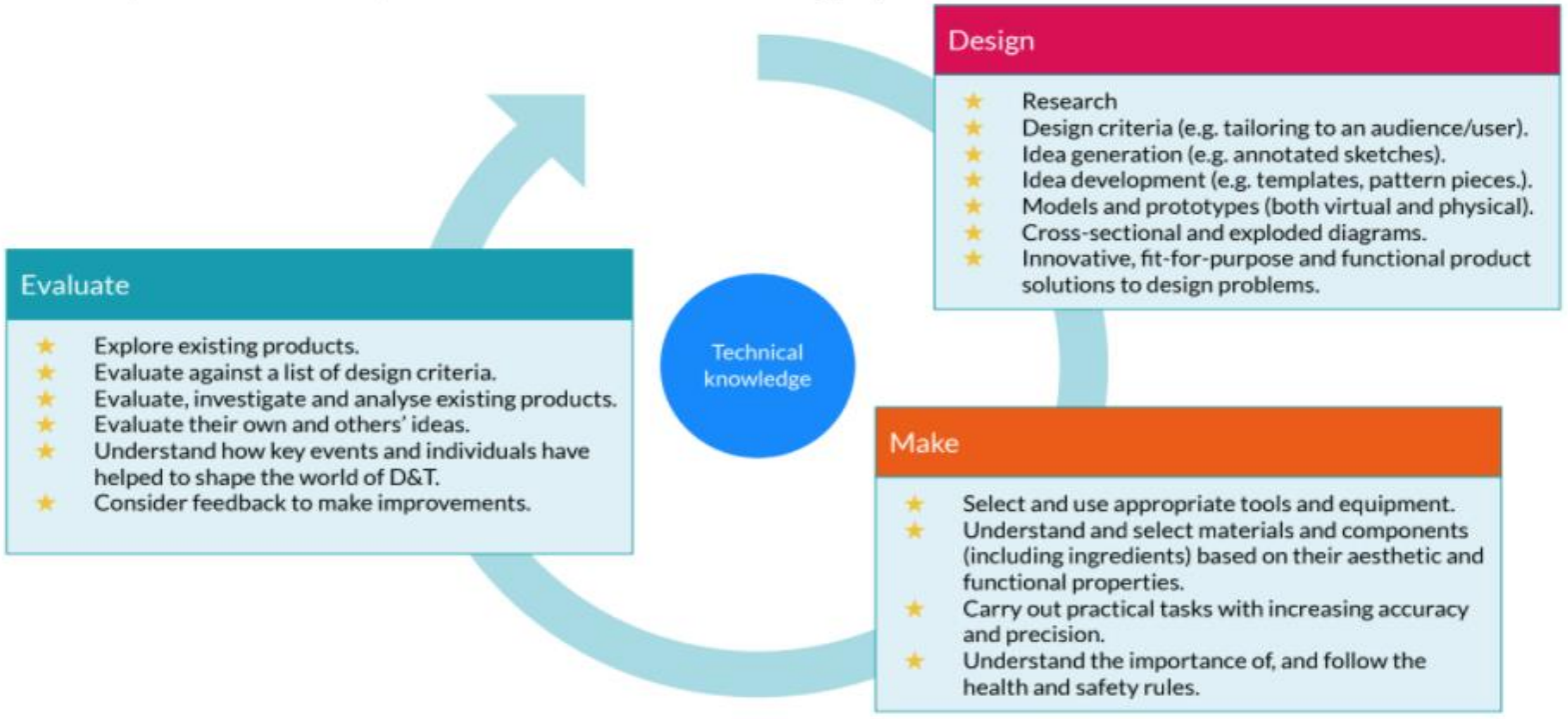
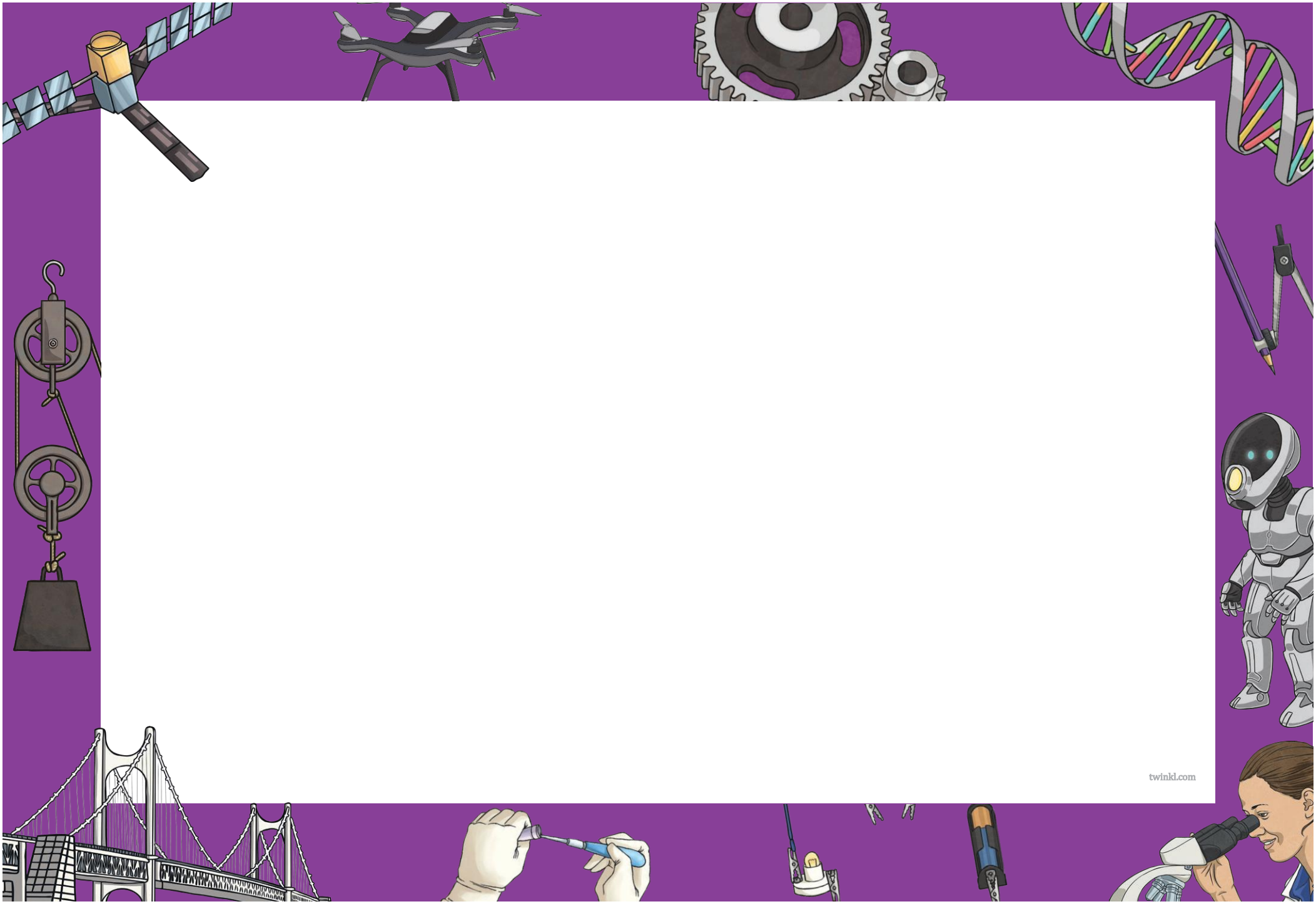
The design process

The Design and technology National Curriculum outlines the three main stages of the design process: design, make and evaluate. Each Kapow Primary unit follows these stages, to form a full project. Each stage of the design process is underpinned by technical knowledge which encompasses the contextual, historical and technical understanding, required for each strand.



Cooking and nutrition* has a separate section in the D&T National Curriculum, with additional focus on specific principles, skills and techniques in food, including where food comes from, diet and seasonality. Food units still follow the design process summarised above, for example by tasking the pupils to develop recipes for a specific set of requirements (design criteria) and to suggest methods of packaging the food product including the nutritional information.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	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Developing, planning and communicating ideas.	• Draw on their own experience to help generate ideas • Suggest ideas and explain what they are going to do • Identify a target group for what they intend to design and make • Model their ideas in card and paper • Develop their design ideas applying findings from their earlier research	• Generate ideas by drawing on their own and other people's experiences • Develop their design ideas through discussion, observation , drawing and modelling • Identify a purpose for what they intend to design and make • Identify simple design criteria • Make simple drawings and label parts	• Generate ideas for an item, considering its purpose and the user/s • Identify a purpose and establish criteria for a successful product. • Plan the order of their work before starting • Explore, develop and communicate design proposals by modelling ideas • Make drawings with labels when designing	• Generate ideas, considering the purposes for which they are designing • Make labelled drawings from different views showing specific features • Develop a clear idea of what has to be done, planning how to use materials, equipment and processes, and suggesting alternative methods of making, if the first attempts fail • Evaluate products and identify criteria that can be used for their own designs	• Generate ideas through brainstorming and identify a purpose for their product • Draw up a specification for their design • Develop a clear idea of what has to be done, planning how to use materials, equipment and processes, and suggesting alternative methods of making if the first attempts fail • Use results of investigations, information sources, including ICT when developing design ideas	• Communicate their ideas through detailed labelled drawings • Develop a design specification • Explore, develop and communicate aspects of their design proposals by modelling their ideas in a variety of ways • Plan the order of their work, choosing appropriate materials, tools and techniques

D&T at Langford Village

What does D&T look like at Langford Village?

At Langford Village, we feel it is vital to nurture creativity and innovation through design by exploring the designed and made world in which we all live and work. All pupils, from Foundation Stage to Year 6, will participate in engaging, purposeful and rich Design and Technology lessons. The children are encouraged to design, construct and evaluate models according to a brief.

The level of design criteria, practical skills required and the evaluative process used progresses as the children move through the school. We strive to plan a Design and Technology curriculum that encompasses a range of skills and builds upon that of the previous year; a well-equipped and informed teaching team delivering the Design and Technology curriculum to pupils and fun and engaging lessons that spark a love of design in all pupils.

How do we plan for D&T at Langford Village?

D&T at Langford is planned and taught by following the topics outlined in Cornerstones. Each year group has focused D&T topics such as 'Moon Zoom' in Key Stage 1 through to 'Scrumdiddlyumptious' in Lower Key Stage 2 to 'Scream Machine' in Upper Key Stage 2. Design and Technology is incorporated into the termly topic plans.

Events

Pupils across the school take part in a STEM based activities during the Autumn, Spring and Summer terms such as Marble Run making and Langford Bake Off. In addition, pupils also participate in House craft days – Christmas, Easter and at Zone Day.
The school also promotes and signposts pupils to external events taking place to encourage further participation.

What are the expected learning outcomes?

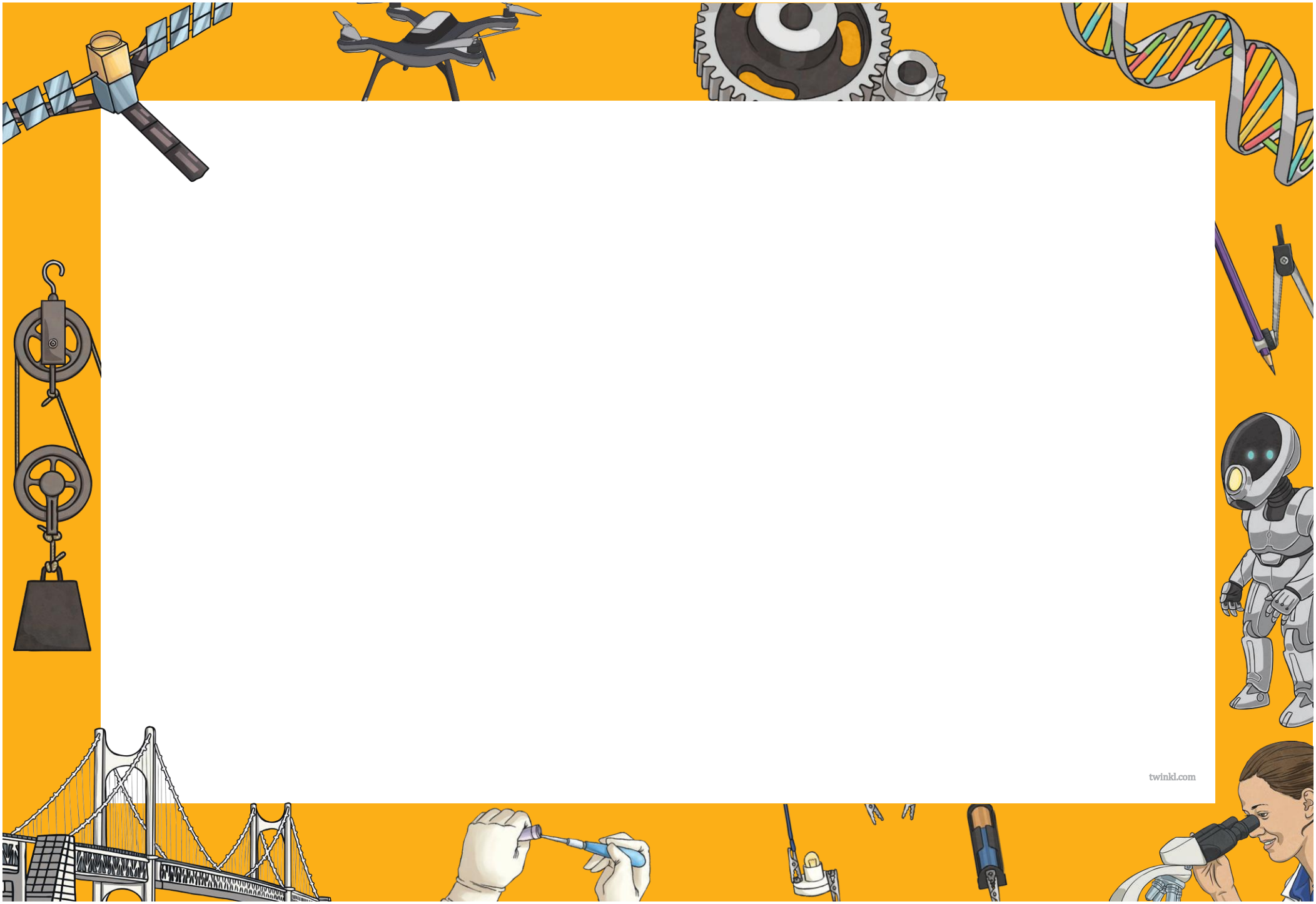
Design and Technology gives children the opportunity to develop skill, knowledge and understanding of designing and making functional products. Using creativity and imagination, pupils design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values. Ultimately, children learn how to take risks, become resourceful, innovative, enterprising and capable citizens, whilst utilizing a range of communicative skills to express and present their ideas and designs.

During the Early Years Foundation Stage, the essential building blocks of children's design and technology capability are established. There are many opportunities for carrying out D&T-related activities in all areas of learning in the EYFS. By the end of the EYFS, most children should be able to construct with a purpose in mind, using a variety of resources. They are able to use simple tools and techniques competently and appropriately to build and construct with a wide range of objects, selecting appropriate resources and adapting their work when necessary. They will develop the skills to select the tools and techniques they need to shape, assemble and join materials they are using.

In Key Stage 1, children progress to design products for themselves and others based on design criteria and research. They develop and communicate their ideas in a variety of ways including the use of ICT to create plans. In addition, pupils make using a range of tools, components and materials.

Throughout their journey in Key Stage 2 pupils will continue to develop their skills to evaluate a range of existing products and their own. They will evaluate how designers have helped to shape our world and advance their technical knowledge of structures and mechanisms, electrical systems and apply their understanding to their products. Furthermore, pupils will develop an understanding of computing to program, monitor and control their products.

Cooking and nutrition is taught throughout the school year through a variety of topics so that children foster a love of cooking and understand the key skills involved as well as making healthy choices. Further opportunities are provided for children to develop key design and technology skills.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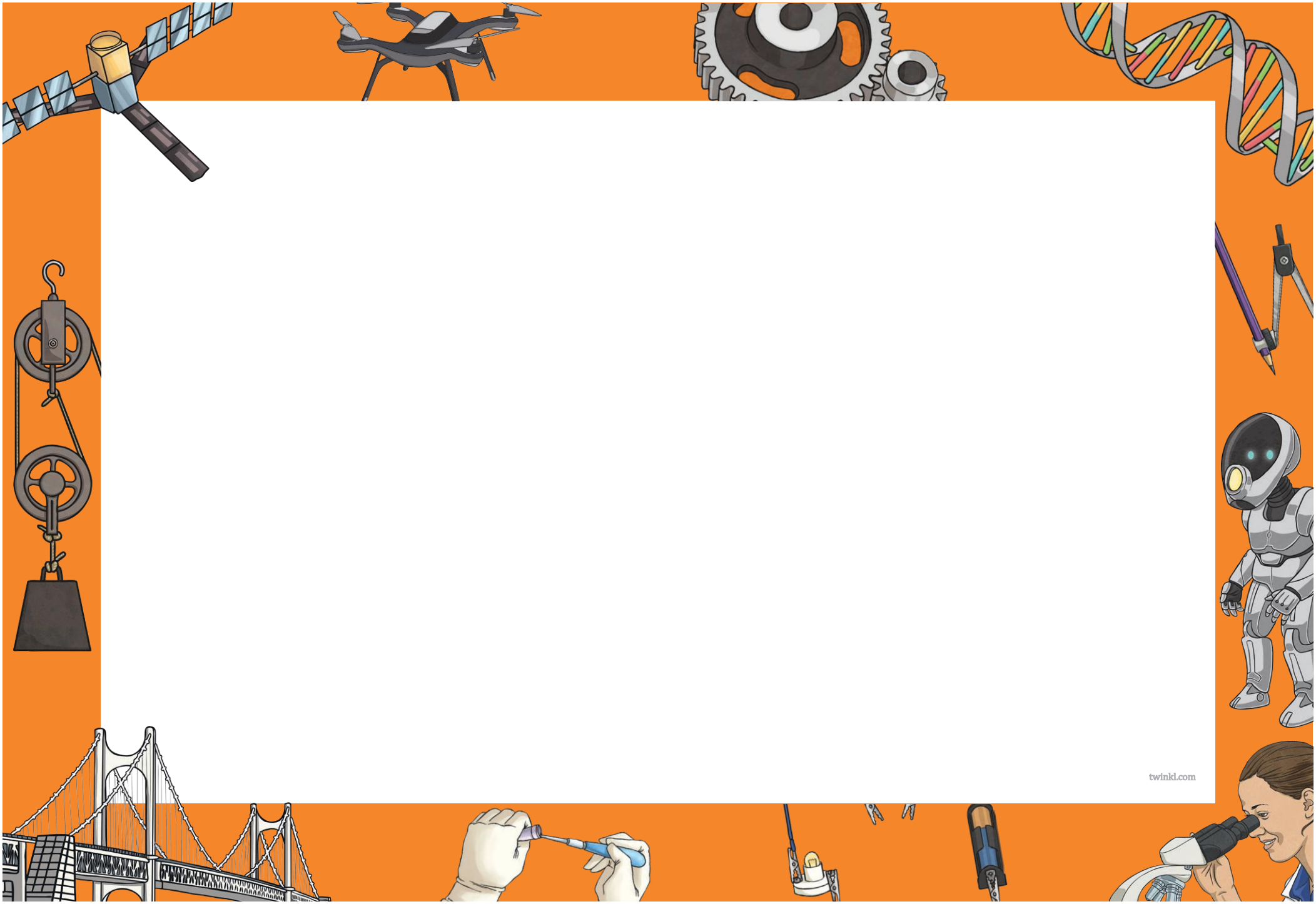
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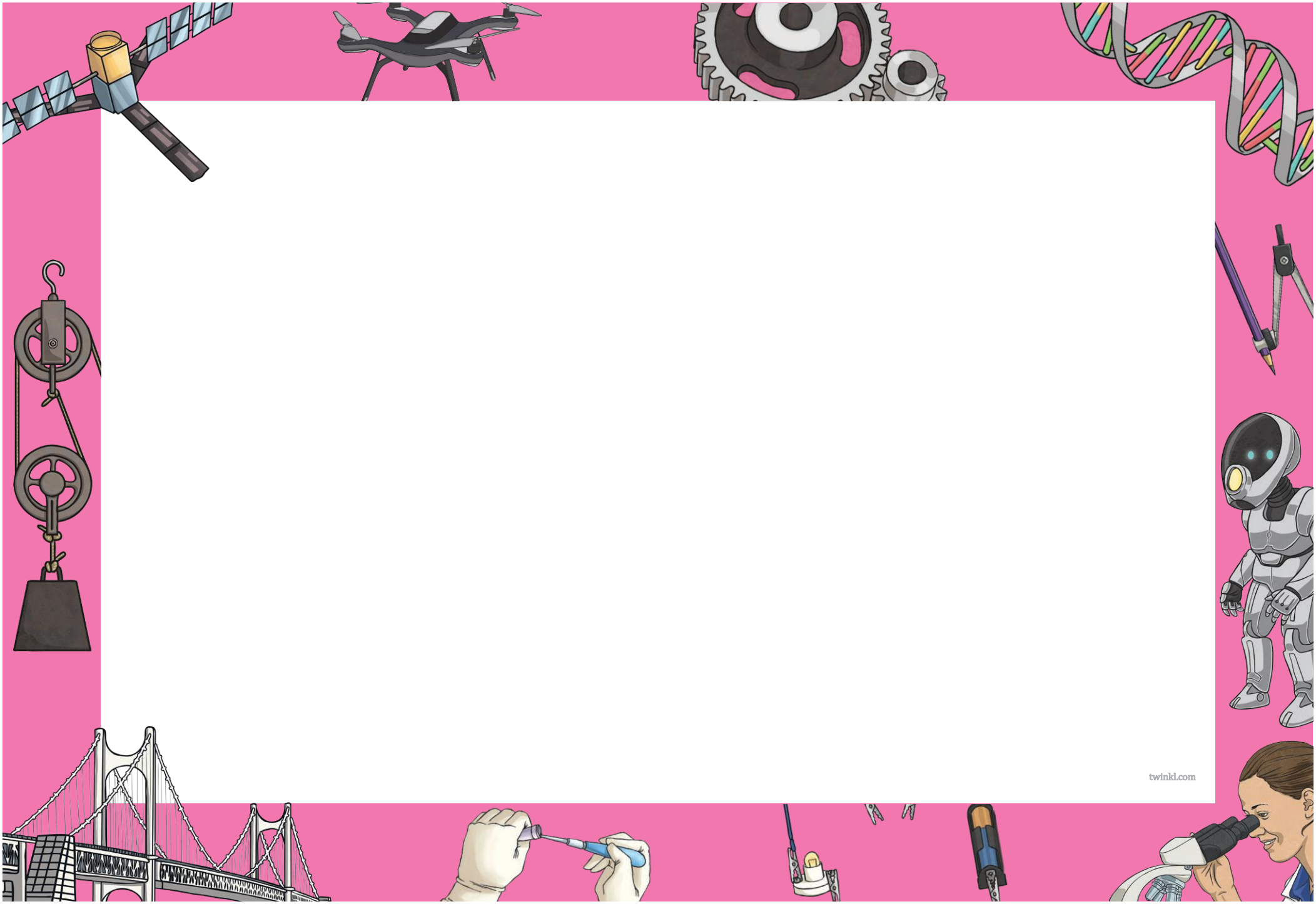
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