Design the Best Toy Ever
STEM Project

This project covers the following;

- **_Science_**_: Design & Make/ Forces/ Materials_
- **_Maths_**_: Measurement/ Shape & Space/_
- **_Engineering_**_: Research, Explore, Design, Make, Modify, Evaluate_
- **_Technology_**_: Design & Make / audio recordings/ photography/ Adobe Spark / use of Seesaw, ClassDojo and other platforms to present to class_
- **_Visual Art_**_: Drawing / Construction/ Fabric & Fibre_
- **_English/Gaeilge_**_: Oral Language/ Writing/ Reading_

Task

**Due to Covid19 all the toy shops are closed! Your friends and siblings need new toys to play with. Can you design the best toy ever?**

Before you begin, it may be a good idea to explore your own favourite toys. Consider why it is your favourite, what it is made from and how it functions. Complete the 'T in Toys' task first, to investigate toys in more depth**.**

Criteria: You need to draw your design of your toy. Colour where possible.
Please consider the following;

- Who is your toy for? What age range? A toy for a baby is very different to a toy for a 10 year old.
- Label your design with the materials needed to create this toy.
- Include any levers, cogs, twists, pull strings, push buttons or other mechanical features that allow your toy to function and/or move.
- Your drawing might not be to scale. So include the measurements you would expect your design to meet in real life.
- Consider shapes & colours in your design. What will attract children to play with this?
- Include a short paragraph explaining how you will play with this toy.

*Decoration & visual presentation will get extra credit.

Timeframe:
- Give children a timeframe to complete their project within to help develop self-management during independent learning.

Extensions to criteria to increase challenge
Teachers consider some of the following suggestions to challenge pupil's learning further;

- Design a survey to find out from your friends what they like in a toy. Consider carefully what questions you could ask. This could be in written form, via audio on Seesaw or using a digital tool like Google forms or Mentimeter.
- Apply a budget. Offer pupils a link to a DIY store. Ask pupils to budget the overall cost of the design.
- Design & Make a prototype of your toy. Follow the steps of Explore, Plan, Make and Evaluate. Will your design need to be adjusted before you submit it to teacher?
- Integrate recyclable material. Can you design & make a toy using only recycled material from your Green Bin? What will you use and why?
- Conduct market research with your class. Following the design, how many children would play with this? What needs to be changed? How much would they be willing to pay for this toy?
- Design a marketing strategy to sell their design to Dragons Den. This could include designing packaging for the toy, estimating the cost of production and the possible profit to be made.
- Integrate digital technology. Could the child create a TV commercial for their toy using Windows Movie Maker or Adobe Spark? Could they create a digital poster on Adobe Spark or other online graphic software? Could they record a radio advertisement or jingle using audio?

Simplify criteria for younger children or those needing support as follows;
Teachers consider some of the following suggestions to support pupil's learning further;

- Design a toy for your friend. Ask your friend what they would like in a toy. Work together as a team.
- What could you add to your current favourite toy to make it even better?
- Be a reporter for the Toy Show and describe your toy orally. Record child's presentation on either audio or video.
- Design & Make a toy from only cardboard boxes. Imagination is the key here!
- Use stories to inspire oral language around toys. Possible stories could include
    - ✓ The Magic Toy Box by Melanie Joyce
    - ✓ The Toys' Party; Oxford Reading Tree: Level 2: Stories
    - ✓ Toys In Space by Mini Grey

**See an example story of one teacher (Year 2 Australia) and her journey through a similar project on Design & Make the Best Toy Ever; https://spark.adobe.com/page/OqyIHPOycG44f/