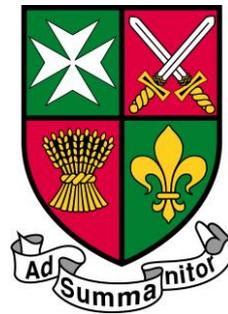


Jordanhill School

Teaching & Learning A Guide for Parents



Foreword

There is nothing more important in a school than the quality of dialogue and interaction between the teacher and the class or individual pupil. Outstanding teachers bring a repertoire of techniques to bear which while effective in themselves allow the teacher to be sensitive to and respond to the needs of the class.

Jordanhill School was founded in 1920 as the 'demonstration school' for the adjacent teacher training college. While these links were severed 30 years ago, the school remains committed to progressive and enlightened pedagogical practice underpinned by the latest research.

Our approaches to teaching and learning emphasise the centrality of the teacher in leading learning and in creating the structures and scaffolding that facilitate learning. Fundamentally, they are underpinned by the findings of 'cognitive load theory' as to how young people learn and reflect the distilled insights of our teaching staff as to what the latest research tells us works best in and out of the classroom.

Pupil led or discovery learning does also play a part as research shows that 'critical skills' approaches, peer learning and project based learning (interdisciplinary learning) can have a positive impact when well designed and implemented. However, such approaches are best used after a period of knowledge acquisition rather than as the principle vehicle for knowledge acquisition or wider learning.

Toddlers and infants learn through physical interaction with the world and 'learning through play' is a fundamental element of the teaching process at these stages. While it is not the focus of this guide, the effective use of digital technology can greatly enhance the learning experience in and beyond the classroom for all learners. In the latter years of secondary education many young people will welcome greater autonomy in their learning and 'flipped learning' approaches will play a greater role. This is a reflection of the fact that 'novices' and 'experts' learn in different ways.

While this guide may have greatest relevance from ages 7 to 16, some young people will want and need highly structured support throughout their school years.

This guide is a distillation of a more extensive toolkit for teachers. I thank all of my colleagues who have contributed to the toolkit, particularly John Anderson for his leadership of the group. We hope parents find this guide useful in understanding some of the approaches adopted by teachers at Jordanhill School.

Dr Paul W. Thomson
Rector
2018

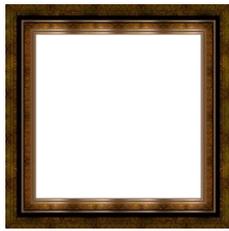
What we expect of a teacher

The General Teaching Council for Scotland (GTCS) stipulates a set of Professional Actions in Career Long Professional Learning

Personal Qualities <ul style="list-style-type: none">• Enthusiastic• Caring• Able to motivate pupils• Belief that all learners can improve• Demands high standards• Good sense of humour• Maintains a professional relationship	Subject Expertise <ul style="list-style-type: none">• Excellent subject knowledge• Makes links to prior learning.• Understanding of how pupils' learning links to later learning in the subject.• Understanding of how pupils learn in the subject.• Able to make links to everyday life to engage learners.
Pedagogical Skills <ul style="list-style-type: none">• Use of voice• Understanding of pace and challenge• Intelligent lesson planning• Good transitions• Uses deliberate practise• Understands the importance of interleaving to promote retention.• Use of fact learning to free working memory• Good use of assessment• Good use of homework• Variety of learning techniques used (whole class, group work, peer learning and independent learning) to promote learning and engagement.• Uses a variety of teaching techniques to aid comprehension.• Understanding of barriers to learning and strategies that can be used to help learners.	Classroom environment <ul style="list-style-type: none">• Routines established to minimise uncertainty• Good behaviour management• Good use of the physical space• Highly organised• Atmosphere (calm) conducive to learning• Pupils are safe• Mutual respect



What teachers think about when planning a series of lessons



The big picture



Lesson objectives



The Hook



Explanations



Make it stick



Independent working



Peer Learning



Check for understanding



Review and next steps



Homework



Atmosphere of Learning

There is no expectation that all of these features will appear in any one lesson although some are common to almost all lessons. Rather, the effective teacher ensures that the necessary structure, support and challenge is in place across a coherent set of lessons to support effective learning.

Student Centred Approaches

Challenges for teachers

- Keeping the focus on learning, not the project
- Mistaking physical activity for cognitive activity
- Cognitive overload –teaching complex things in complex ways with minimal guidance
- Activity-filled projects provide the confused student with easy hiding places

Teacher Led Approaches

Challenges for teachers

- Failing to get beyond the basic knowledge, facts, structures and rules
- Resorting to ‘monologic’ teaching and leaving too little time for questioning, analysing, challenging and debating
- Losing sight of the importance of communication, self-expression and creativity
- Instilling the self-discipline, perseverance and resilience needed to study, work and live independently

The teacher leading the class through concepts and illustrating ideas can be highly productive and efficient. The danger is, if executed poorly, this can become passive for students leading to a lack of engagement.

Teachers keep pupils thinking by peppering their explanations with questions and using visual media to aid understanding of abstract concepts.

To learn, students must transfer information from working memory to long-term memory where it can be stored and later retrieved.

Students have limited working memory capacities that can be overwhelmed by tasks that are cognitively too demanding. Understanding new ideas can be impeded if students are confronted with too much information at once.

Teachers use “worked examples” as one method of reducing students’ cognitive burdens. This guidance — or “scaffolding” —can be gradually removed in subsequent problems so that students are required to complete more problem steps independently. The teacher (expert) talking through worked examples and verbalising the thought process aids metacognition. Short re-caps or quizzes also aid pupil understanding.

Teachers often use multiple modalities to convey an idea; for example, they will speak while showing a graphic. If teachers take care to ensure that the two types of information complement one another — such as showing an animation while describing it aloud — learning is enhanced. But if the two sources of information are split — such as speaking aloud with different text displayed visually — attention is divided and learning is impaired.

Making content explicit through carefully paced explanation, modelling, and examples can help ensure that students are not overwhelmed.

Common Misconceptions

Learning facts/knowledge is not important

(Nowadays, students can google for answers so there's little point in getting them to memorise information.)

False. Students need to have a bank of facts and knowledge to allow them to learn new ideas and make connections between their learning.

<http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.152.9549&rep=rep1&type=pdf>

Teacher-led instruction is passive

False. Studies show that teacher-led instruction (e.g. direct instruction) is one of the most effective teaching strategies for helping pupils to learn. It is only passive if the pupils are not engaged and/or the learning is not pitched at the correct level.

<http://www.evidencebasedteaching.org.au/direct-instruction-facts-myths/>

Technology and the rapid pace of change means that students do not need to learn material that will be out of date by the time they leave school

False. We may revise the content of some curricula but the fundamentals of most subjects remain the same as it has done over many years. Mastery of the fundamentals allows students to make more sense of modern developments.

Projects are the best way to learn

Projects can provide necessary motivation and can act as a method for helping pupils place their learning in context and to help them remember their learning. However, they are best used **after** a period of knowledge acquisition rather than the vehicle for teaching knowledge.

We should take into account pupils' learning styles when teaching

Myth. We are all different and do have our own preferences but there is no evidence to classify learners into categories such as Visual, Kinaesthetic, Auditory etc. That said, teachers should aim to present material using a variety of media since this can help with engagement.

<https://www.theguardian.com/education/2017/mar/13/teachers-neuromyth-learning-styles-scientists-neuroscience-education>