

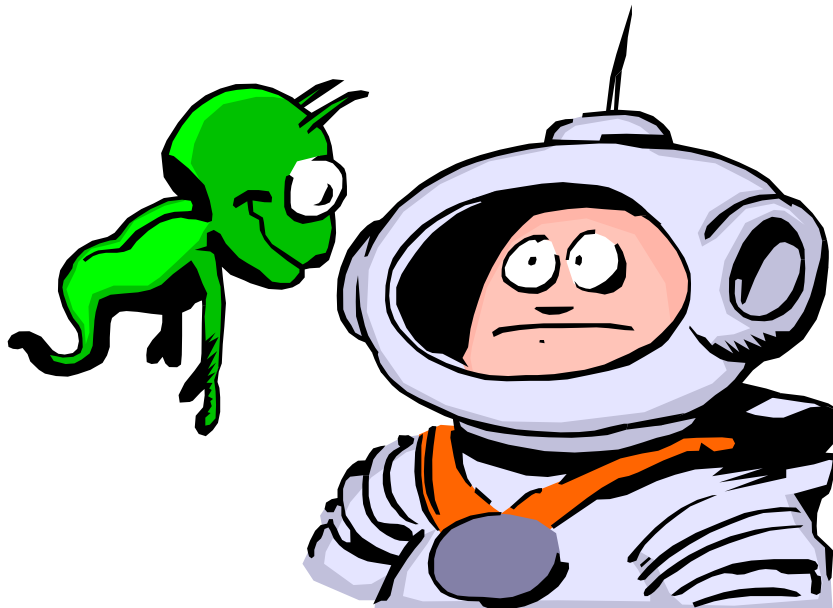


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SPARE PARTS PUPPET THEATRE

GRANNY IS AN ALIEN



TEACHERS NOTES



TEACHERS NOTES

ABOUT KIDSAFE WA

Kidsafe WA is part of a national non-government, not-for-profit, charitable organisation. The primary aim of Kidsafe is to prevent unintentional injury and death to children through research, education and advocacy.

Kidsafe WA and Healthway are proud to support Spare Parts Puppet Theatre **Granny is an Alien** performance, by promoting the message Safety Rules OK!.

Injury

Injury is the leading cause of death to Australian children aged 0-14 years. Injuries and their consequences are preventable through education and reinforcement of positive safety rules. This can be achieved by giving children the knowledge of potential injuries, creating awareness and acceptance of safety messages and through developing children's skills to identify hazards and make changes to improve the safety of their environment and behaviour.

What is the "Safety Rules OK!" message?

The "Safety Rules OK!" message is an overarching safety message. It means we need to think about the safety of others and ourselves in everything we do. There are many different areas of safety such as personal safety, home safety, school safety and water safety. Each important area has safety rules that we need to remember.

You can help

We need your help to introduce Kidsafe's "Safety Rules OK!" message to your students before and after the performance of **Granny is an Alien**. To assist you Kidsafe WA has developed "Safety Rules OK!" Teachers' Notes that link to the concepts of personal values, safety and injury prevention. The selected activities focus on Eclipse safety, Comets, Astronauts & Safety for Granny. Activities are linked to learning areas of the Curriculum Framework.

Contact Kidsafe

For more information contact Kidsafe WA:

Cnr Thomas Street and Roberts Road, Subiaco

PH: 9340 8509 Fax: 9340 8041

Opening hours: Monday to Friday 9am –4pm

Website

Access the "Safety Rules OK!" teachers notes and hyperlink to sponsors on the Spare Parts Puppet Theatre website.

- Visit Spare Parts Puppet Theatre www.sppt.asn.au
- Visit the "Safety Rules OK!" website www.safetyrules.health.wa.gov.au
- Visit Kidsafe WA website www.kidsafewa.com.au
- Visit the Perth Observatory website www.wa.gov.au/perthobs



TEACHERS NOTES

BACKGROUND INJURY STATISTICS

Preventing injury to children is a National Health Priority area. The main areas for focus highlighted in *the National Injury Prevention Action Plan for 2000-2002*, include transport related injury, falls in children, poisoning in children and water safety.

Injury is the leading cause of death in Australian children aged one to fourteen, accounting for nearly half of all deaths in this age group. Unfortunately more children die as a result of injury than die from cancer, asthma and infectious diseases combined. In Western Australia, on average each week 86 primary school children (5-14years) are admitted to hospital as a result of an injury. Of these injuries the majority occur in the home with 14 primary aged children across the state being admitted to hospital for an injury that occurred at home. School is the second leading place for injuries to occur. Each week there are 7 primary school children admitted to hospital as a result of an injury that occurred at school.

Data collected by Princess Margaret Hospital Emergency Data Information System showed that in the year 2000, 20 children every week presented to the Emergency department for injuries that occurred at school. The majority of the injuries occurred in the school playground as a result of falls. The more serious injuries are from a fall height greater than 1 metre. These children fell from monkey bars and flying foxes, which resulted in fractured arms, abdominal injuries, facial lacerations or more severely head injury with concussion. The second highest causes of school injuries are sporting injuries with the highest number seen in Soccer & Aussie Rules.

These statistics represent only the most serious incidents, and are considered the tip of the iceberg for the true incidence of injuries among children. Many more children present with injuries to other hospitals, medical centres, local doctors and the school nurse, which are not recorded. The preventable nature of childhood injuries demands the development of childhood injury policies, surveillance and prevention programs together with greater community support, the uptake and practice of safety messages from an early age.



TEACHERS NOTES

VALUES CLARIFICATION

Background

The values we hold influence our thoughts and actions. In order for people to follow safety messages and act in a safety conscious manner they must believe that safety of themselves and others is important. Secondly, they must hold the belief that injuries are preventable and not just an unpreventable event.

Purpose

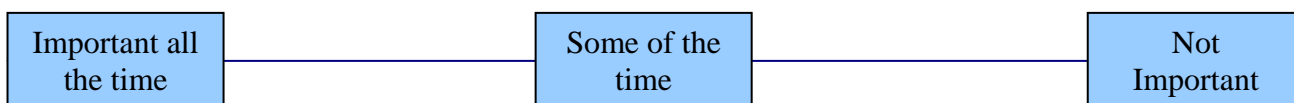
Students are to recognise that their own values impact upon the decisions that they make.

Curriculum Framework Links

Learning Area	Learning Outcomes	Key Aspects
Health and Physical Education Strand: Self-management skills	Self Management Skills	<ul style="list-style-type: none">● Clarify their values.● Describe how their values can affect the decisions they make.

Activity: Values Clarification of Personal Safety

- Ask the class the question – Do you think personal safety is important?
- Place a piece of string or masking tape across the classroom as a continuum. Label one end “Important all the time”, in the middle “Some of the time”, at the other end “Not important”.
- Ask students to stand on the personal safety continuum to show how important they think personal safety is. Write the student’s name on tape at that position and copy this continuum
- Repeat this values clarification exercise after the students have completed the other safety Rules OK! Activities. Compare these results with the first exercise. Have any students changed their positions?
- Invite the students to share with the class why they have moved.



Activity: Values Clarification the Safety of Others

Discuss what Alex and Gran Valued most. Did Gran and Alex’s concerns for personal safety enter into their decision-making, why and why not?

EXPLORING SPACE

Background

Agent Alex is regularly investigating strange planets for Alien life forms. Alex likes to imagine she is an astronaut exploring the planets. When astronauts are in space gravity is not always present and they have a feeling of weightlessness.

Purpose

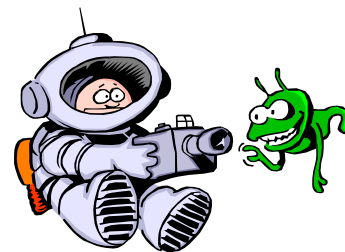
Students understand the effects of gravity and the feeling of weightlessness.

Curriculum Framework Links

Learning Area	Learning Outcomes	Key Aspects
Science Strand: Investigating Scientifically	Conducting Investigations	<ul style="list-style-type: none"> Students carry out activities involving a small number of steps, and observe and describe results.

Things you need

- Elevator
- Bathroom Scales
- Chair
- Cup of water
- Drinking straw



Activity – Explore the effects of gravity

1. Arrange with your local business or shopping centre (where there is an elevator) to use the elevator to conduct your experiment.
2. Stand on your scale. Record your normal weight before you push the button.
3. Push a button for an upper floor. Check the scale as the elevator starts. It should show more than your normal weight, because gravity pulls you down as the elevator moves up. Record your weight several times during your journey to an upper floor.
4. Check the scale as the elevator stops. The reading should be less than your normal weight, because your body is still trying to move up. It is pushing against gravity and cancelling its force.
5. Try the experiment as the elevator goes down. What happens to your weight?

Activity – Explore the effects of weightlessness

Not only are astronauts weightless in space, but so is everything else, including their food and drink. How does this affect life aboard a spacecraft?

1. Place a glass of water on the floor near a chair so that your stomach is higher than your mouth. Try to drink from the glass in this position.
2. Next, use a straw. Even with a straw, drinking is difficult. Astronauts have to squeeze drinks from plastic containers to get the liquid into their mouths

Further Information

Activity Adapted from: Childcraft Annual 1999.

COMETS

Background

Grandma has a special surprise to share with Alex, the same surprise her own grandfather had shared with her in 1937. Comets are part of our solar system, and are believed to come from a region far beyond the orbits of Neptune and Pluto. Some, like Comet Halley go in periodic orbits (it orbits the sun every 76 years). Comets are made up of the original material from which the solar system formed. Orbiting far from the Sun, this primordial material has survived in an unaltered state for billions of years.

Purpose

Students learn about the mystery and structure of comets



Curriculum Framework Links

Learning Area	Learning Outcomes	Key Aspects
Science Strand: Earth & Beyond	Earth & Beyond	● Students Understand changes and patterns in space in relation to comets.

Activity

1. Discussion – either as a whole class or in groups. What is a comet? Can you name any famous comets? What was the name of the comet Grandma showed Alex?
2. Make a Comet Nucleus(Instructions Page 6):
(Activity adapted from www.solarviews.com/eng/edu/comets.htm)
When comets are near the sun they have several distinctive parts, this includes its nucleus. When a comet nucleus is gravitationally drawn into the inner solar system it begins to heat up. This volatile material from which it is made boils off to form the head and tail(s) that have amazed and frightened people throughout history. This tremendous light show is produced from just the small solid nucleus measuring only 15 to 20 kilometres long. Think of it as a very dirty iceberg!

In groups, follow the recipe on the following page to make a comet nucleus.

3. Discuss what happens to the comet nucleus as the atmosphere changes around it (you will see these changes as you add the different ingredients).

Extension Exercise

Arrange an excursion to the Perth Observatory to see the different instruments that astronomers use to view space & the amazing comets.

Further Information

Solarviews www.solarviews.com/eng/edu/comets.htm

Perth Observatory www.wa.gov.au/perthobs/

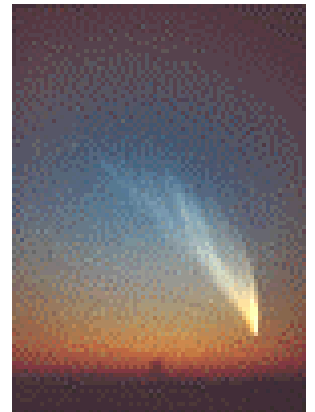


TEACHERS NOTES

RECIPE TO MAKE YOUR OWN COMET NUCLEUS

What you need:

- Dry Ice (2.3kgs) available from ice cream parlours & ice companies
- Water (Around 2 litre in a jug)
- Ammonia (a few drops or sprays of window cleaner)
- Dirt (fine grained, one handful)
- Corn starch, or Worcester Sauce (a couple of pinches or drops)
- 2 Rubbish Bags
- Large Bowl or Small Pot
- Water Proof Gloves
- Cloth towel
- Paper or Cloth Towels
- Hammer
- Mixing Spoon or Stick



Description of Ingredients:

These ingredients are either actual components of a comet nucleus or handy analogous ones. The dry ice is frozen carbon dioxide; Water, ammonia, organic (carbon based) molecules, and silicates are all present on comet nuclei.

Recipe:

1. Line the bowl with a rubbish bag. Place the trash bag on the floor.
2. Pour about a pint of water into the bowl. Add the cornstarch or Worcester sauce, ammonia, and some of the dirt; mix it a bit.
3. Put on the gloves.
4. Wrap the dry ice in a cloth towel; place it over the rubbish bag on the floor.
5. Use the hammer to grind up the dry ice into a powder. Gradually pour the dry ice powder into the water, mixing as you pour. There will be lots of vapour formed. The dry ice, water and other ingredients should form a thickening slush. Keep stirring for a few seconds as it thickens.
6. Now using the rubbish bag to lift the slush away from the sides of the bowl, use your gloved hands to pack the slush into a ball. Keep packing and forming until the ball solidifies as a big lump.
7. Peel back the rubbish bag. Scatter some more dirt over the lump. Pour some of the remaining water over the lump, turning it as you do so, so that a layer of water ice forms over the entire lump.
8. Observe the behaviour of your miniature comet nucleus. It can be handled without gloves if the water ice coating is intact. If a pot feels sticky, pour water on the spot. It hisses and pops carbon dioxide sublimates (goes from the solid state directly into a gas) and forces its way through weak spots in the water ice crust. On real nuclei this results in slight jetting forces that can cause the nucleus to spin, slightly alter its orbit, or split apart.

(NOTE: Get 1.4 to 2 kg of dry ice for each nucleus you plan to make).



TEACHERS NOTES

ECLIPSE SAFETY

Background

Looking directly at the sun can damage your eyes. Never look directly at the sun's brightness can damage your eyes, and this damage can happen painlessly – so you may not know it's happening until it is too late. A solar eclipse happens when the moon passes in front of the sun and throws its shadow on the earth. During a total eclipse the moon covers the entire sun, leaving only the sun's ringlike corona in view.

Purpose

Students understand the dangers associated with solar eclipses and learn about the preventing injuries to their eyes

Curriculum Framework Links

Learning Area	Learning Outcomes	Key Aspects
Science Strand: Earth & Beyond	Earth & Beyond	● Students Understand changes and patterns in space in relation to the sun, moon & earth.
Health & Physical Activity Strand: Concepts for a Healthy Lifestyle	Knowledge & Understanding	● Demonstrate how eye injuries can occur and how they can be prevented

Activity

1. Discussion – either as a whole class or in groups. What is a solar eclipse?
2. Conduct the Solar eclipse activities: Word Definitions (Page 8 & 9)
How do they occur? (Page 10).
3. Watch the replay of the December 4th Total Solar Eclipse online at: www.csiro.au/helix/eclipse/live/index.html Observe the changes in the sky & the sun. During the total solar eclipse, what shape is left against the dark sky?
4. Warning: It is very dangerous to look directly towards the Sun whenever any part of it is visible, especially through binoculars or telescopes. Why should you never look at the sun directly?
5. When is the safest time to watch the eclipse?

Extension Exercise

What are some other ways that you can cause injuries to your eyes? How can you prevent these injuries?

Further Information

Astronomical Society of Australia www.atnf.csiro.au/asa [www/info_sheets/eclipse2002.html](http://www.info_sheets/eclipse2002.html)
Perth Observatory www.wa.gov.au/perthobs/
Preventing Eye Injuries www.kellogg.umich.edu/conditions/faq/eyeinjury.html
Sports Medicine Association WA www.smawa.asn.au



TEACHERS NOTES

WORD DEFINITIONS - ECLIPSE

Use a dictionary or Internet to look up the definitions of each word listed below. Write out the definition for each word.

Word	Definition
Solar Eclipse	
Eclipse	
Lunar Eclipse	
Umbra	
Penumbra	
Annular Eclipse	
Annulus	
Astronomy	
Solar System	
Telescope	
Totality	

Useful Links

Educators Guide to Eclipses

www.solarviews.com/eng/edu/eclipses.htm

Astronomical Society of Australia

www.atnf.csiro.au/asa_www/info_sheets/eclipse2002.html

Macquarie Dictionary Online

www.macquariedictionary.com.au



TEACHERS NOTES

ANSWERS - WORD DEFINITIONS - ECLIPSE

Use a dictionary or Internet to look up the definitions of each word listed below. Write out the definition for each word.

Word	Definition
Solar Eclipse	the interception of the light of the sun by the intervention of the moon between it and the observer
Eclipse	the obscuration of the light of a satellite by the intervention of its primary planet between it and the sun
Lunar Eclipse	when the moon is partially or wholly within the earth's shadow
Umbra	the complete or perfect shadow of an opaque body, as a planet, where the direct light from the source of illumination is wholly cut off
Penumbra	the partial or imperfect shadow outside the complete shadow (umbra) of an opaque body, as a planet, where the light from the source of illumination is only partly cut off
Annular Eclipse	an eclipse of the sun in which a portion of its surface is visible as a ring surrounding the dark moon (opposed to <i>total eclipse</i>).
Annulus	a ring; a ringlike part, band, or space
Astronomy	the science of the celestial bodies, their motions, positions, distances, magnitudes, etc
Solar System	the sun together with all the planets, satellites, asteroids, etc., revolving around it.
Telescope	an optical instrument for making distant objects appear nearer and larger. Astronomical telescopes are used for viewing objects outside the earth
Totality	the state of being total; entirety. The safest time to watch an eclipse. Occurs when the moon is completely covering the Sun.

Useful Links

Educators Guide to Eclipses

www.solarviews.com/eng/edu/eclipses.htm

Astronomical Society of Australia

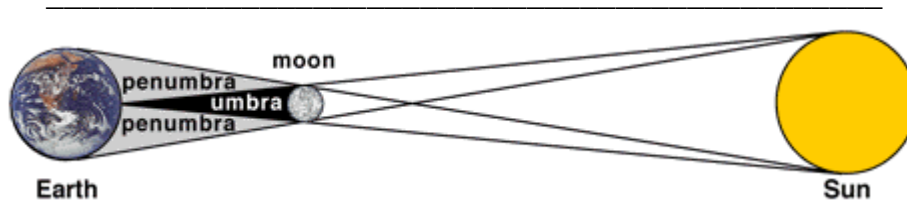
www.atnf.csiro.au/asa_www/info_sheets/eclipse2002.html

Macquarie Dictionary Online

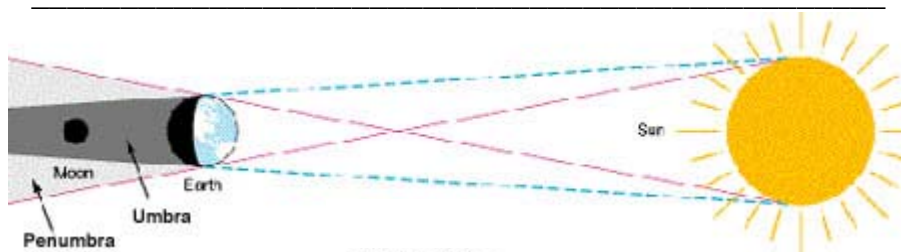
www.macquariedictionary.com.au

HOW DO ECLIPSES OCCUR?

What type of eclipse is demonstrated in the diagram below?



What type of eclipse is demonstrated in the Diagram below?



Using the following website, answer the following questions:

<http://www.brocktonpublicschools.com/schools/high/planetarium/webquest/eclipse/procedures7-12.html>

During What phase of the moon do Solar Eclipses Occur?

Which kind of Eclipse allows for FEWER people to watch it and which one allows the MOST AMOUNT of people to watch an Eclipse?

What are the names for all the different kinds of Solar Eclipses?

Why Do Eclipses Occur?



TEACHERS NOTES

SAFETY FOR GRANNY

Background

Falls are the leading cause of hospitalisations for children aged 0-14 years and older persons 55 years and older. Even though children seem to fall all the time, as you get older the consequences are more severe – you don't bounce back so easily. Even though Grandma and Alex are both at risk of injuries from falls by making it safe for older people, it makes it safe for everyone.

Purpose

Students identify how to prevent the falls to young children and older persons in the kitchen.

Curriculum Framework Links

Learning Area	Learning Outcomes	Key Aspects
Health & Physical Education Strand: Self Management Skills	Self Management Skills	● Students perform basic guided decision making to clarify their values
Health & Physical Education Strand: Concepts for a Healthy Lifestyle	Knowledge and Understanding	● Students use decision making model to choose safety actions and identify reasons for their decisions

Activity

The following activity uses the ThinkSafe steps: **Spot the Hazard, Assess the Risk, Make the changes.**

1. Brainstorm – whole class or small groups – what are the types of hazards that can be found in Grandma's kitchen?
2. Grandma has made Alex a cake for morning tea. Using the activity sheet on page 12, students complete the checklist at home and then present their findings in a class discussion. What type of injuries can result from the hazards you found in your kitchen?
3. What things does Grandma need to change to make the Kitchen safe for herself and Alex?

Extension Activity

Using the adopt a nursing home idea from the Spare Parts puppet theatre teachers notes, conduct a stay on your feet audit & checklist for safe shoes with your adopted grandparent from the nursing home. See the "Are your shoes safe" checklist included on the next page.

Further Information

Injury Control Council of WA – Stay on your feet program www.iccwa.org.au
Kidsafe WA www.kidsafewa.com.au

GRANNY'S IS AN ALIEN KITCHEN SAFETY CHECKLIST

Kitchen Safety For Grandma

		YES	NO
1	Can you easily reach kitchen items you use regularly without climbing, bending or upsetting your balance?		
2	Is there good lighting over work areas?		
3	Do you mop up spills immediately?		
4	Is there good ventilation to reduce the risk of spectacles fogging?		
5	Are all cords safely away from passageways and walkways, do not hang over bench tops?		



Kitchen Safety for Alex

		YES	NO
1	Do your appliances have short cords that do not dangle over the bench?		
2	Do you use the back hot plates and turn pot handles around to prevent pots being pulled from the hot plates?		
3	Are matches, knives and other sharp objects stored in a place where a child cannot reach them?		
4	Are plastic bags out of reach or tied in the middle?		
5	Is the kettle out of children's reach?		
6	Do you have locks on cupboard doors and pantries?		
7	Do you have a fire blanket, fire extinguisher or woollen blanket ready to use in the event of a fire?		



Are there any similarities between Grandma's & Alex's Kitchen Safety Requirements?

What changes would you make to Grandma's Kitchen to make it safe for both Grandma & Alex?



TEACHERS NOTES

TIME CONTINUITY AND CHANGE - 1937-TODAY

Background

Family Relationships and lifestyles changes overtime and to make meaning of the world we need to understand these differences. Through understanding and studying people of the past and events of the past they can better understand the present and make informed decisions for the future.

Purpose

Students understand that individuals have an identity that has developed through family, school groups and other influences which is shaped over a long period of time.

Curriculum Framework Links

Learning Ares	Learning Outcomes	Key Aspects
Society and the Environment: Time, continuity and change	Time, continuity and change	Students understand that people's actions and values are shaped by their understanding and interpretation of the past

Activity

- Students are to use reference books and the Internet to research information on living in the 1930's in Australia. See the list of categories that can be used as a guide.
- Students then compare their finding with life in Australia at present.
- What are the major differences between when Grandma (May) was a girl to now, as Alex grows up?
- What was the main influence on Lifestyles in the 1930's? (The Great Depressions)

Resources

Changing Community Activity Sheet Page 14

Further Information

1930's Fashion

www.wharf.com/ariel/1930s_Women.htm

www.dare.k12.nc.us/khs/ag/5th/1930's/fashion.html

Books on Australia's History

A Concise History of Australia by Stuart Macintyre

Australia's Culture: A cultural History by John Rickard

World Book Encyclopedia's

Childcraft Annuals

Child Safe Search Engines

AJ for Kids www.ajkids.com



TEACHERS NOTES

CHANGING COMMUNITY

Using the Internet and Reference Books, research what the following topics were like in the 1930's compared to today. What are the major differences?

	1930's	2003
Health		
Clothing		
Housing		
Transport		
Safety		
Communication		