

## Portreath School Subject Statement 2024-25

**Subject: DT      Leader: Emily Tonkin**

### **Quote that guides us:**

*"All sorts of things can happen when you're open to new ideas and playing around with things" –  
Stephanie Kwolek*

### **Why is it important to teach DT?**

DT is a subject that encourages children to think critically in a variety of ways. It develops children's empathy by considering the wants and needs of others, as well as developing resilience and problem-solving skills. Furthermore, children's sense of personal pride is celebrated when they are able to physically handle their final "product" that they have worked so hard to create.

At Portreath School we have devised a curriculum that matches the ambition of the National Curriculum and embodies the elements of our school motto: Be curious, creative and courageous to grow and make a difference.

Children's **curiosity** is sparked through every aspect of DT. Children are encouraged to ask questions to better understand the wants and needs of their user at the beginning of a project. In the "making" stage of the unit, children will constantly be curious about how to bring their design to life, as well as being **courageous** and taking risks when problems arise. In addition to this, children will show curiosity when evaluating, by considering ways they could make their products even better. DT provides children with real and relevant problems within a variety of contexts which promotes **creativity**. This motivating context allows children to discover and harness skills acquired from many other subjects, including English, Maths, Science, Art, PSHE and Computing. By equipping children with the necessary skills and tools to create functional and high-quality products, a huge sense of accomplishment can be felt when seeing, touching and even tasting the results of their personal hard work.

Creativity and innovation are nurtured through the process of exploring, designing and analysing the world in which we all live. Teaching DT creates an important foundation for later learning and careers. This is why it is important to nurture children's creativity and passion for DT at a young age in order to provide a platform for their futures. Statistics show that over 1 million women now work within the STEM industry in the UK. However there is still an overall shortage in students applying for STEM qualifications. It is vital to expose children to all of the possibilities and potential of their future from a young age.

### **Golden Threads**

As a school, we have identified 7 golden threads that are the key concepts that weave throughout our DT curriculum. They are:

- The Design, Make, Evaluate cycle
- Collaboration
- Solving problems
- Something for someone for some purpose
- Food
- Structures and Mechanisms
- Textiles

These threads start in the EYFS and link the learning in DT together across the school. They help the children to make connections. By considering these threads when planning the EYFS team start to 'plant the seed' of these concepts and prepare the children for their journey in KS1 and 2. As the DT lead, I have worked with the EYFS lead to identify key learning for EYFS to prepare them for the study of DT. The children can develop so many of the key skills needed at a very early age. For example, in EYFS, children begin to create structures with a purpose by collaborating with others and using problem solving. Throughout KS1 and KS2 in DT, children will solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values.

### **Design**

- Considering the wants and needs of their user
- Making design decisions based on the form their product will take, how their product will function, what task or tasks it will perform and who the product will be for.
- Learning to generate, develop, model, test and communicate ideas through talking, drawing, templates, mock-ups and computing.

### **Make**

- Selecting from and using a range of tools and equipment to perform practical tasks.
- Selecting from and using a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics.

### **Evaluate**

- Exploring and evaluating a range of existing products.
- Evaluating their ideas and products against design criteria.
- Collaborating with others to share feedback.

## **Curriculum Design**

DT is taught in half term blocks with three DT units being covered each year in every class. Due to mixed year groups in year 3, 4 and 5 we have a two-year rolling programme for Birch and Oak Class. To ensure a clear sequence of learning, each unit has a clear planning document. These detail the skills progression and small steps that build towards the final end point.

All DT units follow the principle of "The Three S's": *Making **something** for **someone** for **some** purpose.* This allows all aspects of the design, make and evaluate cycle to be given equal weight. We use the DT Association's resource "*Projects on a Page*" to support planning. These give a step-by-step guide to the different aspects of DT. These are:

- **Textiles**
- **Food**
- **Structures**
- **Mechanisms (KS1)**
- **Electrical or Mechanical Systems (KS2)**

Vocabulary is a focus, and key vocabulary is identified for each topic. The vocabulary also acts as an assessment tool as we can assess if children are able to understand and talk about the skills they are learning in DT.

The units have been carefully devised and link to learning elsewhere in the curriculum. DT is enriched by linking it to other subjects, as it can help to give purpose and context. DT also offers a valuable opportunity to apply and reactivate learning in other subjects. It draws upon prior learning from the curriculum. The units have been carefully sequenced with this prior learning in mind - for example, units based on structures are placed after children have learned about materials in Science, to allow children to consider the properties of materials when designing their final products.

Within each unit, there is at least one lesson which involves a "focussed task". This is where children can learn and develop a certain skill which will feed into their designing and making further along in the unit. This could be anything from learning how to safely chop vegetables in a food-based unit to exploring different joining or stitching techniques in a textiles unit.

### **What we do well as a school:**

We ensure DT is a hands-on, experience-based subject which allows children to make their own decisions, solve problems and work practically and collaboratively. The child-led learning process of DT means children are given opportunities to trial and error their ideas, allowing them to seek solutions independently. This promotes a growth mindset and shows children that mistakes are a necessary part of learning. The design, make, evaluate learning cycle allows children to create a final product which they can not only be proud of, but also consider ways to improve their work. The cross-curricular nature of DT means that units can be linked with topics. This deepens children's curiosity and interest and provides the project they are working on with further context and purpose. Children are able to take pride in the products they produce. We share work with parents using Dojo and within open classrooms. This helps to promote a sense of pride within the children but also sparks creative conversation between parents and children about their learning.

Children are encouraged and taught to work methodically, using their imagination to design and construct their projects to solve real life and relevant problems. They experiment with a variety of resources and techniques to bring their creations to life; taking risks in their learning and sharing their concepts with the rest of the class, in a safe and trusted learning environment. Discussion, investigation, evaluation and teamwork is implemented through effective collaboration, the sharing of ideas and support from peers and adults.

Our Outdoor Learning area gives children the opportunity to make structures from nature, cook food on an open fire and appreciate the environment around them. We encourage children to use materials in a sustainable way. We are a Plastic Free School and work closely with charities such as Surfers Against Sewage. We have a list of key experiences which all children will be able to do whilst at Portreath school. Many of these are linked with the learning which takes place in DT and will help to prepare them for life beyond school. Some of the key experiences include: sewing on a button, cooking a meal and building a den.

In 2024, the construction of a new classroom building provided the children of Portreath School with the opportunity to see DT in a real-life context. The builders worked closely with our pupils, allowing the children to witness important moments such as concrete being laid or the crane loading roof

pieces onto the building. Detailed plans of the classroom were shared in assembly, creating a real buzz across the school.

## **Resources**

We have a DT area which is stocked with the resources needed to successfully implement the curriculum.

## **Use of Sketchbooks**

From Year 1, each child is provided with a high-quality, hardback sketchbook. This allows children to take pride in their work. The sketchbooks are used for both Art and DT learning. The sketchbooks are used to document things from DT lessons – whether this is a photo of a child taking part in a focussed task, a questionnaire from their user or a design straight into the book. Each unit has a cover sheet which the children stick in, where the “Something”, “Someone” and “Some Purpose” are introduced, as well as any key vocabulary. This sheet is referred to regularly throughout the unit. At the end of the unit, children stick in an evaluation sheet where they are able to evaluate their final piece. In KS2, the children also evaluate their peers’ work. The sketchbooks are carried with the children throughout their school journey, so they are able to visually see how they have developed and look back on their previous projects,

## **Training**

Teachers have received a training session on implementing the principles of DT into their teaching and planning. Staff meetings and INSET sessions are to be used to give staff confidence in planning and teaching DT. Any relevant CPD is signposted by the subject lead to the relevant teachers.

## **What does monitoring tell us?**

Discussion with children with their books show that children are able to articulate what they have learnt not just activities undertaken. The children demonstrated their enthusiasm and engagement with DT. Children enjoy every process of the DT unit, not just the “making”. The children have made meaningful and well considered comments when evaluating their work. Their sense of self-pride is evident when talking about their final products.

## **Next Steps**

- Evaluate and amend the units of work taught, as a result of monitoring
- Ensure effective use of sketchbooks to capture the journey of DT
- Implement the CAD units
- Continue to build on visits and visitors to enrich learning and make children aware of the wide range of careers linked to DT.