

It's About Time

Sample

CONTENTS

TEACHERS' NOTES	Page 4
STUDENT RECORD SHEET	Page 6
WATCHING THE CLOCK?	Page 7
KEEPING TRACK OF TIME	Page 8
HOW DOES IT ADD UP?	Page 9
TIMING AND TECHNOLOGY	Page 10
SHADOW MAGIC	Page 11
SHADOWS OF TIME	Page 12
PUT A SMILE ON YOUR DIAL	Page 13
DRIPS IN A CLEPSYDRA	Page 14
A ROLLING BALL GATHERS NO MOSS	Page 15
WHEN IS A DAY NOT A DAY?	Page 16
IN RHYTHM	Page 17
BLINK AND YOU'LL MISS IT	Page 18
TIME ZONES - THE FACTS	Page 19
THE 24 HOUR CLOCK	Page 20
ZONES IN THE AIR	Page 21
TIME ZONE PROBLEMS	Page 22
BIG TROUBLE IN LITTLE ISLAND!	Page 23
CHILDHOOD MEMORIES	Page 24
FISHING FOR THE FUTURE	Page 25
WRITTEN IN THE STARS OR JUST FOR GALAHS?	Page 26
THE MANY FACES OF TIME	Page 27
PERHAPS YOU'LL OPEN A CAPSULE	Page 28
ARE YOU KEEN TO MAKE A TIME MACHINE? PART ONE	Page 29
ARE YOU KEEN TO MAKE A TIME MACHINE? PART TWO	Page 30
FIVE MINUTE FILLERS	Page 31
ANSWERS	Page 33

Watching the Clock?

Name: _____



Do you know how often you check the time and **when** you need a clock or watch?

Do you **always** need a clock to tell you that it's dinner time?

Make a list of 5 times during the day that you "check the clock".



Think of some other times during the day when you can tell **APPROXIMATELY** what the time is without looking at a clock or watch.



Draw a "birds-eye" map of your house with labels showing all of the devices that show time.

Include a key with symbols to show whether it is a clock, a watch, a digital display or other:

Key:

..... **Clock**

..... **Watch**

..... **Digital**

.....

.....

.....



Related Outcome: Students will indicate when and where time is used.
Subject Areas: Maths - Measurement.

Timing and Technology

Name: _____



In sporting events such as the Olympic Games, timing devices are used to determine split-second times. Find out about some of these by visiting www.nsc.gov.au and search for the download of "Brief History of Timing in Sport". Advances include highly sensitive touch pads at the end of swimming pools, digital cameras with inbuilt clocks, photo beams across finishing lines and automatic radio transmitters attached to competing athletes.



1] How have these advances changed the outcome of results?

2] Do you think that these advances in timing are positive or negative, and why?

Although we as humans seem to remain the same, world time records are continually being broken. Write down three theories you have to explain the ongoing broken records:

- ① _____
- ② _____
- ③ _____

Compare your theories to a classmate. Do you share any common ideas?

Below, draw your plans for a timing device to more accurately record times during races at a school sports event.



Related Outcome: Students will investigate aspects of using technology to record time.
Subject Areas: Technology & Enterprise - Materials; Science - Natural & Processed Materials.

Drips in a Clepsydra

Name: _____

A CLEPSYDRA is another name for a water clock, a method that was used by the Egyptians, Greeks and Romans to show the passing of time.

Your challenge is to see if you can make a clepsydra that shows the passing of ten minutes.

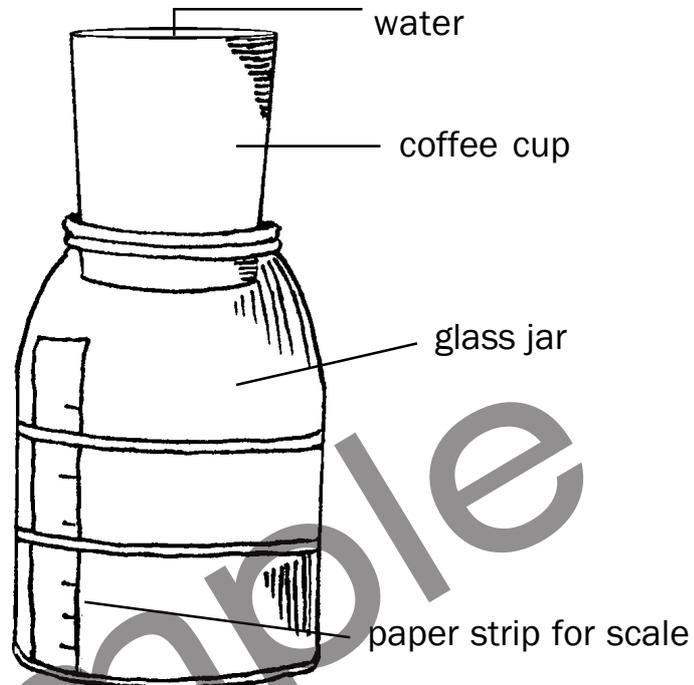
You need:

A small foam coffee cup or yoghurt container;

A small glass jar;

A strip of paper;

Two rubber bands.



What to do:

- Use a pin to make a small hole in the bottom of the coffee cup so that water flows through in droplets. (Start very small and only make it larger if you need to.)
- Set up your materials as in the diagram.
- Fill the top cup with water.
- Use the paper strip to show the water level in the glass jar at the passing of each minute. (Do this by timing with a second-hand on a watch or timer.)

See if you can adjust the hole so that the timer can show **TEN MINUTES**.

Brain Teaser: Are the marks the same distance apart all the way up the jar? Why or why not?

Go to www.ernie.cummings.net/ and find out about other ancient timers that you can make. Compare them all to find out which one is the most accurate. Decide WHY it is the most accurate.

Time Zone Problems

Name: _____



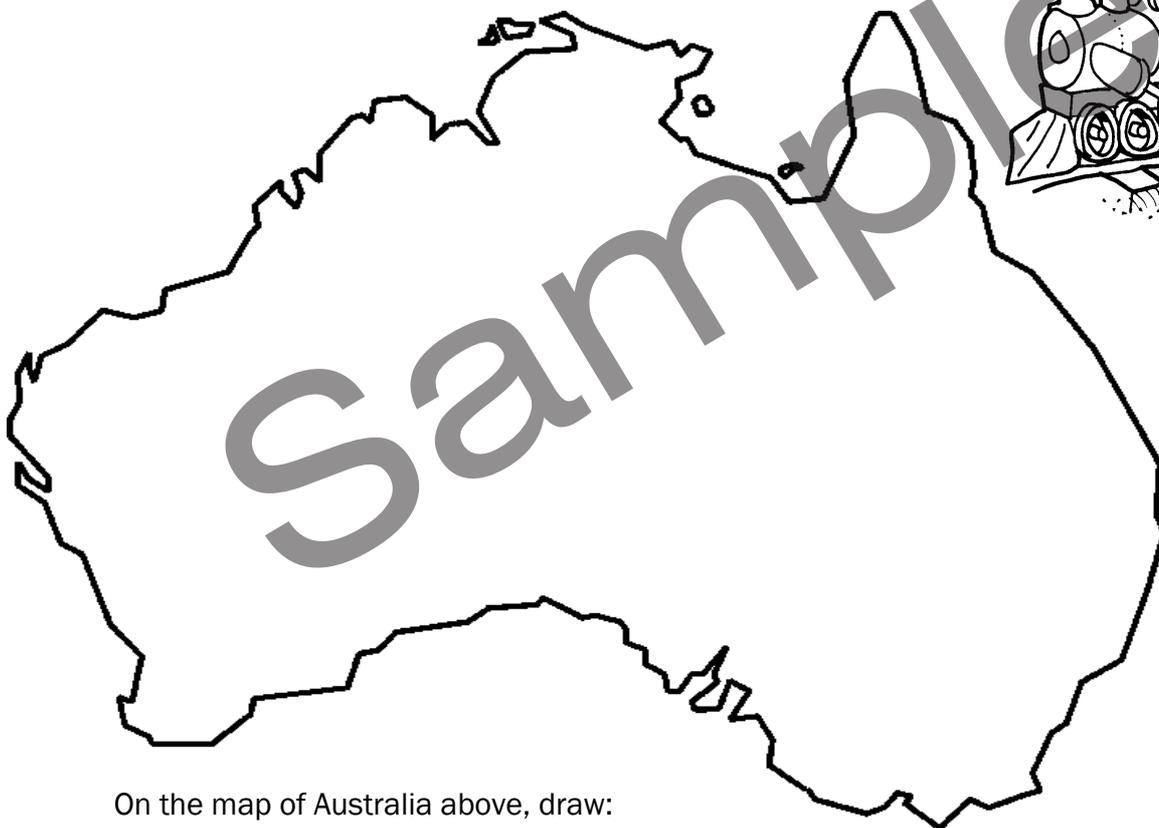
What are some of the difficulties faced by a country like Australia, where there is more than one time zone?

Find out about time zones in Australia. Some atlases may contain this, or visit www.worldtimezone.com

If you started from Sydney and travelled by rail to Perth, where would you have to change the time on your watch? By how much time would this change be?

1a) _____
1b) _____

2a) _____
2b) _____



On the map of Australia above, draw:

- The Trans - Australian railway line; Sydney to Perth.
- The states of Australia.
- The places where the train traveller must change his/her watch.
- Shade in the different Australian Time Zones.



Design a bright sign that reminds passengers on the "Indian Pacific", (travelling the Trans - Australian railway) to adjust their watches to the different Time Zones. Find out more about interstate train travel on www.gsr.com.au



Related Outcome: Students will relate their understanding of time zones to Australian states.
Subject Areas: Maths - Measurement; Science - Earth & Beyond.