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Connect Past, Present and Future



TECHNOLOGY AT PRIMARY – WOODEN MECHANICAL KITS

We know that the best way to understand is to experience first hand. Our range of quality **Pathfinder wooden mechanical kits** that allow children to make, investigate, record and experience for themselves. The range includes:

- ☆ **Lift Bridge** (Code: WM6707)
- ☆ **Swing Bridge** (Code: WM6709)
- ☆ **Hydrapult** (Code: WM620)
- ☆ **Hydraulic Mini Extractor** (Code: WM716)

We also have two inventions by **Leonardo da Vinci** who was a great painter and inventor.



- ☆ **Da Vinci Wooden Bridge** (Code: WM6718) was originally designed to be set up and dismantled easily by armies.

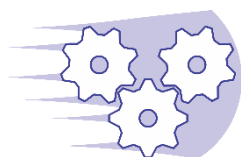
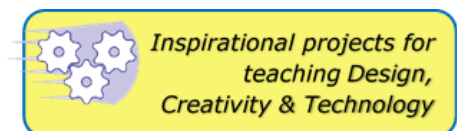


- ☆ **Da Vinci Catapult** (Code: WM6703). Construct a working catapult. Includes instruction manual. Suits ages 8+

WHAT'S NEW?

Demountable Motor Kit (Code: MOTDMT) (Price \$19.50)

- A mini model of the simple form of DC electric motor has a 2 pole armature with wound enameled copper wire and a permanent magnet
- The construction of the model is open for observation and investigation. The two magnets are removable to allow for experimentation.
- Wiring for hooking up to battery source, mini spanner and screw driver are supplied with the kit
- Motor kit is stored in its own plastic box
- Power source such as 3 xAA Batteries recommended. (Not included)



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This Month's Q&A Technology Tips: Solar



Q: What is the effect of heat on Solar Panels?

A: The power produced by a Solar Panel falls as its temperature increases. Data for a high quality, Solar Panel at 100% Sun specifies a power drop of 0.3% per Deg C of Panel temperature rise. (Note: this drop will be different for other Panels.) The power drop is due mainly to a drop in Panel voltage with temperature rise. Current actually increases very slightly with a temperature rise.

- With cell operating temperature as high as 60°C or more in full Sun on a hot day in Australia, power drops in the order of 10.5% are expected. Remember, a Solar Panel's rated power is determined at a cell temperature of 25°C.

Q: What is the effect of shade on Solar Panels?

A: When an individual Solar Cell is fully shaded the power it produces falls to near zero. If this shaded cell is in a string of cells all connected in series, the power output from this string of cells is limited by the output from the shaded cell - that is the power output from this string of cells is near zero.

Larger commercial Solar Panels usually have bypass diodes incorporated in their construction. These diodes allow the current to bypass groups of cells that have a shading issue on one or all of their cells thus limiting the power loss due to partial shading of the panel.



TEACHER CONFERENCES & WORKSHOPS

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

DATTA QLD - 27-28 June, 2019

DATTA WA – 5th July, 2019

DATTA ACT – 21st September, 2019: TECHnow Conference

DATTA AUST - 14-20 October 2019: Design & Technologies Week 2019

ITE (was IIATE)- 27–29 November 2019



MAKE A NOTE!

Scorpio updates its catalogues and website information frequently. Make a note or two to remind yourself to check it out.



“Hopefully you want to create designs that are timeless. To do that you first need know what stands the test of time and what doesn’t.”

Steven Bradley



“Trends come and go and then come back again.”

Steven Bradley (historian, author)

I was fortunate to recently spend a few hours in **Newark Museum** in New Jersey, U.S.A. This small museum encourages schools to visit its displays, has a MakerSPACE area and runs events for the local community.

Part of the Museum space is Ballantine House built in 1885. This was the residence of the wealthy beer-brewing Ballantine family. Parts of the house have been refurnished to represent the period. Going into the house, visitors are invited to think about the objects on view. I thought I’ll share these with you and hope they inspire you also.

Think of all the people...

Think of all the people who came in contact with all these things – the designers, the craftspeople, the factory workers, the transportation workers, shopkeepers, advertisers, decorators, owners, children, servants, slaves, friends, and family.

Each of these objects has been a part of many people’s lives, but it has touched these lives in different ways.

For some people, the object was something they sat in a factory all day making. For some it was something they sold to earn their living.

For others, it was a treasured purchase for a new home, or a birthday present, or a gift for a loved one.

For still others, owning fine things always remained an unattainable dream.

Each of these objects has a story to tell, and the Museum’s goal is to help them tell their stories, and the stories of the people whose lives they touched.

When you buy things for your home, you have to make choices.

Every object in this gallery was originally **chosen** and **purchased** by someone for his or her **home**.

Many became family heirlooms, and were **inherited** before they were acquired by the Museum.

The choices you make depend on your answers to the following questions:

*What do I **NEED**?*

*What **STYLE** do I like best?*

*What is **FASHIONABLE**?*

*What is it **MADE OF**?*

*Is it made by **HAND** or by **MACHINE**?*

*Does it have some **PERSONAL MEANING** for me?*

*Can I **AFFORD** it?*

What is it used for?

Some things are designed for a specific **purpose**, while the function of other things is flexible.

But an object can also serve a visual purpose – to be **beautiful**.