge – two or more steps
Level 3	**Strategic thinking** Requires reasoning, developing a plan or a sequence of steps, some complexity, more than one possible answer
Level 4	**Extended thinking** Requires an investigation, time to think and process multiple conditions of the problem.

Webb's analysis is used in assessment, but it also informs curriculum design.

Dr Karin Hess (2009) has helpfully combined Bloom's Taxonomy and Webb's Depth of Knowledge into a single chart which she calls a 'Cognitive Rigor Matrix'. The matrix allows teachers to examine the depth of understanding required for different tasks that might at first glance seem to be at comparable levels of complexity. More information is available at: www.karin-hess.com/cognitive-rigor-and-dok

Approaches such as these help us to plan learning in terms of greater depth, and also to find out how well our students are doing in these terms. It does not matter which one you use, or whether you find some blend that suits you best. What is important is to think about how the intellectual level is being increased, and these approaches all give us a way of looking at learning in terms of its increasing depth or complexity. The brain is an extraordinarily complex organ, and no simple taxonomy of levels will really describe what's going on when we learn something. There are, of course, many theories about how human beings learn, and although it is not the function of this book to examine them all in detail, we need to see how the major ones relate to curriculum design.

Theories of Learning

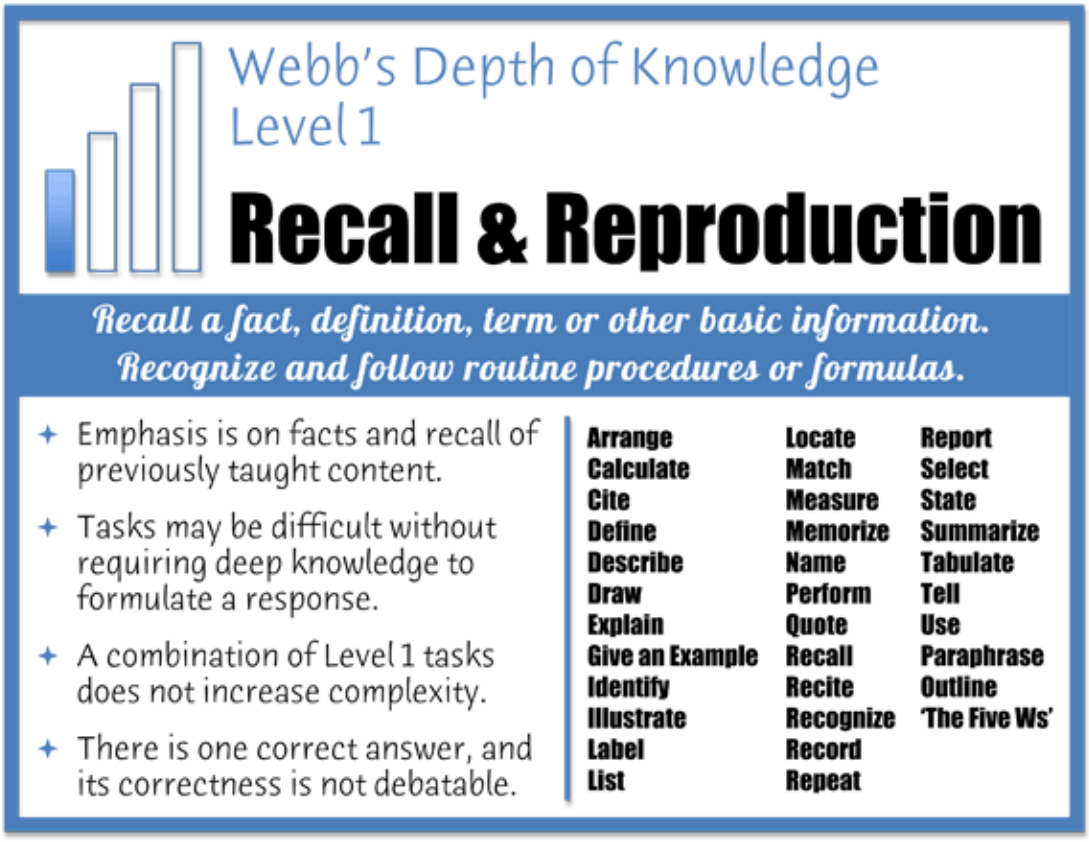
An important element of all three of the above approaches is the development of deeper understanding. This is the difference between Levels 1 and 2 of Bloom and referred to by Webb as *"conceptual knowledge"*. In each case, it refers to the stage at which a learner is able to put acquired knowledge into a framework of meaning.

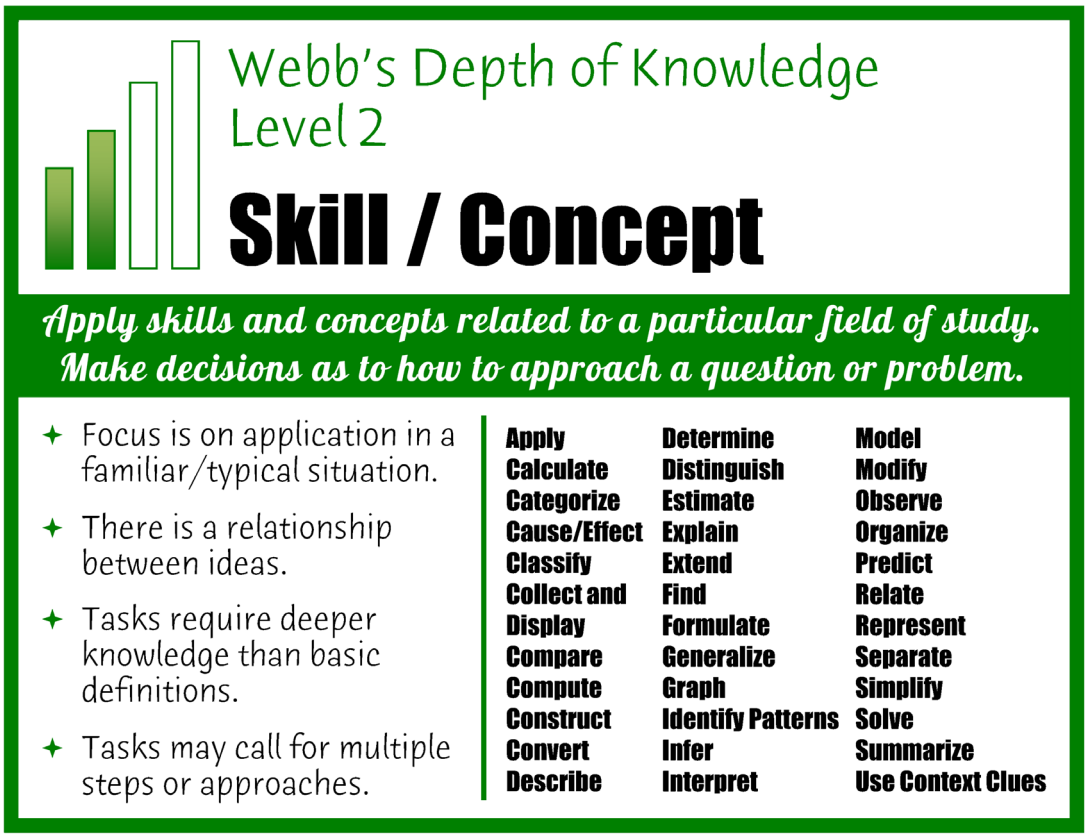
Those who take a 'constructivist' view (such as Piaget and Vygotsky) see the process of learning as one of 'constructing meaning'. In this theory, when we learn something new, we need to fit this new learning into the meaning we already hold of the world. This 'already-held meaning' or set of understandings is called a 'schema'. Jean Piaget (1969) first used the term to refer to the cognitive structures that enable thinking. The schema represents a series of interconnected pieces of knowledge and understandings that allow us to make sense of our experiences. The schema becomes more extensive as we encounter more experiences. (We should know that the word "schema" is singular, although it may sound plural. More than one schema is technically called "schemata" – see Goffman below - but most people say "schemas"!)

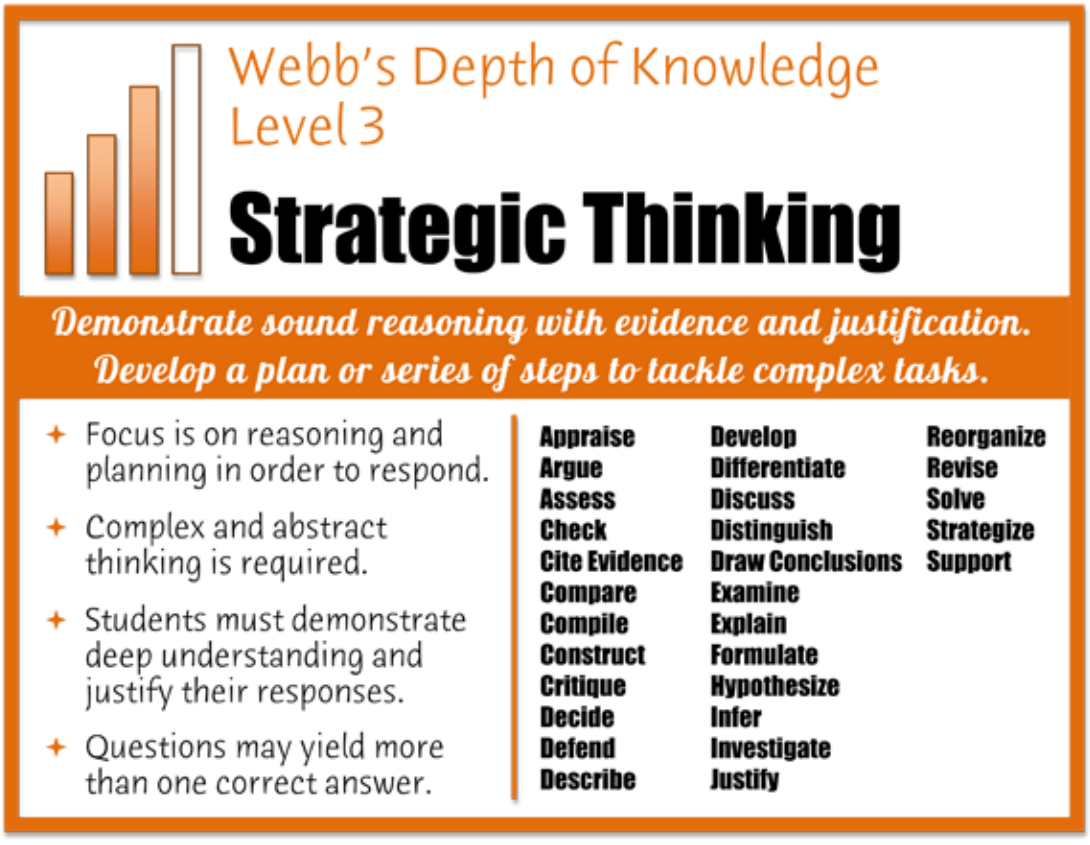
Lev Vygotsky (1978) took this into a social context and saw these meanings as socially constructed, with language (particularly talk) playing a key part in learning. It is through talking to others (particularly "more experienced others" such as teachers, but also with fellow learners) that learners are able to make sense of their experiences. This is the reason why there is emphasis on group and paired discussions. More recent researches, such as Lave and Wenger (1991), emphasise this social dimension: *"learning is fundamentally a social process and not solely in the learner's head"*.

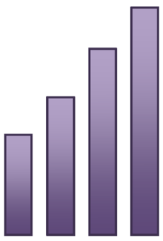
Erving Goffman (1974) developed the idea of 'frames' to refer to *"schemata of interpretation"* which allow individuals or groups *"to locate, perceive, identify, and label events and occurrences, thus rendering meaning, organizing experiences, and guiding actions"*. This term became more prevalent in education to describe the way in which understanding is constructed, but it essentially refers to the same thing: a set of understandings.

Recent neuro-scientific research gives us a different way of understanding learning. We see it now in terms of the development of 'neural networks' that become increasingly complex as we learn more and as extra neural connections are made. Usha Goswami (2008) suggests that *"As we learn language and attach labels to concepts, the neural networks become more complex, and as we learn new information via language, fibre connections will form in response that encode more abstract information and therefore more abstract concepts"*. In short, as we learn more (i.e. have more experiences), so the neural networks become more complex, and when they are more complex, we are enabled to understand more.




Webb's Depth of Knowledge
Level 2
Skill / Concept
Apply skills and concepts related to a particular field of study.
Make decisions as to how to approach a question or problem.
Focus is on application in a familiar/typical situation.
There is a relationship between ideas.
Tasks require deeper knowledge than basic definitions.
Tasks may call for multiple steps or approaches.
Apply
Calculate
Categorize
Cause/Effect
Classify
Collect and Display
Compare
Compute
Construct
Convert
Describe
Determine
Distinguish
Estimate
Explain
Extend
Find
Formulate
Generalize
Graph
Identify Patterns
Infer
Interpret
Model
Modify
Observe
Organize
Predict
Relate
Represent
Separate
Simplify
Solve
Summarize
Use Context Clues


Webb's Depth of Knowledge
Level 3
Strategic Thinking
Demonstrate sound reasoning with evidence and justification.
Develop a plan or series of steps to tackle complex tasks.
Focus is on reasoning and planning in order to respond.
Complex and abstract thinking is required.
Students must demonstrate deep understanding and justify their responses.
Questions may yield more than one correct answer.
Appraise
Argue
Assess
Check
Cite Evidence
Compare
Compile
Construct
Critique
Decide
Defend
Describe
Develop
Differentiate
Discuss
Distinguish
Draw Conclusions
Examine
Explain
Formulate
Hypothesize
Infer
Investigate
Justify
Reorganize
Revise
Solve
Strategize
Support



Webb's Depth of Knowledge Level 4

Extended Reasoning

Integrate knowledge from multiple sources.
Make real-world connections in unique and creative ways.

- Tasks require complex reasoning, planning and thinking.
- Activities have multiple steps.
- Students employ and sustain strategic thinking processes over an extended period of time.
- Students may be asked to relate concepts within the content area and among other content areas.

Analyze
Apply Concepts
Appraise
Compose
Connect
Create
Critique
Defend
Design
Evaluate
Extend
Formulate
Judge
Justify
Modify
Plan
Project
Propose
Prove
Reflect
Report
Support
Synthesize

Social Studies Primary 7	Unit 1: The Rise and Fall of Civilisations
Learn about	**Key inquiry questions**
Learner should find out about the rise and fall of civilisations over time and identify the areas where it took place using relevant sources like maps, text books and descriptions. They should compare in detail at least two civilisations like the Mayas, Aztecs, Khymer Empire or Romans. Learners should consider what impact these civilisations have on South Sudan and the rest of the world today. Learners should deepen their understanding of the roots of these civilisations by studying maps of where they took place, looking for physical features and communication routes for example to help explain the reason for settlement. Learners should develop an understanding of periods of history by analyzing characteristics of different periods, assessing which factors were key to their successes and failure. They should work together to research the relationships between characteristic features and use this knowledge to take part in informed debates about different periods in history, questioning what can be learnt from events and styles of leadership that could help support sustainable developments in South Sudan today.	• What are the key features of the rise of civilisations? • Why do so many civilisations decline? • What resources provide us with the best information about the past? • What are the most significant outcomes from past civilisations that affect us today? • How does studying maps help us to understand about the development of civilisations? • What changes would you have made to some of the events that have taken place in the past?

Learning outcomes

Knowledge and understanding	Skills	Attitudes
• Describe two civilisations in detail • Explain the factors that contribute to the rise and decline over time of civilisations • Know the features of debate and how to research effectively in order to be able to make a valuable contribution • Develop a sense of period by knowing about the characteristic features of periods studied • Use maps to recognise settlement patterns and communication routes	• Explore the locations of civilisations using maps • Investigate factors that led to the rise and decline of civilisation • Compare characteristic features of civilisations • Outline the benefits the modern world from civilisations from the past	• Value the resources that describe the past to us • Appreciate the changes brought about by civilisation to society today • Respect the challenges faced by today's society with respect to some events that happened in the past

Contribution to the competencies:
Critical thinking: Using a range of resources to find out about the past
Communication: Read and comprehend a variety of text types to find out about civilisations from the past
Co-operation: During debate, be tolerant of the view of others
Culture: Take pride in the way that aspects of past civilisations have shaped society in South Sudan in a positive way

Tutor Course Notes

Key Messages and Approaches

This module is similar to Module 3 with a lot of paired and group work looking at the sorts of learning experiences that are needed to develop knowledge, understanding and skills.

The key text is on the slides. It is usually best to read the slides aloud, stopping to check that participants understand, or get some participants to read a section in turn. There is supplementary text on the 'Workbook for Teachers'.

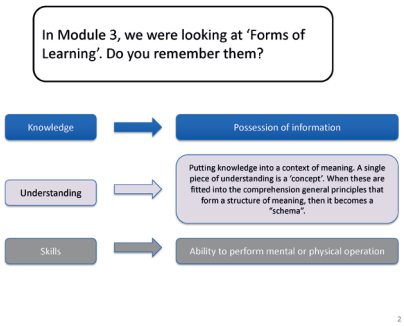
Some activities require looking at syllabus units and textbooks. It is always better for participants to share these rather than have one each, because this encourages discussion.

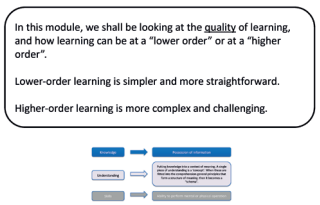
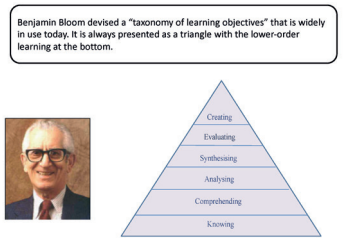
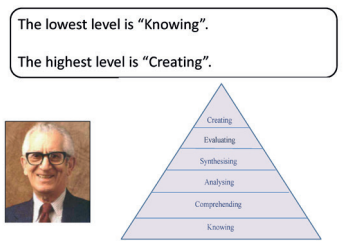
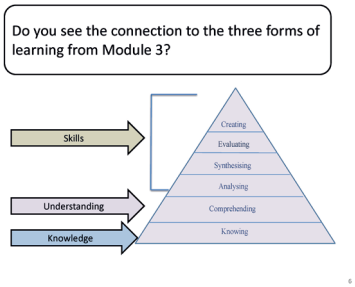
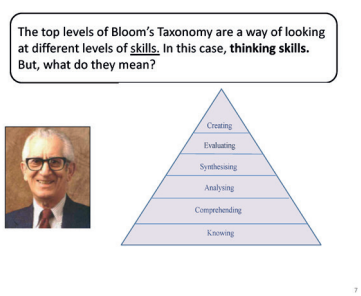
Nearly all the activities are discussion-based. Participants should be put into pairs, and the pairs put together into groups of four or six. If there is an uneven number of participants, then some will need to work in a three.

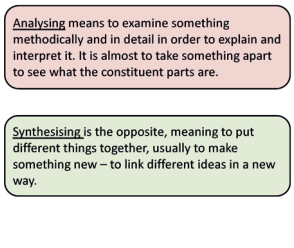
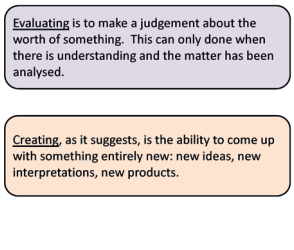
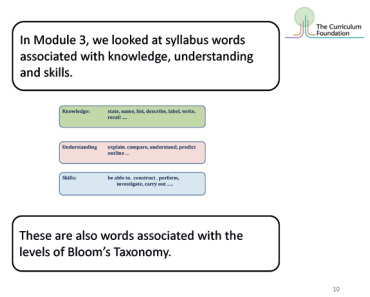
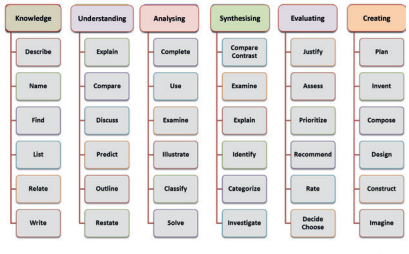
Participants should be invited to discuss each question in pairs, then prepare to report back to the larger group or to the class.

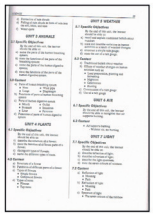
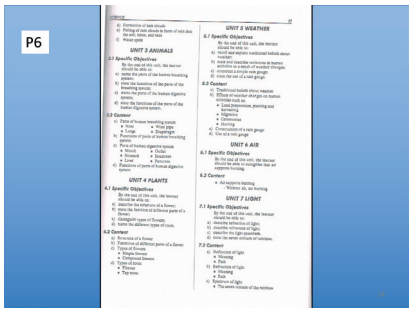
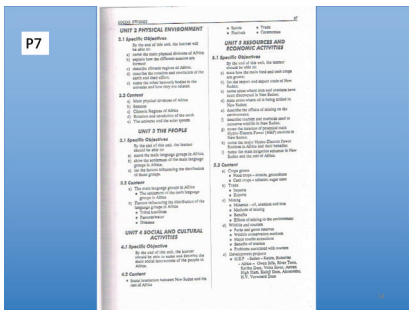
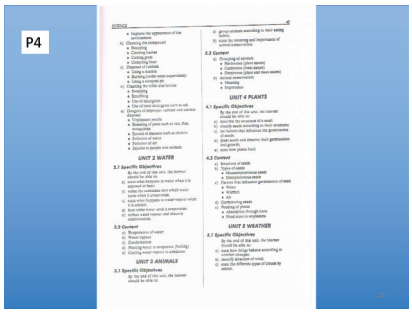
Depending on the size of the class, it may not be possible for every group to report back on every activity. So, it will be necessary to ensure that every group gets a chance during the day, and also that it is not always the same person who speaks on behalf of the group.

Presenting the Slides

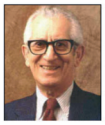
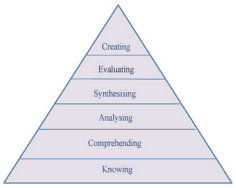
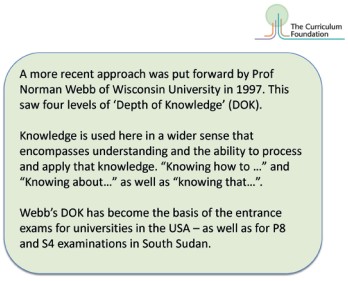
		Session 1
1		Introductory slide – show during arrival.
2		This slide is just to remind participants of the previous module. No need to read it all out again.

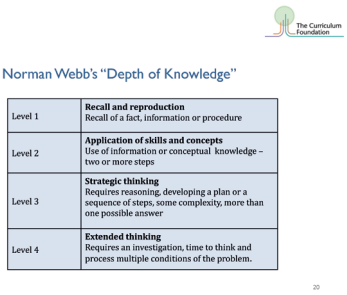
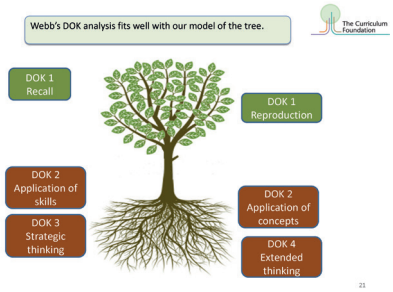
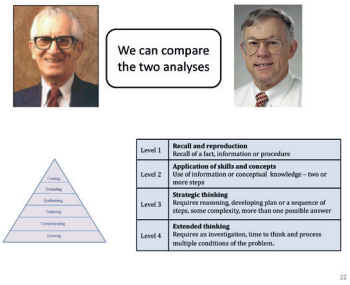
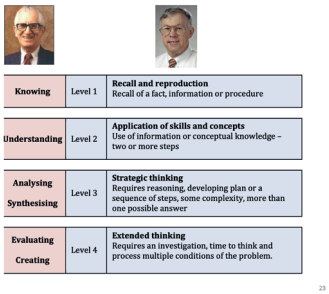
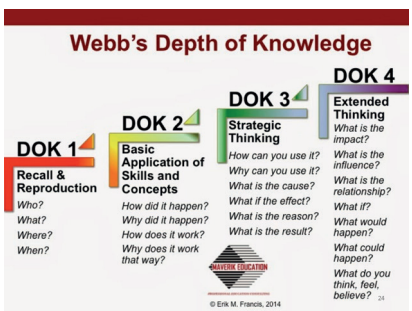
3		Read it aloud as participants follow – or get some participants to do so. It makes the point that "higher order" and "lower order" are about **quality**.
4		The picture is Benjamin Bloom, who devised the famous taxonomy. It was over sixty years ago that Benjamin Bloom wrote his "Taxonomy of Learning Objectives", but it is still influential today. The model is always presented as a triangle. The taxonomy suggests that within the cognitive domain, there is a hierarchy of processes with 'knowledge' as the first or lowest level and comprehending (or "understanding") next. The other four are all skills because they refer to mental operations. There is more about this in the coursebook.
5		This merely draws attention to the highest and lowest.
6		This makes the connection to the three forms of learning (knowledge, understanding and skills) from Module 3. The highest four are all skills because they refer to mental operations.
7		This slide introduces the next two by raising the question of what "analysing, synthesising, evaluating and creating" actually mean.

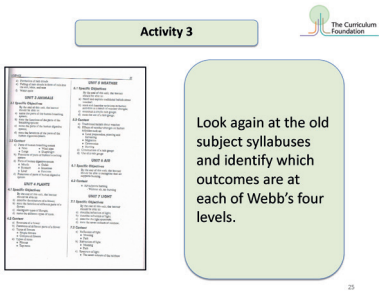
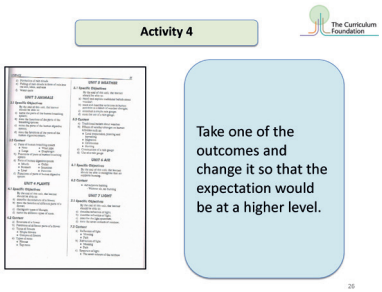
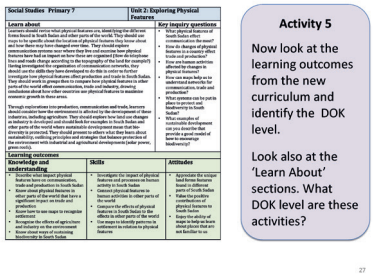
8		Read these through one at a time. Analysing means to examine something methodically and in detail, in order to explain and interpret it. It is almost to take something apart to see what the constituent parts are. *In Science, we could analyse statistics of life expectancy and then draw conclusions. In English, we could analyse a poem to see how the author achieved their effect.* Synthesising is the opposite, meaning to put different things together, usually to make something new – to link different ideas in a new way. *In Social Studies, we could put together several historical accounts to give our own view.*
9		Read these through one at a time. Evaluating is to make a judgement about the worth of something. This can only be done when there is understanding, and the matter has been analysed. *In Science we might decide which is the best way of conducting an experiment or finding something out – this is an evaluation.* Creating, as it suggests, is the ability to come up with something entirely new: new ideas, new interpretations, new products. *This does not have to be in the Arts. A new way of interpreting history is also creative.*
10		This introduces the next slide about syllabus words by linking to Module 4.
11		This gives words found in syllabuses that are linked to Bloom's levels. There is no need to read all these out – but participants can refer to them in the next activity. *Participants might notice that some words are repeated – this is because they have slightly different meanings in the different contexts.*

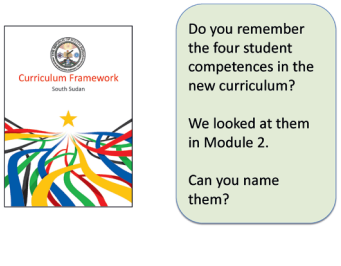
12	 **Activity 1** Work in pairs and look at the old syllabus units we used in Module 3. Analyse the "specific learning outcomes' in terms of Bloom's Taxonomy.	**Activity 1** Using the same three examples from the old syllabuses, put participants in pairs to 'Analyse' *(the word is used deliberately!)* the "specific learning outcomes" in terms of Bloom's Taxonomy.
13	P6 	Example 1. Pairs should also have these on paper. You could go through the first few as a class. They will soon spot that they are all at the lowest level.
14	P7 	Example 2
15	P4 	Example 3
16	**Activity 2** Now do the same for some learning outcomes from the new curriculum. Focus on the "Skills" column. **Learning outcomes** **Knowledge and understanding** • Name some common water and air-borne diseases, describe their causes, effects and prevention; stress and depression; home nursing • Explain the structures and functions of human digestive and respiratory systems • Understand hygienic food preparation techniques; nutrition needs for good health and for special groups • Outline the sources of water, methods of collection & purification; pollution and its impact **Skills** • Observe carefully • Predict what might happen • Collect and present results appropriate in writing or drawing • Interpret results accurately • Report findings appropriately **Attitudes** • Appreciate hygiene food preparation • Appreciate control of water-borne diseases	**Activity 2** Now do the same with the new syllabuses. As before, pairs should also have these on paper. They should do more than one if there is time.

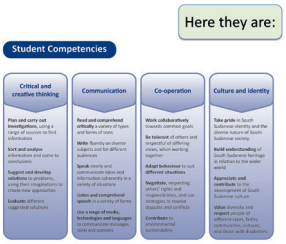
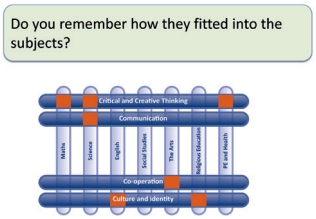
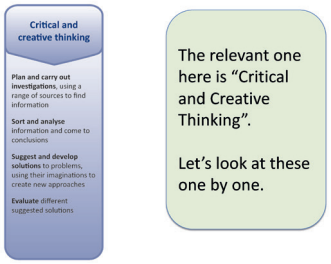
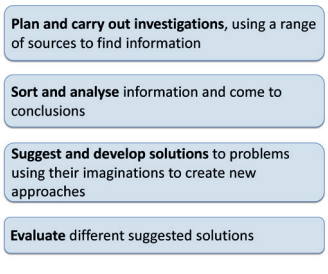
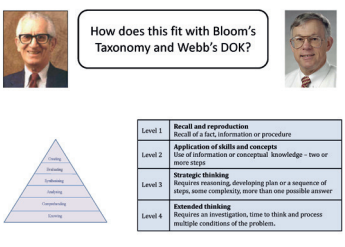
17		Coffee Cup. Time for a break!

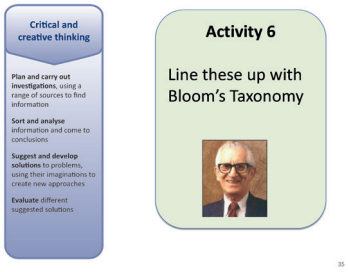
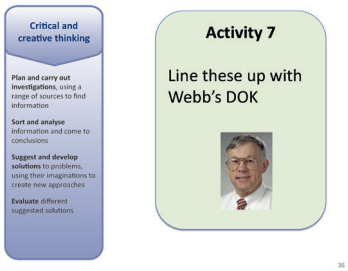
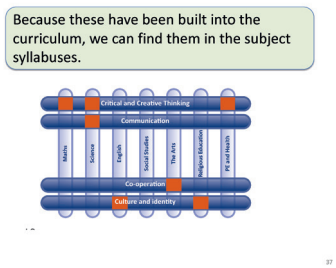
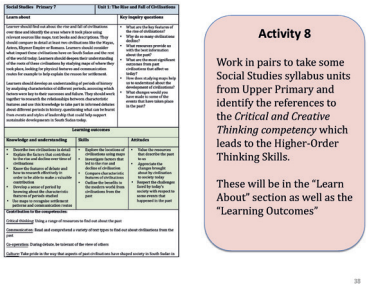
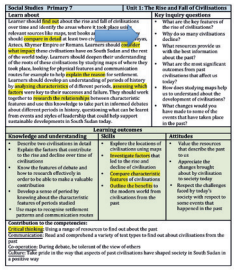
		Session 2
18	 	This is just an introductory slide to link to the previous session.
19	 	This is the main man. Read the slide as before. There is more about Webb in the coursebook. The key points are: • He sees four levels • When he says "Depth of Knowledge", he is using "knowledge" to refer to any learning • His levels are used for examinations throughout the world.

20		Here are the four levels. Read these through. Ask participants to discuss in pairs.
21		Webb's levels link to our model of the tree from Module 2. The 3 higher levels correspond to the deep roots of learning.
22		This is just an introductory slide saying that we can compare Bloom and Webb.
23		This slide is the actual comparison. Read these through and ask participants to discuss in pairs.
24		This gives words found in syllabuses that are linked to Webb's levels. There is no need to read all these out – but participants can refer to them in the next activity.

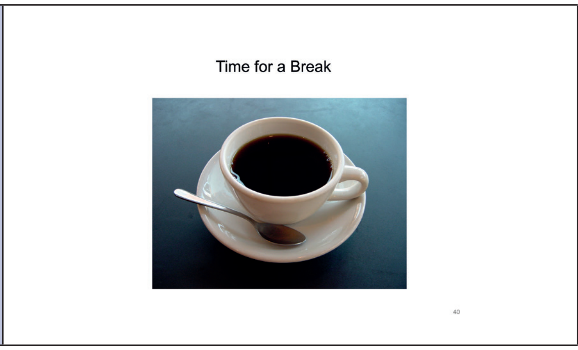
25		**Activity 3** Look again at the old subject syllabuses and identify which outcomes are at each of Webb's four levels. There is no point in doing all three sheets because they are all at Webb's level 1.
26		**Activity 4** Take one of the outcomes and change it so that the expectation would be at a higher level. (This requires creativity and not just analysis!) For example, 2.1 d is "State the function of the parts of the human digestive system". This is at DOK 1. If we changed it to "Explain which is the most important part of the human digestive system" it would become DOK 3 because it now involves reasoning, some complexity, and there is more than one possible answer.
27		**Activity 5** Now ask participants to look at the learning outcomes from the new curriculum and identify the DOK level. Remind them to look also at the 'Learn About' sections. What DOK level are these activities?
28		Coffee Cup. Time for a break!

		Session 3
29		Ask if participants can remember the four competencies. They can talk in pairs first.

30		Here are the answers!
31		This reminds participants how the four competencies fit with the subjects.
32		The relevant one here is "Critical and Creative Thinking". There is no need to read this here – the next slide shows these separately.
33		Here are the four parts of "Critical and Creative Thinking". Read them one at a time.
34		Don't read all this out! But participants will want to refer to it in the next activity.

35		**Activity 6** Line these up with Bloom's Taxonomy. *Ask participants to work in pairs to look at each part and suggest which of Bloom's levels they meet.*
36		**Activity 7** Now line these up with Webb's DOK levels.
37		This slide introduces the next activity.
38		**Activity 8** Work in pairs to take some Social Studies syllabus units from Upper Primary and identify the references to Critical Thinking and Higher-Order Thinking Skills. These will be in the "Learn About" section as well as the "Learning Outcomes". **Look at the next slide before starting!**
39		This gives an example of how to do this activity. The highlighted words all relate to one or other of the four parts of Critical and Creative Thinking. Now the participants can do a different example from the syllabuses.

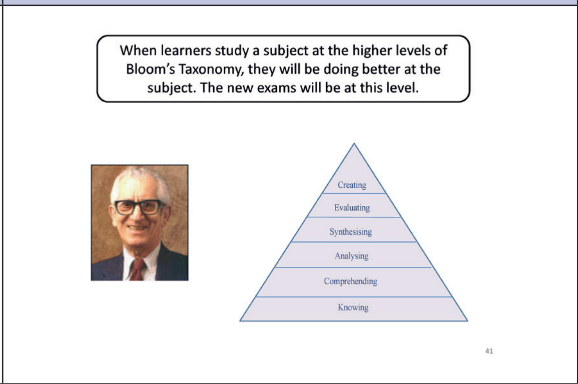
40



Coffee Cup. Time for a break!

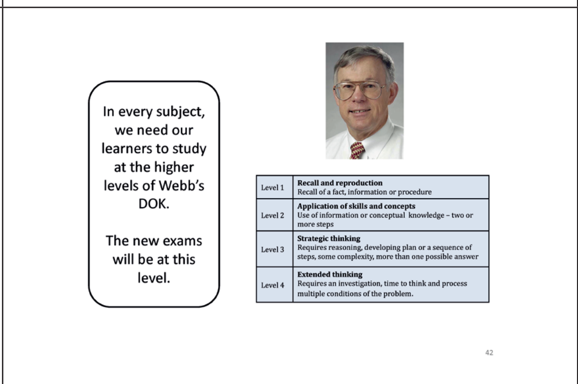
Session 4

41



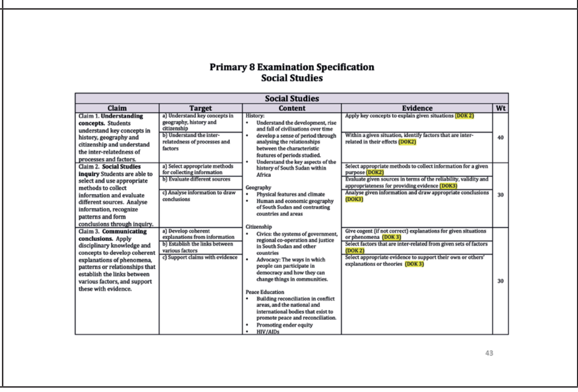
Point out to participants that when learners study a subject at the higher levels of Bloom's Taxonomy, they will be doing better at the subject. The new exams will be at this level.

42



Point out to participants that in every subject, we need our learners to study at the higher levels of Webb's DOK. The new exams will be at this level.

43

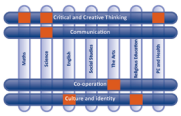


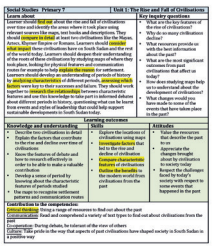
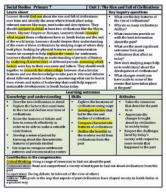
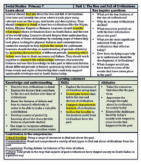
Primary 8 Examination Specification
Social Studies

Social Studies				
Claim	**Target**	**Content**	**Evidence**	**Wt**
Claim 1. **Understanding concepts.** Students understand key concepts in history, geography and citizenship and understand the inter-relatedness of processes and factors.	a) Understand key concepts in geography, history and citizenship b) Understand the inter-relatedness of processes and factors	History: • Understand the development, rise and fall of civilisations over time • develop a sense of period through analysing the relationships between the characteristic features of periods studied. • Understand the key aspects of the history of South Sudan within Africa	Apply key concepts to explain given situations (DOK 2) Within a given situation, identify factors that are inter-related in their effects (DOK2)	40
Claim 2. **Social Studies inquiry** Students are able to select and use appropriate methods to collect information and evaluate different sources. Analyse information, recognize patterns and form conclusions through inquiry.	a) Select appropriate methods for collecting information b) Evaluate different sources c) Analyse information to draw conclusions	Geography • Physical features and climate • Human and economic geography of South Sudan and contrasting countries and areas	Select appropriate methods to collect information for a given purpose (DOK2) Evaluate given sources in terms of the reliability, validity and appropriateness for providing evidence (DOK3) Analyse given information and draw appropriate conclusions (DOK3)	30
Claim 3. **Communicating conclusions.** Apply disciplinary knowledge and concepts to develop coherent explanations of phenomena, patterns or relationships that establish the links between various factors, and support these with evidence.	a) Develop coherent explanations from information b) Establish the links between various factors c) Support claims with evidence	Citizenship • Civics: the systems of government, regional co-operation and justice in South Sudan and other countries • Advocacy: The ways in which people can participate in democracy and how they can change things in communities. Peace Education • Building reconciliation in conflict areas, and the national and international bodies that exist to promote peace and reconciliation. • Promoting ender equity • HIV/AIDs	Give cogent (if not correct) explanations for given situations or phenomena (DOK 3) Select factors that are inter-related from given sets of factors (DOK 2) Select appropriate evidence to support their own or others' explanations or theories (DOK 3)	30

43

This shows the new Examination Specifications for P8 Social Studies. There is no need to read out all this. Point out the final column where each one is referenced to Webb's DOK levels. **So these DOK levels are important!**

44	Learners will not reach these levels unless they have the right learning experiences. Lessons must encourage Higher-Order Thinking.  Level 1 – Recall and reproduction – Recall of a fact, information or procedure Level 2 – Application of skills and concepts – Use of information or conceptual knowledge – two or more steps Level 3 – Strategic thinking – Requires reasoning, developing plan or a sequence of steps, some complexity, more than one possible answer Level 4 – Extended thinking – Requires an investigation, time to think and process multiple conditions of the problem. 44	Learners will not reach these levels unless they have the right learning experiences. Lessons must encourage Higher-Order Thinking.
45	The key to attaining the higher levels is to work through the first three student competencies. If learners are *thinking critically and creatively, communicating* and *co-operating*, they will almost inevitably attain the higher levels.  45	The key to attaining the higher levels is to work through the first three student competencies. If learners are *thinking critically and creatively, communicating and co-operating*, they will almost inevitably attain the higher levels.
46	**Activity 9** **Preparation for school-based task** *Select at least four syllabus units and identify where there are opportunities for critical and creative thinking; relate these to the learning theories that have been studied.* 46	**Activity 9** Preparation for school-based task *"Select at least four syllabus units and identify where there are opportunities for critical and creative thinking; and relate these to the learning theories that have been studied."*
47	**Assessment Requirements** The presentation should set out for each of the four syllabus units chosen: • A description of the syllabus unit referring to **Learning Outcomes** and to the teaching and learning approaches outlined in the **Learn About** section. • The opportunities that the unit presents for critical and creative thinking (This should include those contained in the unit and others that the teacher might create) • The relationship of this to one or more of the learning theories that have been studied. 47	These are the assessment requirements. The presentation should set out for each of the four syllabus units chosen: • A description of the syllabus unit referring to **Learning Outcomes** and to the teaching and learning approaches outlined in the **Learn About** section. • The opportunities that the unit presents for critical and creative thinking (This should include those contained in the unit and others that the teacher might create). • The relationship of this to one or more of the learning theories that have been studied.

48	We looked at a syllabus unit and identified the opportunities for *Critical and Creative Thinking.* Do you remember? 	Remind participants that we have already looked at a syllabus unit and identified the opportunities for *Critical and Creative Thinking.*
49	Your post-course task is to do the same – but this time to do it for at least **two** syllabus units. You can start the task now, working in pairs or a small group. We can learn from each other! 	The post-course task is to do the same – but this time to do it for at least four syllabus units. You can start the task now, working in pairs or a small group. *We can learn from each other – this assessment task is not like an examination – other people can help. When we work in a school, we work as part of a* ***team****. We all help each other.*
50	• Choose a unit and describe what it is about. • Identify opportunities for critical and creative thinking (you could write these down, or highlight them) • Say how these are related to one or more of the theories we looked at in Module 2: (Piaget, Vygotsky, Montessori, Pavlov, Skinner, Ausubel, Goswami) 	The task is to • Choose a unit and describe what it is about • Identify opportunities for critical and creative thinking (you could write these down, or highlight them) • Say how these are related to one or more of the theories we looked at in Module 3 (Piaget, Vygotsky, Montessori, Pavlov, Skinner, Ausubel, Goswami)
51	End of Module 5 – and the end of Course 1 The next course looks at Curriculum Expectations 	End of Module 5 – and end of Course 1!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