



## ACTIVITY 1

### UNDERSTANDING WHAT YOU READ

Read the content for this topic then answer the following questions to see how much you understand about what you read.

1. What area of research is this year's National Science Week celebrating?
2. TRUE or FALSE – It is International Year of Family Farming
3. List an area of science that plays a part in food production.
4. What is one of the purposes of National Science Week?
5. How many years has the National Science Week been held?

### TRY THIS

The instructions for the experiment have been mixed up. Re-write the eight steps in the correct order. Check the NiE page to see if you are correct.

Pour enough water into the bowl to cover the cereal completely and leave it sit for 10 minutes so the cereal soaks up the water. Stir the mixture and use a fork to mush it up more. Remove the magnet every now and then and have a close look. The iron should look like a dark stain against the white rubber of the balloon.

Pour approximately 4-5 cups of cereal into the plastic bag or food processor. Whiz, bash or thump the cereal until it is as fine as you can make it. Empty it into the bowl.

Stir the magnet slowly through the cereal mixture, making sure to run it along the bottom where the iron will have sunk. It will take some time for the magnet to pick up enough iron for it to be visible.

Compare the amount of iron collected on the balloon for each cereal tested.

Put the magnet into the balloon and tie a knot in the balloon to hold the magnet firmly in place.



## ACTIVITY 2

### CHANGING

Two types of change - physical and chemical – form a large part of food production.

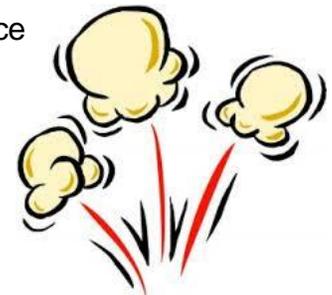
**Physical Changes** such as melting, freezing and dissolving do not involve any change in the chemical composition of a substance so you can get back what you started with by reversing the process, e.g. freezing and melting or dissolving and evaporating.

**Chemical Changes** involve a change in chemical composition in the substances which are being investigated so you cannot easily get back your original substances as something new has been formed. eg Try unfrying an egg

Decide whether these are examples of physical changes or chemical changes and explain your decision.

Eg Frying an egg – Chemical change because the changes

- Boiling water
- Mixing bicarbonate of soda and vinegar
- Cooking popcorn
- Rotting fruit
- Squeezing an orange to make juice
- Whipping cream
- Dissolving salt in water
- Cooking sausages on a BBQ
- Chopping up a carrot
- Adding food colouring to icing
- Chewing/digesting food
- Toasting bread
- Baking a cake
- Freezing milk
- Cooking rice
- Cooking marshmallows on a fire
- Melting ice-cream





## ACTIVITY 3

### FRUIT JELLY SCIENCE

#### What you need:

- 1 packet of Jelly crystals
- Chopped fruit of various types apple, pineapple (fresh and tinned), orange, kiwi
- Plastic cups (1 for each fruit)

#### What to do

1. Chop various types of fruit into small pieces. Place into separate cups.
2. Mix up the jelly according to the instructions.
3. Add the jelly to each fruit cup and have a further container with just jelly as a control.
4. Leave in a fridge for a couple of hours to set.

#### What happens?

Does all the jelly set properly?  
What happens if you use tinned fruit?

#### Why does it happen?

Explain why you think some fruits set and some don't.  
Some fruits contain enzymes called proteases.  
This means that when they are mixed with the gelatin in the jelly, the proteases chop the gelatin protein up into pieces so the jelly doesn't set.



## ACTIVITY 4

### WORDS AT WORK

In Wordy News this week we defined the word INSTITUTE which was used in the following way:

Institute cites Gladstone fish disease outbreak as why it needs ...

## More science data please



**Bosses visit turtle centre**  
MARA PATTISON-SOWDE  
Industry reporter  
QUOIN Island Turtle

### Forms of the word institute = institutes, instituted, instituting, institution, institutionalised

Choose which form of the word fits into the sentences below.

Peter had already \_\_\_\_\_ a search into the mystery of the missing flight.

In 1910 the scientific \_\_\_\_\_ had 55 instructors and 650 students.

He has done research in physics for a number of different \_\_\_\_\_s throughout the country.

Many old people in this country are \_\_\_\_\_ because family simply cannot or will not take care of them.

Nothing would be gained and harm might be risked by \_\_\_\_\_ proceedings against the man.

Not attending the enrolment day indicates to the \_\_\_\_\_ that you do not wish to accept the offer.

With higher global divorce rates and the idea of marriage cast as \_\_\_\_\_ misery, why bother?



## ACTIVITY 5

### CHECK IT OUT

#### WHERE AM I

During National Science Week there are many events happening all over Australia.

From the list of events below indicate which State or Territory they are happening. Mark the town or city on the map below.

Based on the dates and locations plan a trip to visit all events.

#### Event

Humanoid Discovery Exhibition - Townsville, June 7 - August 24

Excellence in Science Teaching Award –Adelaide, July 6 - August 29

Upstream/Downstream- Bathurst, July 11 - December 1

What I See When I Look at Sound – Perth, July 12 - August 31

Physics is Fun Luna Park -Milsons Point, July 14 - September 26

Embracing Innovation Craft+Design Centre, Canberra July 24- August 30

Science For Our Future, Science in the World, Hobart, July 30 - August 7

Explosive Science - Brisbane EKKKA, August 8 - August 17

EcoScience Schools Day - Alice Springs - August 8

Yarraville West Primary School Science Fair - August 1 2014 - August 22



Note these ● are approximate



## ACTIVITY 6

### NEWS IN THE SPOTLIGHT

A media release is the most effective way of providing information to media outlets about your event or an issue. Its purpose is to gain the interest of the media outlet, and provide them with the angle of how to position the story. Write a media release for a science event happening at your school

#### Media Release

**Date:**

**Title:**

**[use this space to write about your event]**

**[use may include this general information about National Science Week]**

In 2014, National Science Week events are expected to be held right throughout Australia from Dubbo, Davenport, Darwin and everywhere in between, offering an array of activities with everything from science festivals, music and comedy shows, interactive hands-on displays, open days and online activities.

**ENDS**

**For further information please contact xxxxxxx**