'No limits: Education for success in the 21st century' - Aspirations Curriculum Statement

The Aspirations Academies Trust academies are working together to develop a common curriculum approach from the ages of 4 to 18. The main focus is for the new curriculum to be gradually introduced in Years 4, 7 and 12 in September 2019. The expectation is for each academy to follow the collective curriculum outlines and philosophy whilst also putting its own personal stamp on their own curriculum. The shared, collective curriculum will enable sufficient commonality of subjects, topics and assignments to enable cross-Trust moderation and raising of standards. Currently in other year groups the curriculum is unique to each academy, however, in the primary phase there is commonality in that the focus is on English, Maths and the Aspirations (creative) curriculum, whilst in secondary phase there has been a move towards using the same GCSE and A level subject syllabi in order to drive the curriculum across all year groups. The curriculum in each Aspirations Academy will develop significantly over the coming years. This document aims to set down the rationale and principles of the general approach to the curriculum in Aspirations Academies and also forms the basis of each Academy's curriculum statement.

Curriculum Background

The curriculum of a school requires three elements:

1. Intent: A framework for setting out the aims of a programme of education, including the knowledge, understanding and skills to be gained at each stage.
2. Implementation: Translating the framework over time into a structure and narrative, within an institutional context
3. Impact: Evaluating what knowledge, understanding and skills pupils have gained against expectations.

The Aspirations Academies Trust (Aspirations) expects the curriculum in each academy to adhere to the above three elements and to additionally value ingenuity, creativity and risk-taking. Aspirations recognise that, as well as knowledge, students need to develop their ability and skills to apply and repurpose knowledge in order to survive in a rapidly changing world. In applying knowledge to real-world contexts and allowing young learners to take the lead in using this knowledge to find solutions and answers, learning is deepened.

Aspirations considers the greatest impact of the curriculum to be high rates of pupil progress. Progress in:

A. **Development of knowledge: Progress in <u>knowing</u> more and <u>remembering</u> more. The future requires the acquisition and application of a wide range of knowledge.**
B. **The ability to apply knowledge: Progress in knowledge being applied in more challenging, relevant and more engaging ways.**
C. **The acquisition of 21st century skills to translate knowledge into actions for success:**

A. The importance of developing a focus on knowledge to help improve the rate of progress

Students from a wide range of backgrounds naturally arrive in school with different levels of knowledge acquisition, hence a well-rounded, knowledge-specific curriculum is required to overcome inequality of opportunity. This knowledge-rich curriculum requires careful consideration of the sequence of knowledge so that it is pedagogically coherent and

reflects the specific ideas and language in each discipline being taught. It emphasises knowledge to be remembered and constantly built upon, not merely encountered and fleetingly experienced. This systematic and cumulative knowledge includes:.

- Knowledge of vocabulary (and literacy in general)
- Knowledge of events, people and places..
- Knowledge of **ideas and concepts** drawn from subjects.
- Knowledge of procedures.
- Knowledge of interconnected webs of concepts (or `schemata').

The importance of knowledge acquisition for progress has been highlighted by HMCI *'Twelve years of education should give children a lot more than a disposition to learn and some ill-defined skills. Yet the evidence from the first stage of our research this year is that* ***the focus on substance****, on* ***the knowledge that we want young people to acquire****, is often lost……If their entire school experience has been designed to push them through mark-scheme hoops, rather than developing* ***a deep body of knowledge****, they will struggle in later study.'*

Aspirations understand the need for a deep, layered approach to knowledge acquisition in which all age related expected knowledge is carefully mapped out, delivered, monitored and applied. Aspirations recognise that students suffer in the following ways when pupils do not have the knowledge they need:

- Knowledge deficits accumulate when layered on top of one another in a curriculum sequence.
- This accumulation of dysfluency (gaps) limits and may even prevent acquisition of complex skills that depends on their prior knowledge.
- This problem is called `cumulative dysfluency'.

B. The importance of applying knowledge in increasingly more challenging, relevant and more engaging ways.

Students naturally compartmentalise what they learn according to the specific context in which that learning occurred. This makes it difficult for students who haven't fully mastered the material to:

1. Recognise when they have applicable knowledge that they could use in the current situation.
2. Recall and apply that knowledge accurately and appropriately.

To help students appreciate that their knowledge and skills can be effectively applied in multiple contexts, this needs to be a conscious part of the teaching process. Situations and issues need to be used for students to draw on the knowledge and skills they have already learned, and then identify it and apply it to the issue or situation.

This "Transfer" of knowledge and skills is a cognitive practice whereby a learner's mastery of knowledge or skills in one context enables them to apply that knowledge or skill in a different context. Because transfer signals that a learner's comprehension allows them to recognise how their knowledge can be relevant and to apply it effectively outside original learning conditions, transfer is often considered a hallmark of true learning (Barnett & Ceci, 2002). Learning theory suggests that a variety of teaching strategies can help students

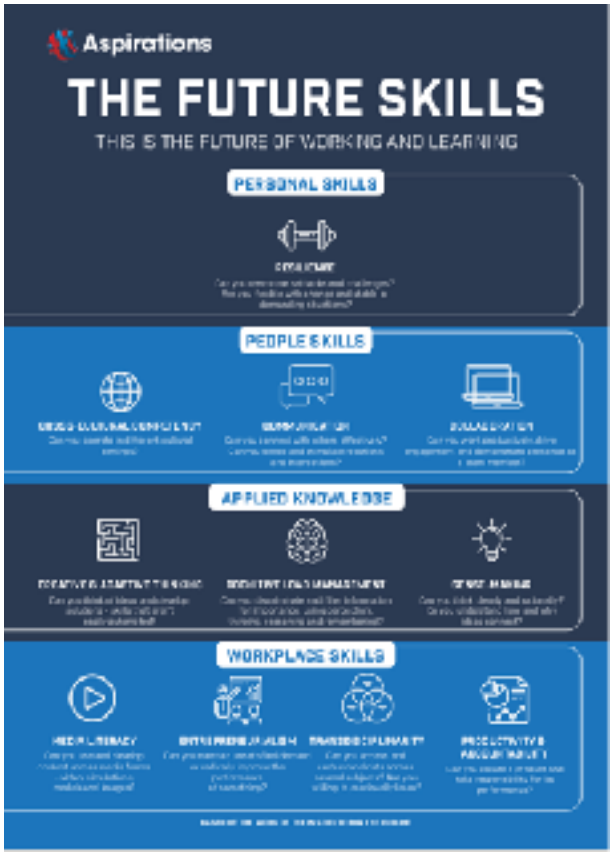
reach the intellectual maturity to transfer their knowledge, including practice with conceptual understanding, comparative scenarios, and clear road maps for learning (NRC, 2000).

Aspirations work extensively with local and national employers to provide real life experiences of the world of work for students whilst at the same time providing real-life issues and problems for students to apply their knowledge and skills. These experiences are embedded throughout the curriculum particularly in the Applied Trans-discipline Learning assignments.

C. The importance of the acquisition of 21st century skills

'Deloitte recently analysed 350 careers and found that the numbers of jobs available in 160 of them is declining. A PWC report has suggested that more than a third of jobs in the UK are at high risk of automation by the early 2030's. The computer giant Dell survey saw business leaders predicting that 85% of the jobs students today will be doing in the 2030's do not yet exist. So what subjects should our children be learning at primary school, GCSE and university, if they go to university at all? To face up to the wildly uncertain future our children will need not just academic qualifications but above all emotional and mental flexibility and resilience.' The Telegraph 28/7/18

There are a range of `Drivers of change' which are influencing the way we work and learn, alongside the `Future skills' which are the future of working and learning (Extended description of these skills in the appendix):



To be successful in the future, individuals will need to demonstrate foresight in navigating a rapidly shifting landscape of organisational forms and skill requirements. People will be

called upon to continually reassess and develop the skills they need, alongside the acquisition and application of a wide range of knowledge. Workers in the future will need to be adaptable lifelong learners.

Implementation and delivery of the curriculum

The role of teachers

One of the central aims of Aspirations curriculum planning is to ensure that teaching is effective and manageable to both ensure challenging and engaging learning but to also attract and retain good teachers. Through the `No limits' curriculum the aim is to ensure all planning is done in teams and within the working week.

Teacher planning for the curriculum is highly structured with planning guidelines and structures. The aims are to ensure challenging and engaging learning, full curriculum coverage, skills development, examination preparedness and employability experiences. To achieve these aims there needs to be a range of teaching strategies used, including:

- Whole-class teaching: Whole-class teaching ensures that each and every child is taught all of the core curriculum content, in contrast to some differentiated teaching that can narrow the curriculum for lower attaining pupils and work against social mobility. The approach in Aspirations academies is to teach all students at the highest level and to structure support for students who have a lower starting point.
- Teacher-led instruction: This is when the teacher is the primary deliverer of instruction. This occurs in both the CORE learning subjects where teachers utilise their subject expertise to students and also in the ATL assignments through specific subject or topic related workshops.
- Student-led learning: Although teachers plan the learning and remain in the classroom to provide guidance on subject areas and to oversee quality, the control of the learning experience is handed over to the students. Students are encouraged to teach themselves and their peers by undertaking their own study and research, then sharing their findings with others. The central foci to student-led learning are:
    - Working in teams
    - The production and presentation of a high quality piece of work at the end of each assignment.
    - The integration of employability experiences into the curriculum allowing for subject knowledge to be applied to real-world situations.

Student-centered learning emphasises the learner's critical role in constructing meaning from knowledge and prior experience, it also allows for the development of the essential 21st century skills. Student-centered learning aims to develop learner autonomy and independence.

The No limits: Education for success in the 21st century: Curriculum Rationale

Aspirations has a duty to prepare our young people for success in this future world. This is being done through developing an approach to teaching and learning in which:

- All students achieve at least expected academic progress and high levels of attainment in national qualifications
- All students acquire knowledge to be remembered and constantly built upon to deepen their understanding

- All students develop high level 21st century skills
- All students enter skilled employment or higher levels of study
- All students develop high levels of self-worth and self-confidence
- Learning is challenging and engaging
- Learning is highly relevant to the world today and in the future
- Schools motivate, develop, recruit and retain high quality teachers

In order to ensure the development of a curriculum that ensures a depth of knowledge, the application of knowledge and the development of 21st century skills, the central feature of the 'No Limits' model is the development of a curriculum that fully embraces both single-discipline Learning (CORE) and trans-discipline learning (APPLIED). Both have a place in the education process. The CORE learning sessions occur both as regular timetabled single-discipline learning sessions as well as during the ATL assignment sessions as specific knowledge workshops. The APPLIED Trans-discipline Learning (ATL) assignments combine several subjects and run from 3 to 11 weeks in length for at least 2 hours most days. These assignments are designed to apply CORE learning to real-world situations to ensure student learning is relevant, engaging and challenging.

All Aspirations Academies from September 2019 are following a Trust-wide developed curriculum in Years 4, 7 and 12, the 'No limits:Education for success in the 21st century'. The intention is to gradually develop this curriculum in its entirety teaching through Applied and Core learning sessions (explained later in this document) into most year groups. Where this is not achieved the the aim is to at least ensure the curriculum principles are embedded across all year groups. The projected implementation of this curriculum is:

Nature of curriculum	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13
Distinct Core learning sessions	Literacy and numeracy	Literacy and numeracy	Literacy and numeracy	Most subjects to be examined at GCSE	Most subjects to be examined at GCSE	All subjects to be examined at GCSE	All subjects to be examined at GCSE	All subjects to be examined at GCSE	All A level subjects	All A level subjects
Distinct Applied learning (AFL) sessions	Yes	Yes	Yes	Yes from September 2019	Yes from September 2020	Probably from 2021	Unlikely, although Space Studios and Livingstone Academies will use	Unlikely, although Space Studios and Livingstone Academies will use	Yes	No
Degree level modules										Yes

Curriculum Principles

The 'No limits: Education for success in the 21st century' curriculum principles:

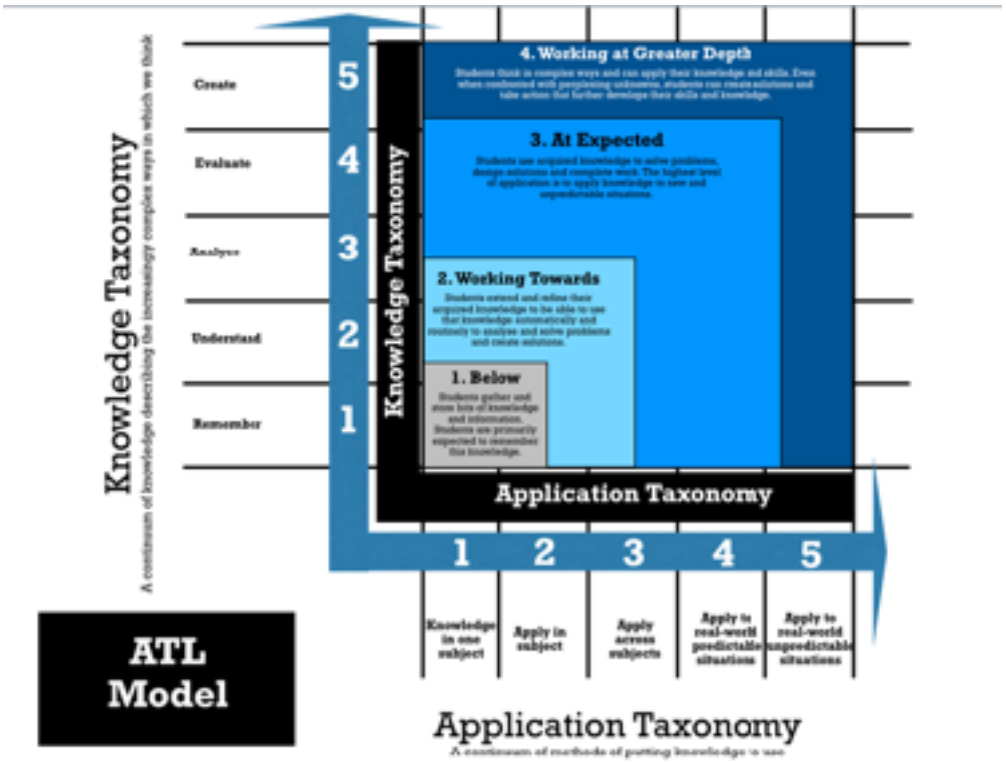
- **The curriculum will be knowledge rich**. All students will acquire knowledge to be remembered and constantly built upon to deepen their understanding. The learning of knowledge will be consistently layered and revisited.
- **Full curriculum coverage** is essential. The relevant National Curriculum and GCSE syllabi content and skills must be mapped to ensure full and repeated coverage.
- A significant amount of learning will involve the **application of knowledge to real world** issues, situations, problems and employment
- **All students will follow the same curriculum.**

- All learning develops the **11 essential 21st century skills**. All students use the **'iCAN' app** and maintain a digital portfolio of skills development evidence.
- All learning is structured around two approaches:
    - **APPLIED** (Trans-discipline): Learning across multiple subject disciplines
    - **CORE** (Single-discipline): Need to know learning in a single subject discipline designed to inform the APPLIED work and to meet the knowledge demands of exam specifications.
- All learning should be **challenging and engaging** resulting in high levels of progress and attainment.
- The curriculum is embedded with careers development and employability experiences centred on the Gatsby Trust Benchmarks.
- All finished student produced products are **high quality** or are not acceptable.
- Teachers **plan in teams** using the No Limits curriculum planning toolkit
- Planning is the most important part of the whole educational process and is intended to lead to greater student challenge and engagement alongside a more focussed teacher role with reduced pressure and workload.
- The aim is for all teacher planning to be conducted during the working day
- Teachers are all subject specialist who also work on Applied Trans-discipline Learning (ATL) Assignments
- ATL teachers receive ATL CPD and are encouraged to develop relationships alongside real employers and organisations

Applied Trans-discipline Learning means:
Learning between, across and beyond different disciplines, that is relevant to the real world and applied to real practical situations. The goal is to access, analyse and synthesise information and knowledge over several disciplines in order to understand the operation and issues facing the world today and in the future.

Curriculum Content
In planning the curriculum both the Core learning and applied learning elements are planned to ensure coverage of:
- The National curriculum across all subjects
- SATs requirements (KS1/KS2)
- The relevant GCSE specification (KS3/4)
- The relevant A Level specification (Post 16)
- The 11 future skills
- The Gatsby Benchmarks (where relevant)/local employer requirements.

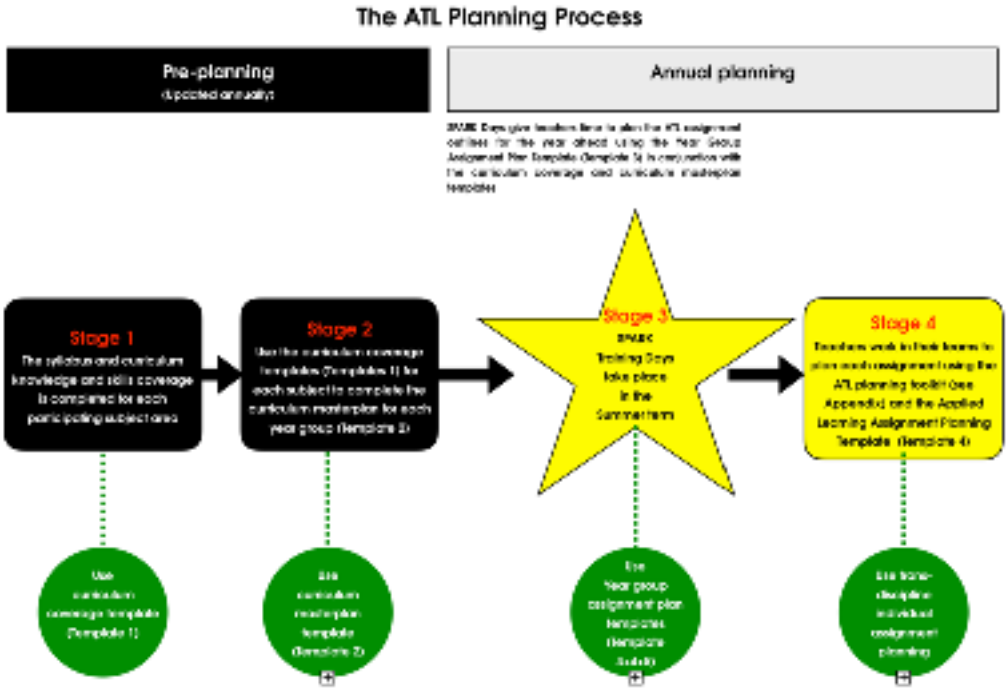
The No Limits Curriculum Model (See the ATL model diagram below)
This model places the knowledge taxonomy (A continuum of knowledge describing the increasingly complex ways in which we think) against the application taxonomy (A continuum of methods of putting knowledge to use) with the aim of highlighting ways that increasingly accessible knowledge can be applied in more challenging, relevant and so ultimately more engaging ways. An individual pupil/student can be placed at any point on the subsequent graph and appropriate learning planned.

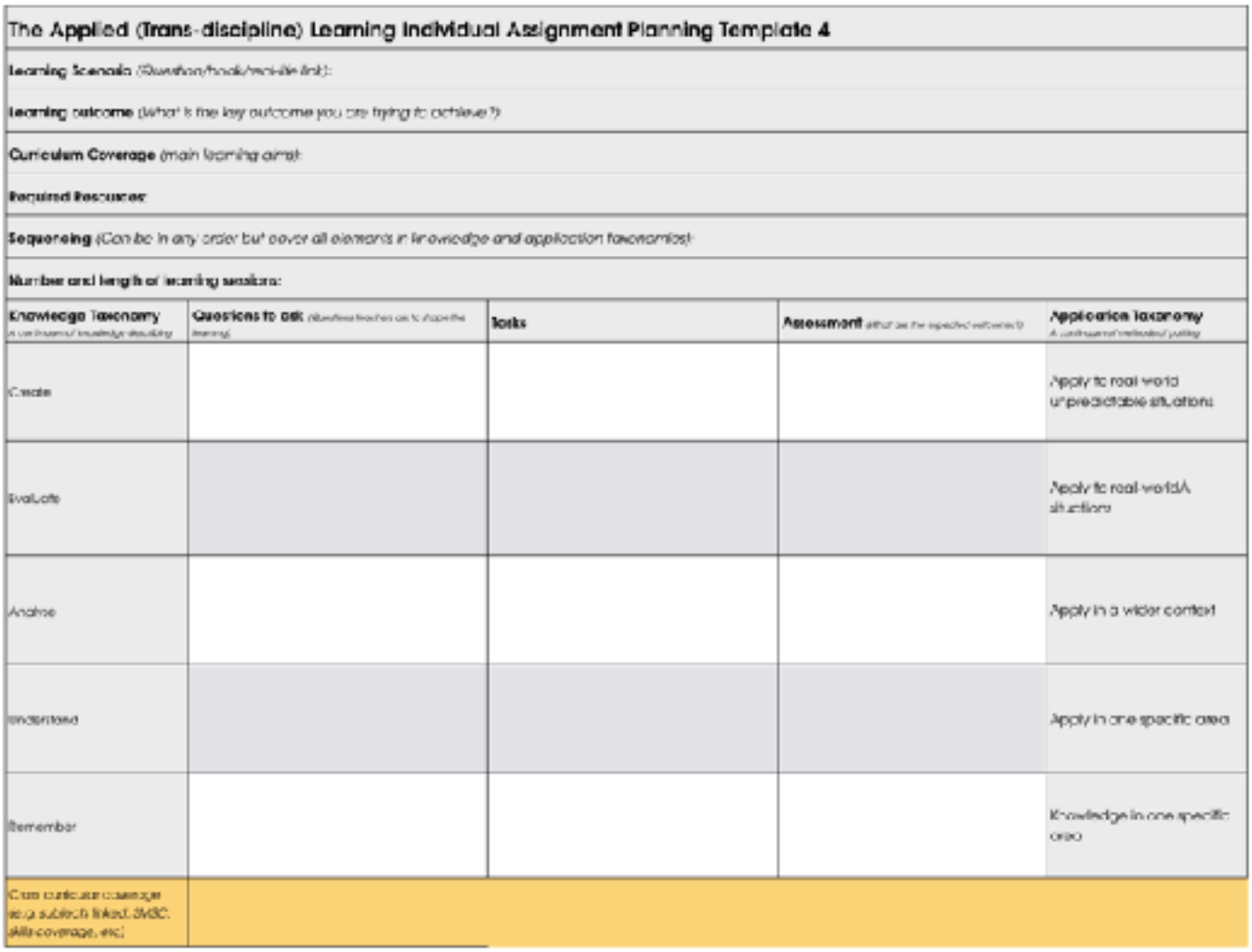


Planning The Curriculum

Planning the learning is perhaps the most important aspect of the No Limits curriculum. There are several planning principles that need to be adhered to:

- Planning needs to be done in teams of teachers
- Teachers need to be given sufficient planning time in the working week
- Planning should follow the No Limits planning process guidelines (see diagram below)
- The Assignment Planning Template (next page) should used for both the Applied assignments and where possible Core learning
- Planning should develop each year - the learning should be different year on year to keep it fresh and relevant
- Teachers need to be trained in ATL and also be regularly exposed to industry





The Applied (Trans-discipline) Learning Individual Assignment Planning Template 4				
Learning Scenario (Question/hook/real-life link):				
Learning outcome (What is the key outcome you are trying to achieve?)				
Curriculum Coverage (main learning aims):				
Required Resources:				
Sequencing (Can be in any order but cover all elements in knowledge and application taxonomies):				
Number and length of learning sessions:				
Knowledge Taxonomy	**Questions to ask**	**Tasks**	**Assessment**	**Application taxonomy**
Create				Apply to real world unpredictable situations
Evaluate				Apply to real-world/A situations
Analyse				Apply in a wider context
Understand				Apply in one specific area
Remember				Knowledge in one specific area
Core curriculum coverage (e.g. subjects linked, SMSC, skills coverage, etc):				

CORE and APPLIED learning
CORE learning occurs in the form of teacher led, timetabled single subject one hour lessons.

APPLIED learning is trans-disciple across a number of different subject working on real world assignments in 2 hour long sessions over several weeks. APPLIED learning assignments are teacher led, teacher designed and cover a range of learning inputs. At the end of each assignment students present a high quality 'product' to reflect the depth of their learning. The learning that takes place in the CORE learning sessions should, wherever possible, be reinforced in the APPLIED learning assignments

Over a year in each year group the ATL assignments should cover a wide range of curriculum knowledge and skills, all of which need to be carefully mapped to ensure full coverage. The ATL Assignments utilise a range of teaching and learning techniques and approaches. One of these is VR (virtual reality). We are working with a VR development company to develop an immersive education elements in each assignment which engages students both in school and at home.

How the Applied Trans-discipline Learning (ATL) sessions would look in terms of the range of teaching styles experienced in a typical assignment
Teachers will plan the ATL assignment sessions weekly. In both Year 4 and Year 7 the majority of the assignments will last for three weeks (either 8 hours or 10 hours per week). As we progress into older year groups the assignments get longer in terms of weeks in order to develop greater depth. The length of time spent on an assignment provides a great many options for a range of approaches

to learning, however the end product is a high quality presentation of their findings/suggestions by students. As the ATL assignment sessions are each 2 hours long then the exact length of the different learning sessions is flexible.

Year 4 example:

How the curriculum would work in Year 4

The No Limits curriculum can be applied to a school week of any length. Here are examples for a 25 ppw curriculum

25 ppw model					
Subject	**English**	**Maths**	**Applied Trans-Discipline Assignments (Biology, Chemistry, Physics, History, Geography)**	**Creative Curriculm**	**PE**
Periods per week	5	5	8	5	2

The ideal Year 4 week structure and expectations = 25 ppw

- 5 periods per day
- Two teachers per 60 students, working and planning together
- Teacher planning time in PE and some creative curriculum time
- Tutorials and assemblies happen within the ATL time

All ATL includes Single Sciences, Geography, History + English + Maths taught through assignments but the Sciences, Geography and History also being taught as single disciplines on a regular basis

There is an Assessment, Presentation and Personal Education (APP) week every six weeks (possibly every ten weeks, with two week long APP weeks) to cover assessment, assignment presentations, PSHEE/Philosophy and more.

Examples of one week (of three) of the scaffolding Types of Learning for each Year 4 ATL Project					
Project title: e.g. The Roman Empire in Britain. How and where they lived. Students design a Roman settlement and their technology and lifestyle		**Single discipline subjects involved in ATL project: Science, Geography, History, English, Maths, Computer Science**			
Single discipline (CORE) teaching (small or large groups)	Specific subject skills/knowledge workshops	Know, need to know, where to find assignment guidance sessions	VR (Immersive Education)	Student directed learning in small groups	Tutorials/assembly
• Outline history of Roman Empire • The outline geography of Roman Britain • A brief look at the Roman life: food, technology, clothes, medicine, etc	• Roman medicine • Roman transport • Roman technology	• Intro 20 minutes: What do students already know, what do they need to research • Monitoring of student work and guidance sessions	• VR simulation on daily life in Roman Britain	• Students to research Roman life in Britain • Students design their own Roman settlement, family and lifestyle	2 x 20 minutes each week

Year 7 example:

How the curriculum would work in Year 7

The No Limits curriculum can be applied to a school week of any length. Here are examples for a 25 and 27 ppw curriculum.

25 ppw model											
Subject	**Biology**	**Chemistry**	**Physics**	**Geography**	**History**	**Maths**	**English**	**A+D**	**MFL**	**PE**	**Applied Trans-Discipline Assignments**
Periods per week	1	1	1	1	1	3	3	2	2	2	8
27 ppw model											
Periods per week	1	1	1	1	1	3	3	2	2	2	10

All ATL includes Single Sciences, Geography, History + English + Maths

There is an Assessment, Presentation and Personal Education (APP) week every six weeks to cover assessment, assignment presentations, PSHEE/Philosophy and more.

Examples of one week (of three) of the scaffolding Types of Learning for each Year 7 ATL Project					
Project title: e.g. Constructing a computer controlled vegetable growing container for semi-arid environments in India		**Single discipline subjects involved in ATL project: Science, Geography, History, English, Maths, Computer Science**			
Single discipline (CORE) teaching (small or large groups)	Specific subject skills/knowledge workshops	Know, need to know, where to find assignment guidance sessions	VR (Immersive Education)	Student directed learning in small groups	Tutorials/assembly
• Outline history of British Empire in India • The outline geography of India • A brief look at the geography and climate of Rajasthan • The science of computer controlled environments	• Ecosystems in semi-arid environments • Maths related to the issue • English creative writing • Basic coding sessions to develop climate control	• Intro 20 minutes: What do students already know, what do they need to research • Monitoring of student work and guidance sessions	• VR simulation on daily life in Rajasthan (20 minutes) • Students produce VR simulation of computer controlled environment	• Students to research Rajasthan and ecosystems • students research computer controlled growing environments • Students test different species of vegetable • Students construct their own artificial growing environment	2 x 20 minutes each week

The ideal Year 7 week structure and expectations = 27 ppw

- Monday, Tuesday and Thursday = 6 hours of learning plus 2x30 minute breaks (e.g 8.30 a.m. to 3.30 p.m.) .

- Wednesday and Friday = 5 hours of learning plus 2x30 minute breaks (e.g. 8.30 a.m. to 2.30 p.m.).
- Wednesdays = + 2 hours teacher planning until 4.30 p.m.
- Fridays = + 1 hour staff meetings
- On Wednesdays and Fridays students can stay until later with supervised prep (run by support staff)
- Tutorials and assemblies happen within the ATL time
- Science, History + Geography, English and Maths teachers are the same for both Core and Applied learning sessions. This is so teachers can reinforce the learning in the single subject (Core) learning sessions in the ATL (Applied) learning sessions.
- There will be two cohorts of up to 90 students in Year 7. Each cohort will have three teachers who will also be their Core subject teachers, however, subject specialists will deliver specific subject focussed workshops across both cohorts when needed.
- Students will have no more than three main teachers to enable them to adjust from a primary style one teacher approach to the secondary specialist teacher style.

The Gatsby Trust Careers and Employability Benchmarks

The Government's careers strategy sets out a long term plan to build a world class careers system that will help young people and adults choose the career that is right for them. This includes the expectation that every school should begin to offer every young person encounters with employers, from year 7 to year 13. To help achieve this, the careers strategy sets out that every school and academy providing secondary education should use the Gatsby Charitable Foundation's Benchmarks to develop and improve their careers provision. The Gatsby Benchmarks are not a statutory framework but by adopting them, schools can be confident that they are fulfilling their legal duties. The 'No limits: Education for success in the 21st century' curriculum is ideally placed to ensure that most of the Gatsby benchmarks are fully integrated into the curriculum.

The Gatsby Benchmarks[10]

1. A stable careers programme	Every school and college should have an embedded programme of career education and guidance that is known and understood by students, parents, teachers, governors and employers.	• Every school should have a stable, structured careers programme that has the explicit backing of the senior management team, and has an identified and appropriately trained person responsible for it. • The careers programme should be published on the school's website in a way that enables pupils, parents, teachers and employers to access and understand it. • The programme should be regularly evaluated with feedback from pupils, parents, teachers and employers as part of the evaluation process.
2.Learning from career and labour market information	Every student, and their parents, should have access to good quality information about future study options and labour market opportunities. They will need the support of an informed adviser to make best use of available information.	• By the age of 14, all pupils should have accessed and used information about career paths and the labour market to inform their own decisions on study options. • Parents should be encouraged to access and use information about labour markets and future study options to inform their support to their children.
3.Addressing the needs of each student	Students have different career guidance needs at different stages. Opportunities for advice and support need to be tailored to the needs of each student. A school's careers programme should embed equality and diversity considerations throughout.	• A school's careers programme should actively seek to challenge stereotypical thinking and raise aspirations. • Schools should keep systematic records of the individual advice given to each pupil, and subsequent agreed decisions. • All pupils should have access to these records to support their career development. • Schools should collect and maintain accurate data for each pupil on their education, training or employment destinations.
4.Linking curriculum learning to careers	All teachers should link curriculum learning with careers. STEM subject teachers should highlight the relevance of STEM subjects for a wide range of future career paths.	• By the age of 14, every pupil should have had the opportunity to learn how the different STEM subjects help people to gain entry to, and be more effective workers within, a wide range of careers.

5.Encounters with employers and employees	Every student should have multiple opportunities to learn from employers about work, employment and the skills that are valued in the workplace. This can be through a range of enrichment activities including visiting speakers, mentoring and enterprise schemes.	• Every year, from the age of 11, pupils should participate in at least one meaningful encounter* with an employer. *A 'meaningful encounter' is one in which the student has an opportunity to learn about what work is like or what it takes to be successful in the workplace.
6.Experiences of workplaces	Every student should have first-hand experiences of the workplace through work visits, work shadowing and/or work experience to help their exploration of career opportunities, and expand their networks.	• By the age of 16, every pupil should have had at least one experience of a workplace, additional to any part-time jobs they may have. • By the age of 18, every pupil should have had one further such experience, additional to any part-time jobs they may have.
7.Encounters with further and higher education	All students should understand the full range of learning opportunities that are available to them. This includes both academic and vocational routes and learning in schools, colleges, universities and in the workplace.	• By the age of 16, every pupil should have had a meaningful encounter* with providers of the full range of learning opportunities, including Sixth Forms, colleges, universities and apprenticeship providers. This should include the opportunity to meet both staff and pupils. • By the age of 18, all pupils who are considering applying for university should have had at least two visits to universities to meet staff and pupils. *A 'meaningful encounter' is one in which the student has an opportunity to explore what it is like to learn in that environment.
8.Personal guidance	Every student should have opportunities for guidance interviews with a career adviser, who could be internal (a member of school staff) or external, provided they are trained to an appropriate level. These should be available whenever significant study or career choices are being made.	• Every pupil should have at least one such interview by the age of 16, and the opportunity for a further interview by the age of 18.

Appendix:

21st century skills descriptors

21st Century Skills Descriptors		
iCan Skills	**Definition**	**Detailed Explanation**
1. Sense-making (Critical Thinking)	The ability to think clearly and rationally, understanding how and why ideas connect.	As smart machines take over rote, routine manufacturing and services jobs, there will be an increasing demand for the kinds of skills machines are not good at. These are higher level thinking skills that cannot be codified. These are called sense-making skills, also referred to as critical thinking, skills that help us create unique insights critical to decision making. As we renegotiate the human/machine division of labor in the next decade, critical thinking or sense-making will emerge as a skill workers increasingly need to capitalise on. **In essence, critical thinking requires you to use your ability to reason. It is about being an active learner rather than a passive recipient of information.**
2. Communication (Social Intelligence)	The ability to connect to others effectively, to sense and stimulate reactions and interactions.	**Socially intelligent employees are able to quickly assess the emotions of those around them and adapt their words, tone and gestures accordingly.** This has always been a key skill for workers who need to collaborate and build relationships of trust, but it is even more important as we are called on to collaborate with larger groups of people in different settings. Our emotionality and social IQ developed over millennia of living in groups will continue be one of the vital assets that give human workers a comparative advantage over machines.
3. Creative and adaptive thinking (Innovation)	The ability to think and develop solutions and ideas.	Job opportunities are declining in middle-skill level jobs, largely due to automation. Conversely, there are an increasing number of job opportunities in both high skill, high-wage professional, technical and management occupations and in low-skill, low-wage occupations such as food service and personal care. Jobs at the high-skill end involve abstract tasks, and at the low-skill end, manual tasks. **What both of these categories of tasks have in common is that they require "situational adaptability"— the ability to respond to unique unexpected circumstances of the moment**. Tasks as different as writing a convincing legal argument, or creating a new dish out of set ingredients both require novel thinking and adaptability. These skills will be at a premium in the next decade.
4. Cross-cultural competency (Global citizenship)	The ability to operate in different cultural settings	In this globally connected world, a worker's skill set could see them posted in any number of locations—so they need to be able to operate in whatever environment they find themselves. This primarily demands an ability to adapt to changing circumstances and an ability to sense and respond to new contexts. Cross-cultural competency will become an important skill for all workers, not just those who have to operate in diverse geographical environments. Organisations increasingly see diversity as a driver of innovation. Research now tells us that what makes a group truly intelligent and innovative is the combination of different ages, skills, disciplines, and working and thinking styles that members bring to the table. Diversity will therefore become a core competency for organisations over the next decade. **Successful employees within diverse teams will need to be able to identify and communicate points of connection (shared goals, priorities, values) that transcend their differences and enable them to build relationships and to work together effectively**.
5. Entrepreneurialism	The ability to meet an unsatisfied demand or to radically improve the performance of something.	Entrepreneurs produce solutions that fly in the face of established knowledge, and they challenge the status quo. They are risk-takers who pursue opportunities that others may fail to recognize or may even view as problems or threats. **Entrepreneurship is closely associated with change, creativity, knowledge, innovation and flexibility**-factors that are increasingly important sources of competitiveness in an increasingly globalized world economy.

21st Century Skills		
Skill	**Definition**	**Detailed Explanation**
6. Media Literacy	The ability to use and develop content that uses all media forms.	There has been an explosion in user-generated media that dominates our lives over recent years that now increasingly dominates what happens in the workplace. **Workers will increasingly need to become fluent in all forms of media, keeping up-to-date with changes, and should be able to critically "read" and assess their content.** Workers will also need to be comfortable creating and presenting their own visual information. As immersive and visually stimulating presentation of information becomes the norm, workers will need more sophisticated skills to use these tools to engage and persuade their audiences.
7. Transdisciplinarity	The ability to access, analyse and synthesise information across several disciplines (subjects).	Many of today's global problems are just too complex to be solved by one specialised discipline (think global warming or overpopulation). These multifaceted problems require transdisciplinary solutions. While throughout the 20th century, ever-greater specialisation was encouraged, the 21st century has seen transdisciplinary approaches take centre stage. We are already seeing this in the emergence of new areas of study, such as nanotechnology, which blends molecular biology, biochemistry, protein chemistry, and other specialties. This shift has major implications for the skill set that knowledge workers will need to bring to organisations. **The ideal worker of the future is "T-shaped"—they bring deep understanding of at least one field, but have the capacity to converse in the language of a broader range of disciplines**. This requires a sense of curiosity and a willingness to go on learning far beyond the years of formal education. As extended lifespans promote multiple careers and exposure to more industries and disciplines, it will be particularly important for workers to develop this T-shaped quality.
8. Productivity and accountability	Productivity is the ability to create a product whilst accountability is taking a role in the creation of a product and taking responsibility for the performance of the product.	Productivity is the ability to create a product using these skills: setting and meeting goals, prioritizing needs, managing time, working ethically, collaborating and cooperating with colleagues and clients.Productivity is increasingly important as it is an important way in which success and failure are established in the working world. Increasingly quality is important. **Being productive in the 21st century means being able to produce a product of a certain quality within a given timeframe**. Accountability and productivity are interconnected. Accountability is taking a role in the creation of a product and taking responsibility for the performance of the product. People are held accountable for the actions they take to complete a task.
9. Cognitive Load Management	The ability to discriminate and filter information for importance.This involves all aspects of perception, thinking, reasoning, and remembering.	A world rich in information streams in multiple formats and from multiple devices brings the issue of cognitive overload to the fore. Organisations and workers will only be able to turn the massive influx of data into an advantage if they can learn to effectively filter and focus on what is important. **The next generation of workers will have to develop their own techniques for tackling the problem of cognitive overload**. For example, the practice of social filtering—ranking, tagging, or adding other metadata to content helps higher-quality or more relevant information to rise above the "noise." Workers will also need to become adept at utilising new tools to help them deal with the information onslaught.
10. Collaboration	The ability to work productively, drive engagement, and demonstrate presence as a member of a team, physically and virtually.	**An essential feature of the 21st century workplace is the ability to work together as part of a team.** Working in teams enables people to be quicker and more effective in their work, as compared to people who work on their own. Collaboration also makes people more responsive, which raises motivation levels, especially when the team is working virtually. Connective technologies make it easier than ever to work, share ideas and be productive despite physical separation. But the virtual work environment also demands a new set of competencies. As a leader of a virtual team, individuals need to develop strategies for engaging and motivating a dispersed group.
11. Resilience	The flexibility to manage change and to remain stable in demanding situations. The ability to overcome setbacks and challenges.	**Resilience** is the process of adapting well in the face of adversity, trauma, tragedy, threats or significant sources of stress — such as family and relationship problems, serious health problems or workplace and financial stressors. It **means** "bouncing back" from difficult experiences.

A. Learner Engagement Strategies (A teacher planning and monitoring tool)

These are used to support teachers in creating and implementing an effective learner environment that maximises engagement, achieves greater depth of learning and is aligned to learner needs. The three indicators for learner engagement are:
1. Active participation, 2. Learning environment, 3. Formative assessment.

Active Participation	Below	Working Towards	At Expected	Working at Greater Depth
Pupil/student learning	• Limited student engagement, with the exception of hand-raising. Some students are off-task or have disengaged from the lesson and are never-directed. • Lesson is teacher led and students progress through new learning with some challenge with expected productivity.	• Most students remain focused and on-task during the lesson. Students answer questions when called, but not all students have the opportunity to actively respond. • Lesson is led by the teacher, and students productively progress through new learning.	• All students remain on-task, responding to frequent opportunities for active engagement throughout the lesson. Lesson is led by both teacher and students, and students productively progress through new learning.	• All students remain on-task and proactively engaged throughout the lesson. • Students take ownership of learning new content, actively seeking ways to improve their own performance.
Lesson design	• Lesson relies mainly on direct instruction with few opportunities for student engagement through interaction.	• Lesson relies on one or two strategies designed to engage students, with the lesson focused more on direct instruction than on student engagement through application.	• Lesson provides multiple strategies designed to maximize student engagement, and student contribution is monitored to ensure full participation.	• Lesson achieves a focus on student-centred engagement where the students monitor and adjust their own participation.
Learning Environment	**Below**	**Working Towards**	**At Expected**	**Working at Greater Depth**
Pupil/student learning	• Students rely on peers or teachers for answers to questions. There is a lack of evidence of students being required to persevere in responding to rigorous tasks or questions. • Students demonstrate a lack of respect for peers, teachers, and/or the learning environment.	• Students exhibit some evidence that they are beginning to take risks and persevere in learning rigorous content. • Students demonstrate respect for the learning environment, but challenges exist in demonstrating respect for peers.	• Students are encouraged to take risks and persevere through productive struggle. Students are praised for demonstrating commitment to learning. • Students demonstrate respect for peers, teachers, and the learning environment.	• Students are encouraged to take risks and persevere through productive struggle. Students are provided with effective feedback to guide them in their learning. • Students demonstrate respect for peers, teachers, and the learning environment.
Lesson design	• Classroom learning procedures and routines are inconsistently communicated and/or implemented.	• Classroom learning procedures and routines are visible, but are not consistently implemented.	• Clear classroom learning procedures and routines are visible and are consistently implemented.	• Classroom learning procedures and routines are clearly established, but remain flexible and fluid to adapt to the learning tasks as needed.
Formative Assessment	**Below**	**Working Towards**	**At Expected**	**Working at Greater Depth**
Pupil/student learning	• Lesson includes few instances of formative assessment to evaluate students' mastery of content. Assessment results indicate that student growth is minimal. • Students are partnered or grouped, but all students receive the same lesson content, process, and product.	• Students demonstrate mastery of content by engaging in formative assessments that allow for reciprocal feedback. Assessment results indicate that student growth is progressing. • Students are partnered or grouped and receive some opportunities for differentiated learning based on adjusting content, process, and/or product.	• Students demonstrate mastery of content by completing a variety of formative assessments that allow for reciprocal feedback. Assessment results indicate that students are meeting expectations. • Students are strategically partnered or grouped based on data. Lesson content, process, and/or product is clearly differentiated to support varying and specific learning needs.	• Students demonstrate mastery of content through opportunities to self-reflect, set learning goals, and share responsibility for learning. • Assessment results indicate that students are exceeding expected outcomes.
Lesson design	• Results from formative processes and tools are used to monitor progress.	• Results from formative processes and tools are used to plan and implement aspects of differentiated learning and monitor progress.	• Results from formative processes and tools are used to strategically adjust instructional pacing, plan differentiated learning, and monitor progress.	• Results from formative processes and tools, along with effective feedback are used to immediately adjust instructional pacing, plan differentiated learning, and monitor progress.

B. Learner Challenge Strategies (A teacher planning and monitoring tool)

These are used to support teachers in building learning based on high levels of challenge and expectations. The three indicators for learner challenge are:
1. Thoughtful Work, 2. High-Level Questioning, 3. Academic Discussion..

Thoughtful Work	Below	Working Towards	At Expected	Working at Greater Depth
Pupil/student learning	• Students demonstrate their learning by completing work and read tasks. Most tasks focus on comprehension and focus on answering recall-type questions.	• Students demonstrate their learning by completing tasks that require comprehension. • There are opportunities for students to develop mastery through learning tasks that require them to apply knowledge and comprehend content.	• Students demonstrate their learning by completing tasks that validate their ability to analyze, synthesize, and/or evaluate new instructional content. • Tasks initiate the opportunity for students to respond to content through inquiry and interpretation.	• Students develop their own learning tasks that stretch their creativity, originality, design, or adaptation. • Tasks include the opportunity for students to assess their own learning and move forward to adapt their knowledge in new activities.
Lesson design	• Learning tasks include one assigned way for students to demonstrate their thinking.	• Learning tasks include one or more assigned ways for students to demonstrate their thinking.	• Learning tasks allow students to self-select options to best represent their thinking.	• Learning tasks extend students' learning, inspiring them to pursue self-discovery.
High-Level Questioning	**Below**	**Working Towards**	**At Expected**	**Working at Greater Depth**
Pupil/student learning	• Students respond to questions that mainly focus on basic recall and retell. • Few students ask questions, and most questions asked focus on basic recall or retelling of content.	• Students respond to questions that demonstrate a comprehension of content. • Students have opportunities to ask questions during the lesson and their questions focus on comparing and contrasting information.	• Students fully explain and justify their thinking when responding to questions that demonstrate different levels of thinking, including questions that require analysis, synthesis, and evaluation of information. • During the lesson, students generate questions about content that demonstrate rigorous independent thinking.	• Students actively engage in developing rigorous questions to challenge the thinking of their peers. • Students are able to respond to rigorous questions generated by peers with little guidance from the teacher.
Lesson design	• Lesson rarely includes questions at the recall and retell level, and/or not all students are required to respond to each question.	• Lesson includes questions at a range of levels, but not all students are required to respond to each question.	• Lesson uses questioning to carefully support students in moving to higher levels of thinking, ensuring that all students have an opportunity to respond.	• Lesson is designed to inspire all students to engage in high-level questioning around the learning task with their teacher and peers.
Academic Discussion	**Below**	**Working Towards**	**At Expected**	**Working at Greater Depth**
Pupil/student learning	• Student discussion is driven by the teacher and mainly remains at the recall level, rarely using everyday language with little to no evidence of academic or lesson-specific vocabulary. • Students participate in discussions on a variety of topics with each student offering his/her own thinking without using ideas from peers.	• Student discussion, structured by prompts from the teacher, includes a combination of recalling, analysis, and/or making a statement and defending it with evidence. • Students provide explanation or evidence of their thinking and respond to their peers' comments.	• Students engage with peers in teacher-guided academic discussions focused on analysis, synthesis, and evaluation of content-driven topics, using academic language to express their thinking regarding the major concepts studied. • Students support their ideas with concrete explanations and evidence, paraphrasing as appropriate, and build on or challenge the ideas of others.	• Students primarily drive the discussion, consistently adding value to the dialogue with their peers and teacher, and respecting the opinion and thoughts of both; the lesson shifts to conversation rather than a Q&A session regarding the major concepts studied. • Students are able to stay focused on the activities or inquiry and engage in dialogue, using content-rich vocabulary with their peers.
Lesson design	• Lesson structure is mostly teacher-led discussion, with the majority of interaction as teacher-to-student.	• Lesson structure encourages a mix of teacher-led and peer-to-peer with the teacher facilitating the majority of discussion.	• Lesson structure mostly enables peer-to-peer discussion, the teacher facilitates and redirects the discussion as needed, while evaluating for quality.	• Lesson is designed to inspire students to independently engage in dialogue and add valuable academic content around the learning tasks.

Teaching and learning strategies

The following examples of possible strategies are noted to highlight their appropriateness to students working in each outcome band. This list is not exhaustive and it would be good practice for people to add to this list.
These strategies are offered to stimulate ideas and to generate challenging and engaging lessons.

Strategy	Below	Working towards	At Expected	Working at Greater Depth
Analogies	*	**	***	***
Analysing media stimulus	**	***	**	**
Brainstorming	**	*	***	***
Compare and contrast	**	*	***	**
Co-operative learning	*	**	***	***
Crafting an argument	**	**	***	***
Demonstration	*	**	***	***
Feedback and reflection	**	**	***	***
Game based	**	**	***	***
Guided practice	***	**	*	*
Inquiry	*	**	***	***
Lecture	***	**	*	*
Memorisation	**	*	*	*
Note taking	**	**	**	**
Physical activity	**	***	**	**
Problem based learning	**	***	***	***
Role play/Simulation	**	***	***	***
Socratic seminar method	*	*	***	***
Storytelling	**	***	***	***
Summarising	**	**	***	**
Teaching others	**	**	***	***
Using writing frames	***	***	**	*

Key: * Less than ideal ** Suitable *** Ideal