Assessment Methodology for Design and Technology

This document has two parts, the first is the general principles of assessment in our school, and the second is the specific methodology for formative and summative assessment in this curriculum subject.

1. General Principles of Assessments

Why is Assessment Important?

Along with pedagogy and curriculum, assessment is a critical aspect in the learning continuum.

Assessment is very important for monitoring the progress pupils make in the curriculum, including the knowledge and skills that the children have acquired. Assessments help teachers and assistant teachers to plan next steps, to help set targets and goals, report to and involve parents in their children's learning and most importantly of all to encourage, inspire and motivate children to address misconceptions, to recall and to improve.

There are two main types of assessment: formative assessment and summative assessment. These are sometimes referred to as *assessment for learning* and *assessment of learning*, respectively. At some level, both happen in almost all classrooms.

Formative Assessments

Formative assessment takes place on a day-to-day basis during teaching and learning, allowing teachers and pupils to assess attainment and progress more frequently. It begins with diagnostic assessment, indicating what is already known and what gaps may exist in skills or knowledge. If a teacher and pupil understand what has been achieved to date, it is easier to plan the next steps. As the learning continues, further formative assessments indicate whether teaching plans need to be amended to reinforce or extend learning.

Effective formative assessment encourages learning by stressing the importance of recall, critical thinking, reasoning, and reflection thus creating a quality learning environment. Many techniques may be used to formally assess student learning. These include questioning (either directed or no-hands up), concept mapping, writing two or three sentences, the teacher observing (e.g. listening to reading) and recommending specific improvements, low stakes quizzes and so on.

Often formative assessments may not be recorded at all, except perhaps in the lesson plans drawn up to address the next steps indicated.

Assessment for learning is an ongoing iterative process that arises out of the thoughtful and sensitive interaction between teacher and learners.

"Human Learning presupposes a specific social nature and process by which children grow into the intellectual life of those around them." Lev S. Vygotsky

Summative Assessment

Summative assessment sums up what a pupil has achieved at the end of a period of time, relative to the learning aims and objectives and the relevant national standards. The period of time between summative assessments may vary, depending on what the subject is and what the teacher or assistant teacher wants to find out. A summative assessment may take place at the end of a unit of work, at the end of a term or half-term, at the end of a year or, as in the case of the national curriculum tests, at the end of a key stage.

Typically summative assessments take place no more than three times a year. The results of summative assessments are reported to parents regularly so that they are fully involved in the child's learning journey and are able to monitor the progress their child is making at useful intervals over the course of the academic year. To distribute workload and make the summative assessment meaningful, the school provides short termly assessments rather than one long one at the end of the year.

A summative assessment may be a written test, an observation, a conversation or a task. It may be recorded through writing, through photographs that the child takes themselves and shared with families via SeeSaw, through presentation and performance including Expert Showcase, other visual media, or through an audio or video recording. Whichever medium is used, the assessment will show what has been achieved. It will summarise attainment at a particular point in time and may provide individual, cohort and whole school "snap shot" data that will be useful for tracking progress, for informing stakeholders (e.g. parents, governors, etc.) and for defining whole school improvement plans.

To optimise the benefit of summative assessment the outcome data is analysed by teachers inform whole class next steps and teaching and learning (therefore also having formative benefits). The school uses the NFER PIRA and PUMA tests in this way, results are diagnosed to inform formative next steps.

Recording and Reporting Summative Assessments

Some summative assessments in the Core Subjects such as PIRA (Progress in Reading and Language Assessment) and PUMA (Progress in Understanding Mathematics Assessment) take place on Insight. For Foundation Subjects, Three Part Assessment Grids are used. Once noted these may be shared with the Curriculum Subject Leader.

The Termly Reports to parents/carers use the same language as the Assessment Grids to inform parents whether their child is Working Towards Age Related Expectation/Standard (ARE), At Expected Age Related Expectation/Standard or Above Expected Age Related Expectation Standard.

2. Specific Methodologies for This Curriculum Subject – Design and Technology

Curriculum Subject – Design and Technology
Curriculum Subject Leader – Nicola Scarafile
Formative Assessment Methods There are five strands of assessment in DT at Milton Road: **Designing-** Understanding contexts, users and purposes. Generating, developing, modelling and communicating ideas. **Making-** Planning. Practical skills and techniques. **Evaluating-** Own ideas and products. Existing products as well as key events and individuals. **Technical Knowledge and understanding-** Making products work. **Cooking and Nutrition-** Where food comes from. Food preparation and nutrition. (1 unit per year group) Ongoing, formative assessment of the top four strands takes place throughout all units of work and the fifth strand is included within all food units. These formative assessment methods in DT might include questioning (either directed or no hands up), teacher observations (e.g. listening to discussions), low stakes quizzes, partner and group work with children feeding back to the class and observation of 'investigative and evaluative activities'. One of the first stages within each unit of work is the 'Focus Tasks' which allows pupils to explore and test tools, equipment and practice the skills which are needed for that unit of work. This allows teachers the opportunity to formally assess children's confidence and competence in using tools and equipment and their knowledge and understanding of the new skill they have been introduced to. This will inform teachers planning and timescales for the 'making' section of the project. Further assessment for learning opportunities are also offered throughout the 'Design, Make and Evaluate Assignment' through an iterative design and make process.
Summative Assessment Methods Year 1- Year 6 record each unit of work from the 'Projects on a Page' (POAP)scheme within a DT book following book expectation project layout which evidences a clear journey of children's thoughts, ideas and progress. This provides the opportunity for summative assessment. In addition, the children can display their work as part of an expert showcase, or via the school's online platform, Seesaw. EYFS's evidence and journey through their unit of work are documented and displayed on their learning journey boards within the classrooms as well as children uploading onto their seesaw learning journey a photo of their final product.
Other Notes Relevant to this Subject: A progression document has been created outlining the specific knowledge and skills relating to the five strands of assessment this has been taken from 'Projects on a Page.' Section 3 on each POAP planner should be referred to by teachers when planning for both formative and summative assessment opportunities.

References: https://blog.cambridgeinternational.org/describing-coherence-of-curriculum-pedagogy-and-assessment/

Appendix:

Example of Three Part Assessment Grid for Design and Technology

Subject: Design and Technology
Unit : Aspect of DT-Mechanisms Focus-Sliders and Levers
Example Methodology for Assessment: **Designing** • Generate ideas based on simple design criteria and their own experiences, explaining what they could make. • Develop, model and communicate their ideas through drawings and mock-ups with card and paper. **Making** • Plan by suggesting what to do next. • Select and use tools, explaining their choices, to cut, shape and join paper and card. • Use simple finishing techniques suitable for the product they are creating. **Evaluating** • Explore a range of existing books and everyday products that use simple sliders and levers. • Evaluate their product by discussing how well it works in relation to the purpose and the user and whether it meets design criteria. **Technical knowledge and understanding** • Explore and use sliders and levers. • Understand that different mechanisms produce different types of movement. • Know and use technical vocabulary relevant to the project.
Above Expected Age Related Expectation Standard   *(children's names to be listed here)*
At Expected Age Related Expectation/Standard *(children's names to be listed here)*
Working Towards Age Related Expectation/Standard (ARE) *(children's names to be listed here)*