Scorpio Technology NEWSLETTER

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TEACHER CONFERENCES & WORKSHOPS

Scorpio is attending or supports these Design & Technology teacher activities:

DATTA QLD - 16-17/06/2022 "Creative Integration", Brisbane Convention and Exhibition Centre

DATTA ACT – Sat 10/09/2022, TECHnow Conference, Daramalan College, Cowper St, Dickson

WELCOME

Get excited! Getting students excited about their learning makes teaching rewarding. We are sure you will find exciting and stimulating projects among Scorpio's ever increasing range.

Remember, we're here to support you, however we can. Contact us at (03) 9802 9913 or email us at sales@scorpiotechnology.com.au

PRIMARY STEM: STRUCTURES

As structures are found in the natural and in the man-made world they make a great topic to explore and experiment with in the classroom.

Engineers and Architects are responsible for producing structures. The key difference between an architect and an engineer is that an architect focuses more on the **artistry** and **design** of the building, while the engineer focuses more on the **technical** and **structural** side. (Ref: https://www.teachengineering.org)

Primary students investigating structures discover that a good structure has balance, or an even distribution of weight that allows it to stay upright and steady. A good stucture needs a strong base.

Areas of investigation include: material strength, need for reinforcement, joining methods, different frame structures are required for different jobs, planning, design and evaluation.

Explore our Wooden Mechanical Range (mostly bridges) in the Primary School catalogue. **Click on link**: https://www.scorpiotechnology.com.au/catalogues

LEARN TO MAKE, MAKE TO LEARN

"Coming together is a beginning.
Keeping together is progress.
Working together is success".
Henry Ford (1863 - 1947)

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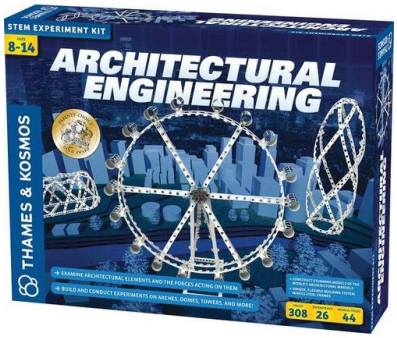
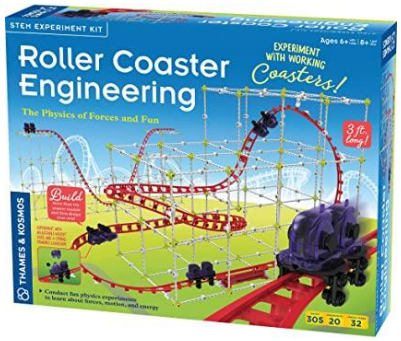
COMING SOON:

PRIMARY:

	
Architectural Engineering Kit– Ages 8-14 (Code: SN625416)	**Roller Coaster Engineering**– Ages 6+ (Code: SN625417)

This Month's Q&A Technology Tips: Free Project Sheets

Q. Do you have any FREE projects?
A. *We've done the hard work for you – the design. However, we aren't releasing these as kits, but we can provide most of the parts you need – except the pizza box!*

Click here:
Design & Technology Week 2021 – Move it & Teacher Guide
Nerve Tester Game
Cooking with Solar Energy
Solar Chargers
ZIF Socket PICAXE Programmer
Scorpio Rear Bike Lamp
Scorpio Christmas Tree
Converting Solder Kits to No Solder Kits and How (*NOTE: Only selected kits can be converted*)

EARTH DAY – 22 APRIL

Since the first Earth Day in 1970, people globally participate in events that highlight the need for climate change and creating a green economy for all.

The Earth Day 2022 theme is '**Invest in Our Planet**'

This month's feature article explains sustainable everyday things we can do to improve our world. We hope it forms a starting point for classroom discussions, project briefs and planning.

If I ride my bike twice….does that count as RE-CYCLING.

We all have to do our part for the environment. And there are many different ways one can save energy. I normally use the couch.

I don't have a Carbon Footprint…Because I drive everywhere.

If Mac users care more about the environment than Windows users, then why do Macs have a trash can and Windows has a recycling bin?

Beyond the 3 Rs: Reuse, Reduce & Recycle

Written by Anita Vejins

"There is no such thing as 'away'. When we throw anything away it must go somewhere."

***Annie Leonard* (1964 -),**
Proponent of Sustainability

The most sustainable way is to not make things. The second most sustainable way is to make something very useful, to solve a problem that hasn't been solved.
Thomas Sigsgaard, Architect

We live in a period where manufacturers have built in a planned obsolescence to encourage purchase of new products. The necessity of disposing obsolete items adds to the increasing amount of waste in our environment. Advertising and marketing have encouraged consumerism and has added its own waste. Every year the crisis escalates.

From the 1970s, we were encouraged to **reuse**, **reduce** and **recycle**. While this is still important at an individual, industry and government level worldwide level we now know this is not enough.

Reuse – Can you get a used item to use instead of buying a new one? Reusing unwanted items in artworks already existed during the early 1900s and perhaps, even earlier. Even famous artists, including Leonardo da Vinci, and Vincent van Gogh, would paint over previous paintings, so they could reuse that canvas.

Reduce - This is the simplest of the concepts. As a society we need to reduce what we produce, buy and discard.

Recycle - The recycling process involves breaking (usually melting)

the product down into its basic raw material (plastic, glass, metal etc.) and then formed into new products

Today the original list of three has grown to encompass more concepts: **Rethink or Refuse, Refill or Return, Rehome or Regift, Repair, Upcycle, Downcycle, Repurpose,** and **Compost**. Each of these play a part.

Rethink or Refuse – Decide if you really need the newest product? Is the old one broken?

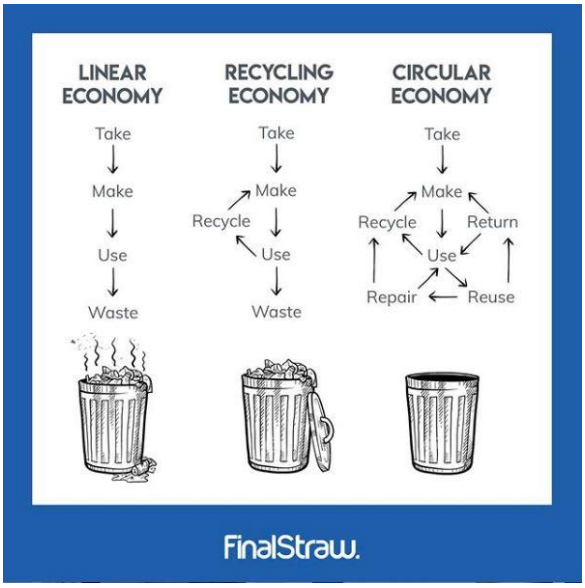
Repair – If possible, repair the product to increase its lifetime.

Upcycle – Turns a waste into a product of a higher quality. It keeps some of the original characteristics, composition, or quality of raw materials. Upcycled art has gained momentum due to growing environmental awareness.

Downcycle - Downcycling, involves converting discarded products into new materials, with lesser quality and reduced functionality. Materials become unsuitable for the process and are discarded into landfill.

Repurpose - Repurposing is the use of something for a purpose other than its original intended purpose by modifying or using the item in a new way. Positives and negatives need to be considered prior to repurposing to ensure that the activity is cost and environmentally efficient.

Compost – By composting our vegetable and green garden waste we return nutrients to the garden and stop it going to landfill.



Source: www.instagram.com/p/By30QuxggGV/

Today's designers and engineers need to take all these concepts into consideration when designing. The aim is to have a circular economy that takes into consideration all stages of a products life.

There is still a lot we need to learn and do to help our Earth, but every step is one step takes us closer to achieving global goals.

REFERENCES

https://earthhero.com/upcycling-vs-recycling/
https://greenliving.lovetoknow.com/Repurposing_Ideas
https://www.profolus.com/topics/what-is-upcycling-pros-cons-and-examples/
https://www.investopedia.com/terms/r/repurposing.asp
www.instagram.com/p/By30QuxggGV/
https://thedieline.com/blog/2020/4/22/the-history-of-plastic-the-theft-of-the-recycling-symbol?

DID YOU KNOW?

Who designed the recycle symbol?
Container Corporation of America held a student contest (1971) to develop a new label for recycling and to raise awareness about recycling.

Gary Anderson (23), an architecture student at University of Southern California won first prize. The original symbol is shown here.

The symbol was not trademarked and is now used worldwide with various modifications.