



## Ambition for all: Science

### Introduction

Our Mission at St Bernadette's Catholic Primary School is: -

**'...to ensure a loving and faithful learning community in which our children can become the person God created them to be. A community where we celebrate the dignity, worth and uniqueness of every individual. Where we grow and learn together with joy, in the love of Jesus. In this love, we strive to be courageous stewards of creation.'**

Our Mission is rooted in scripture

***'I have come so that they may have life and have it to the full'***

***John 10:10***

Therefore, providing an ambitious curriculum, designed and implemented in a way that allows all pupils to achieve is integral in enabling us to strive towards achieving this mission for all the children in our care.

### Intent

At St Bernadette's we are ambitious for every pupil. We have the same learning intentions and hold the same high expectations for all children, regardless of the way or speed in which they learn. Current research has determined that adaptive teaching which meets the needs of learners (how they learn best) has a significant impact on outcomes. The strategies employed at St Bernadette's are detailed below and set out how we strive to achieve the best possible outcomes for all of our pupils.

However, for a very small number of pupils in our school with the highest level of SEND, it may be necessary to provide a significantly different curriculum to that provided to their peers. Where this is the case, it will be carefully considered by the senior leadership team, the SENDco, subject leaders and always in liaison with parents and families.

### Planning

	Engage	Represent	Action & Expression
Recognition	<b>Provide options for Recruiting Interest</b> <ul style="list-style-type: none"><li>• Offer choices of content, materials, and resources</li><li>• Offer choices of media and formats</li><li>• Offer choices of activities and assignments</li></ul>	<b>Provide options for Perception</b> <ul style="list-style-type: none"><li>• Offer choices of content, materials, and resources</li><li>• Offer choices of media and formats</li><li>• Offer choices of activities and assignments</li></ul>	<b>Provide options for Physical Action</b> <ul style="list-style-type: none"><li>• Offer choices of content, materials, and resources</li><li>• Offer choices of media and formats</li><li>• Offer choices of activities and assignments</li></ul>
Strategic	<b>Provide options for Learning When &amp; Where</b> <ul style="list-style-type: none"><li>• Offer choices of content, materials, and resources</li><li>• Offer choices of media and formats</li><li>• Offer choices of activities and assignments</li></ul>	<b>Provide options for Language &amp; Symbols</b> <ul style="list-style-type: none"><li>• Offer choices of content, materials, and resources</li><li>• Offer choices of media and formats</li><li>• Offer choices of activities and assignments</li></ul>	<b>Provide options for Expressive &amp; Communicative</b> <ul style="list-style-type: none"><li>• Offer choices of content, materials, and resources</li><li>• Offer choices of media and formats</li><li>• Offer choices of activities and assignments</li></ul>
Self-regulation	<b>Provide options for Self-regulation</b> <ul style="list-style-type: none"><li>• Offer choices of content, materials, and resources</li><li>• Offer choices of media and formats</li><li>• Offer choices of activities and assignments</li></ul>	<b>Provide options for Cognitive Function</b> <ul style="list-style-type: none"><li>• Offer choices of content, materials, and resources</li><li>• Offer choices of media and formats</li><li>• Offer choices of activities and assignments</li></ul>	<b>Provide options for Executive Function</b> <ul style="list-style-type: none"><li>• Offer choices of content, materials, and resources</li><li>• Offer choices of media and formats</li><li>• Offer choices of activities and assignments</li></ul>

Great teaching and learning requires careful and considered planning. In addition to a sequenced and progressive curriculum, teachers at St Bernadette's apply the Universal Design for Learning guidelines when planning lessons. More information can be found at <https://www.cast.org/impact/universal-design-for-learning-udl>

Think about how learners will engage with the lesson.
• Does the lesson provide options that can help all learners?
• engage their attention?
• make it relevant and meaningful?
• engage all learners?

Think about how information is presented to learners.
• Does the information provide options that help all learners?
• reach their levels of engagement and understanding?
• understand the content and message?
• present what needs to be learned?

Think about how learners are expected to act strategically & express themselves.
• Does the activity provide options that help all learners?
• act strategically?
• express themselves?
• demonstrate progress?

### Quality First Teaching

<https://educationendowmentfoundation.org.uk/news/eef-blog-five-a-day-to-improve-send-outcomes>

Teachers at St Bernadette's employ a range of strategies across the curriculum to improve outcomes for all learners.

These include but are not limited to:

- Creating a calm, positive, emotionally supportive learning environment
- dual coding – providing key vocabulary with words and pictures
- reduction in processes to reduce cognitive load and enabling a focus on the key learning
- explicit instruction -clear and succinct language, chunking of content, introducing new material in small, sequenced steps and modelling of tasks
- cognitive and metacognitive strategies – recall of previously learned content, supporting pupils to plan, monitor and evaluate their learning and modelling a selection of metacognitive strategies e.g. using checklists to monitor their progress
- scaffolding – providing of visual, verbal and written scaffolds and use scaffolding in a manner which reduces over reliance on adults in a non-stigmatising way
- flexible Grouping – group pupils in a way that is non-stigmatising and supports peer to peer learning
- using Technology – use a visualiser when modelling and as a way for pupils to record and present their learning.

## Adaptive Teaching

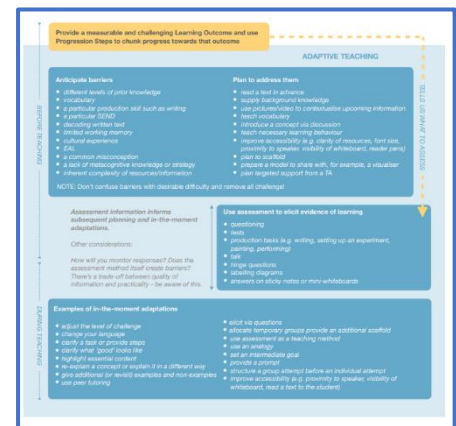
<https://educationendowmentfoundation.org.uk/news/moving-from-differentiation-to-adaptive-teaching>



Adaptive teaching begins by having the same learning intentions for all pupils without lowering expectations. We understand that learners learn at different speeds and in different ways. In order for all pupils to achieve these learning intentions it will be necessary to adapt teaching. Essentially, teachers are required to anticipate barriers to learning and make plans to address them, use effective assessment for learning throughout lessons to evidence learning and respond to the needs of children by using 'in the moment' adaptations.

In **Science** these adaptations may include:

- assessment of prior learning and adapting the teaching sequence if required
- dual coding for key vocabulary and processes
- pre-teaching of key vocabulary and concepts
- adapted knowledge organisers
- adapted texts – simplifying language
- modelling and scaffolding of tasks/investigations/experiments
- scaffolding of task e.g. writing up of an experiment
- employing a range of ways for pupils to record and present their results and learning, including technology. Opportunities for recording methods could include tables, graphs, written investigations, practical, science floor book entries & work with photographic evidence.
- discussions with pupils, alongside their work (teacher knowledge)
- flexible working groups to work to the strengths of the individuals and promote peer to peer support
- autonomy - pupil choice in presentation of their learning
- opportunities to apply and consolidate learning independently through immediate engagement tasks
- regular opportunities to revisit previously taught knowledge using Explorify and sticky learning strategies. **(A non-negotiable of 2 floor book activities per half term in all year groups)**



In science 'in the moment' adaptations may include:

- an adjustment to the level of challenge
- modifying and/or repeating language and instructions
- re-explaining of a concept or explanation in a different way
- reminders of essential content or steps
- provide a prompt, sentence starter or question stem
- provide additional scaffold either verbal, visual or written
- setting of an immediate goal
- improving accessibility – move position in class to the speaker, the whiteboard or the reading of a text aloud.

