**STPS Science Ideas to Do at Home**

This term we have been looking at Biology. Biology includes all living things, especially animals and plants. For something to be classed as a living thing it has to be able to do 7 things. The students from Year 3 and up have been taught a mnemonic (MRS GREN) to help them remember these.

* **M**ove by itself
* **R**espiration – exchange gases with the environment around it or breathe
* **S**ensitivity – ability to sense and react to the world around it in some way
* **G**row and change
* **R**eproduce – make copies of itself eg. babies or seeds
* **E**xcretion – excrete or get rid of waste products eg. going to toilet, breathing out
* **N**utrition – take in nutrients ie. eat and drink

These are some ideas of ways you can continue to look at these areas at home. Drawing pictures with labels, writing information, taking photos, making videos, using Scratch 2.0 (on computers) or Scratch Jr on iPads are all great ways of recording discoveries.

Another great activity would be to create a vegetable garden. If you don’t have space in your garden, then get some pots to grow some plants. Your child can water them, measure them regularly and record the changes in a diary. This is a great maths activity, that can be extended to recording the information in a table and ultimately even a graph. This record may be a drawing of what they are seeing, writing about any changes or even taking photos or video to show the differences. Children love watching plants grow and may even be tempted to try other vegetables if they grew them!

There are also lots of great experiments that can be found online that use materials easily found at home. Cooking is a great Science activity, especially if you make predictions about how the ingredients are going to change, then discuss how they actually changed and if those changes can be reversed.

**Pre-Primary:**

*Living things have basic needs, including food and water.*

Look at what different living things (both plants and animals) need in order to survive eg. food, shelter, air. How are these needs the same and different?

**Year 1:**

*Living things have a variety of external features. Living things live in different places where* *their needs are met.*

Look at how living things (both plants and animals) are the same and how they are different. Look at where they live, how these are different and why they live there.

**Year 2:**

*Living things grow, change and have offspring similar to themselves.*

Look at the life cycles of different living things (both plants and animals). How are they the same? How are they different? How do they change over time?

**Year 3:**

*Living things can be grouped on the basis of observable features and can be distinguished* *from non-living things.*

Get a list of living things (both plants and animals). Use pictures if possible – these could be printed out and made into cards. How could they be put into groups? Come up with as many different ways of grouping them as possible eg. how they move, where they live, what they eat. What is the difference between these and non-living things?

**Year 4:**

*Living things have life cycles. Living things depend on each other and the environment to survive.*

Research the life cycles of different living things (both plants and animals). How are these life cycles different? How are they the same? How do the different living things use each other and the environment? What would happen if something happened to one of them?

**Year 5:**

*Living things have structural features and adaptations that help them to survive in their environment.*

Research living things (both plants and animals) and look at what is unique to each one. Why do they have those features? How does each feature help them to survive? Why couldn’t they survive in a different environment?

**Year 6:**

*The growth and survival of living things are affected by physical conditions of their environment.*

Different living things live in different environments. Choose a habitat and research what living things live there. Why do they live there and not in a different habitat? What threats are there to their survival?

Choose one of the following threats and research the natural disaster and what effects it has on living things.

* bushfires
* floods
* tsunami
* cyclone / tornado
* earthquake
* volcanic eruption