HEAP BRIDGE VILLAGE PRIMARY SCHOOL

"Working together, learning together"

Design Technology Policy

Headteacher

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September 2021

BE POSITIVE ***BE PRO-ACTIVE*** ***BE PROUD***

HEAP BRIDGE VILLAGE PRIMARY SCHOOL

DESIGN TECHNOLOGY POLICY

Statement of Intent:

Design and technology is an inspiring, rigorous and practical subject. Using creativity and imagination, pupils design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values. **They acquire a broad range of subject knowledge and draw on disciplines such as mathematics, science, engineering, computing and art**. Pupils learn how to **take risks**, **becoming resourceful**, **innovative, enterprising and capable citizens**. Through the evaluation of past and present design and technology, they develop a critical understanding of its impact on daily life and the wider world. High-quality design and technology education makes an essential contribution to the creativity, culture, wealth and well-being of the nation.

The writing of this policy, alongside the 'Long Term Curriculum Implementation Plan' has been informed by the school's research into best practice. Key sources used to inform school practice include membership access to the Design and Technology Association publications and resources.

Aims of our Design Technology curriculum:

The national curriculum for design and technology aims to ensure that all pupils:

- develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world
- build and apply a repertoire of knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users
- critique, evaluate and test their ideas and products and the work of others
- understand and apply the principles of nutrition and learn how to cook.

Subject content:

The main focus of our subject content is determined by our focus on the national curriculum expectations as set out below.

Key stage 1

Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home and school, gardens and playgrounds, the local community, industry and the wider environment].

When designing and making, pupils should be taught to:

i) Design

- *design purposeful, functional, appealing products for themselves and other users based on design criteria*
- *generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology*

ii) Make

- *select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]*
- *select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics*

iii) Evaluate

- *explore and evaluate a range of existing products*
- *evaluate their ideas and products against design criteria*

iv)

v) Technical knowledge

- *build structures, exploring how they can be made stronger, stiffer and more stable*
- *explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.*

Key stage 2

Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home, school, leisure, culture, enterprise, industry and the wider environment].

When designing and making, pupils should be taught to:

Design

- *use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups*
- *generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design*

Make

- *select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately*
- *select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities*

Evaluate

- *investigate and analyse a range of existing products*
- *evaluate their ideas and products against their own design criteria and consider the views of others to improve their work*
- *understand how key events and individuals in design and technology have helped shape the world*

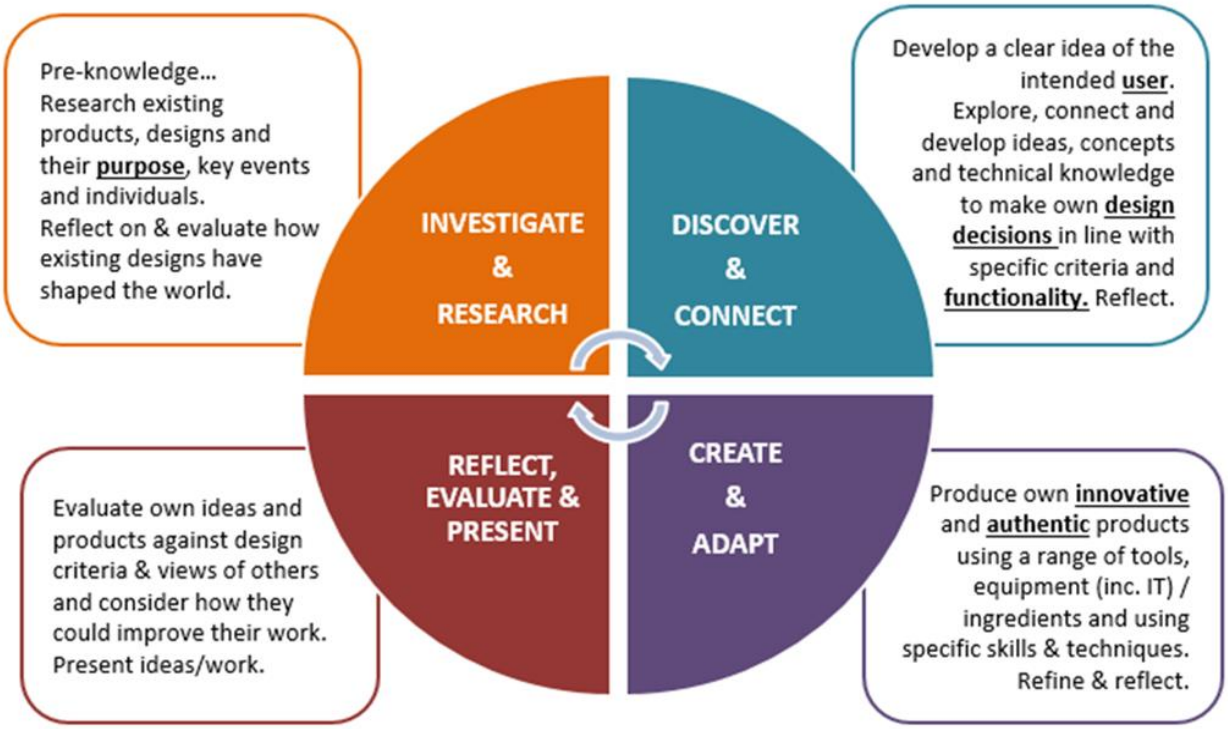
Technical knowledge

- *apply their understanding of how to strengthen, stiffen and reinforce more complex structures*
- *understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]*
- *understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]*
- *apply their understanding of computing to program, monitor and control their products.*

Specific endpoints for each year group have been developed in line with the recommended assessment and progression framework published by the *Design and Technology Association*. These are set out within our 'implementation plan' for the subject and follow the structure we have set out in our teaching process/pedagogy (see diagram below).

Implementation Strategy:

Heap Bridge teaching process/pedagogy



Subject Knowledge & Curriculum Planning

To ensure a clear focus on the above priorities the school has set out a detailed '**Long Term Curriculum Implementation Plan**' *(published on our school website)* which clearly sets out a progression framework for pupil's acquisition of knowledge, skills and understanding across the range of curriculum content taught from Year 1 to Year 6.

Design Technology in the Early Years Foundation Stage

At Heap Bridge children are encouraged to design and create throughout the EYFS curriculum. They are exposed to a range of materials including playdough, clay and junk modelling. By using a variety of progressive tools they become confident manipulating and joining materials and selecting the most efficient resource for their creations. Children enjoy regular baking opportunities such as Gruffalo biscuits and Little Red Hen bread. At times they work with parents to design, make and evaluate during our 'Working Together Learning Together' days.

The most relevant statements for DT are taken from the following areas of learning-Physical Development and Expressive Arts and Design.

'Repeated and varied opportunities to explore and play with small world activities, puzzles, arts and crafts and the practice of using small tools, with feedback and support from adults, allow children to develop proficiency, control and confidence.' (EYFS Framework 2021)

Use of sketchbooks

Sketchbooks are used from Year 1 through to Year 6 to regularly record, collect and investigate ideas, images and wider research, relevant to current and ongoing work. The sketchbook will provide a solid evidence base for the work pupils

undertake within the 'investigate & research' and discover & connect' aspects of the design and technology teaching process, enabling pupils to develop their ideas in a central, personal space, from year to year.

Sketchbooks will also provide a place for year group assessment overviews, to mark the beginning of each school year's programme of work and provide an area for teachers to record their ongoing assessment of pupils work and artistic development.

Cross-Curricular Links

The school incorporates DT into a wide range of curriculum areas. There are opportunities to develop English skills during our DT lessons by using specific key vocabulary and technical terms, discussing the children's own work and that of other designers and researching designers and their work. Mathematical skills will be developed through the cross-curricular maths opportunities linked in with current maths topics, as well as opportunities to use computing skills in ways that will enhance children's learning. DT is often linked with our science topics in particular to support the repetition and embedding of key vocabulary and skills. Children will also be given opportunities to design products linking ideas across other areas of their curriculum such as history and geography topics where appropriate as part of class and corridor display work. They will be encouraged to use their PSHRE skills when discussing their own and each other's designs, offering feedback, support and encouragement to each other.

Subject/Curriculum Leadership

The 'STEAM' *(Science, Technology (I.T.),* ***Engineering (D.T.)****, Art and Mathematics)* curriculum team *(see 'Curriculum Leaders Handbook')* will be responsible for:

i) Producing and reviewing an agreed DT policy and curriculum implementation plan which are compatible with the school's overall curricular aims and which meet the statutory requirements;
ii) providing advice to teachers on appropriate resources, teaching strategies and approaches to assessment;
iii) developing an overview of the DT curriculum in the school to ensure that pupils experience a sufficient variety of key entitlement experiences and that the subject policy is put into practice;
iv) co-ordinating the purchase, organisation and storage of appropriate resources;
v) collecting evidence of pupils' work in the subject to ensure consistency of standards and monitoring approaches to assessment;
vi) assisting with the regular evaluation and monitoring of the quality of provision in the subject, participating in the identification of agreed development tasks each year and reviewing the subject policy and curriculum planning as appropriate;
vii) keeping abreast of recent developments in the subject, attending relevant subject specific training and participating in the planning and delivery of school based training and discussions.

Class teachers will be responsible for:

i) participating in the collaborative development of DT schemes of work and lesson plans which meet the criteria agreed by the school and which ensure that pupils encounter a range of key entitlement experiences;
ii) developing an appropriate number of learning tasks which can be used for assessment purposes and recording the outcomes of these using the system agreed by the school;
iii) ensuring the highest quality of teaching within the subject and seeking professional development opportunities where required
iv) reporting to parents on pupils' attainment and progress in DT;
v) participating in the collaborative review of the effectiveness of schemes of work and lesson plans.

Parental and community involvement and liaison with other schools

Parents will be given opportunities to support and be involved in pupils' learning in art in a variety of formal and informal ways such as ***"Working together, learning together"*** days and class assemblies. School stakeholders will be kept informed of developments in the subject by newsletters and regular updates to the school blog. Parents and other members of the local community also constitute an important resource which can be used to help pupils explore a variety of aspects of the subject and regular use will be made of appropriate visitors and visits during the art programme. Pupils will be encouraged to develop and extend their studies at home and to become aware of the value and potential of the subject in a range of different contexts.

Health & Safety

DBS information will be checked and carried out by the school office before any DT workshops in school.
Risk assessments will be carried out before DT trips and/or specific lessons using particular equipment.

Measuring Impact:

Assessment, recording and reporting

As with any curriculum plan, its success is determined by the degree and depth to which pupils learn and acquire the knowledge and skills set out to be taught. The school is working towards a situation where assessment, recording and reporting of learning in art is based around the following:

a) Key knowledge & skills identified within the 'Long Term Curriculum Implementation Plan' document.
b) Individual year group assessment sheets to track pupils progress across the curriculum.
c) Teacher identification of the different outcomes they would expect across each taught unit of work.
d) Teacher's assessment of pupils work and record of outcomes of pupils against standards of emerging, expected and higher standard.
e) Assessment information is further used to assist teachers to plan their work with the class and prepare their reports to parents;
f) Reports to parents contain effort grades within the subject and at what level the children are working at in relation to emerging, expected and higher standard
g) The 'STEAM' curriculum team will collate small portfolio of examples of students' work that illustrates pupils' performance in each of the key assessment tasks.

Parity & Inclusion

A wide variety of strategies are used to ensure that teaching meets the needs of different groups of pupils, including students with SEND, higher ability pupils and those from different ethnic or gender groups. These include: differentiating lessons, developing core skills, effective lesson planning and management, the appropriate deployment of resources and careful assessment and monitoring.

The senior leadership team alongside the STEAM curriculum team will monitor the application of these strategies.

Review:

September 2024