



AT HOME LEARNING

Year 6

Week 1

Year 6 Learning Timetable

You will not need access to a digital device to complete the following activities. You will need help from a parent/carer and/or siblings.

Resources needed: Activity resources found at the end of this document.

| Week One | Day 1 | Day 2 | Day 3 | Day 4 | Day 5 |
|---|--|---|---|---|---|
| <p>Morning</p> <p>Spelling Words: "Prefixes" monochrome monotone monorail semiprecious semicircle centipede centimetre million millimetre millipede pentagon pentathlon octopus October octagon</p> | <p>English Read: Reading Comprehension. Complete the Quick Quiz, answering in full sentences.</p> <p>Spelling activity: Use the 'Look, Say, Cover, Write, Check' strategy to write your focus words. Write the meaning of each prefix and then write a sample word that contains the prefix.</p> <p>Vocab activity: Word of the week "existence" Existence (noun)– Something that is real Teach your parent/carer how we do an action for our word of the week.</p> <p><i>Alternately access Literacy Planet and Education Perfect for activities.</i></p> | <p>English Read a book of your choice for ½ hour</p> <p>Spelling activity: Using only the first five words from your list, write them into a sentence to demonstrate their meaning.</p> <p>Vocab activity: Word of the week "existence" Complete the sentences... "The existence of alien life..." "The existence of our company depends on..."</p>  <p><i>Alternately access Literacy Planet and Education Perfect for activities.</i></p> | <p>English Read: reading comprehension. Complete the Quick Quiz, answering in full sentences.</p> <p>Spelling activity: Code Breaker Using the prefixes from this week's list, come up with a code for each word.</p> <p>Vocab activity: Word of the week "existence" Write 2 of your own sentences using the word of the week.</p> <p><i>Alternately access Literacy Planet and Education Perfect for activities.</i></p> | <p>English Read a book of your choice for ½ hour</p> <p>Spelling Activity: Go outside and collect some natural items to make your spelling words this week. Take some photos to share on Dojo if you can.</p> <p>Vocab activity: Word of the week "existence" Can you come up with any words that relate to our word of the week?</p> <p><i>Alternately access Literacy Planet and Education Perfect for activities.</i></p> | <p>English Read: reading comprehension. Complete the Quick Quiz, answering in full sentences.</p> <p>Spelling Activity: Write your spelling words in alphabetical order.</p> <p>Vocabulary Activity Write an acrostic for the word of the week.</p> <p><i>Alternately access Literacy Planet and Education Perfect for activities.</i></p> |

| | | | |
|--------|--|---|---|
| Break | | | |
| Middle | <p>Mathematics Have your parent carer test you on your five times tables (x and ÷)</p> <p>Complete the Division Colour Fun and What's the message activities (resources)</p> <p><i>Access Mathematics or Education Perfect for 20 (min)</i></p> | <p>Mathematics: Have your parent carer test you on your four times tables (x and ÷)</p> <p>Complete the Timetable activity provided by TransPerth (resources)</p> <p><i>Access Mathematics or Education Perfect for 20 (min)</i></p> | <p>Mathematics Have your parent carer test you on your three times tables (x and ÷)</p> <p>Problem Solving: Just how much are you worth? Assign a dollar value to each letter of the alphabet (a=\$1, b=\$2, c=\$3, d=\$4 and so on). Use addition to calculate the value of your full name and three family members/friends' names. Whose name is the most expensive? Whose name is the cheapest? How much are your names worth altogether?</p> <p><i>Access Mathematics or Education Perfect for 20 (min)</i></p> |
| | <p>Mathematics Have your parent carer test you on your six times tables (x and ÷)</p> <p>Mathematics Have your parent carer test you on your six times tables (x and ÷)</p> <p>Problem Solving Choose four digits between 1 and 9. Create as many numbers involving decimals as you can, using these four digits. Write your numbers in ascending and descending order. Place your numbers on a number line. Draw a picture which represents each decimal.</p> <p><i>Access Mathematics or Education Perfect for 20 (min)</i></p> | <p>Mathematics Have your parent carer test you on your six times tables (x and ÷)</p> <p>Challenge: <i>Barbie Bungee</i> In this activity, you will simulate a bungee jump using a Barbie® doll and rubber bands. Before you conduct the experiment, formulate a hypothesis. (Resources)</p> <p>Problem Solving: Mrs Armstrong loves planting colourful flowers in her flower garden. Today she has 2 yellow flowers, 3 red flowers, 4 orange flowers and 1 pink flower. She wants to plant them in a straight line along the front of her garden.</p> <p>Draw some possible arrangements. Is it possible to draw a line of flowers so that no two flowers of the same colour are together?</p> <p><i>Access Mathematics or Education Perfect for 20 (min)</i></p> | <p>Mathematics Have your parent carer test you on your six times tables (x and ÷)</p> <p>Challenge: <i>Barbie Bungee</i> In this activity, you will simulate a bungee jump using a Barbie® doll and rubber bands. Before you conduct the experiment, formulate a hypothesis. (Resources)</p> <p>Problem Solving: Mrs Armstrong loves planting colourful flowers in her flower garden. Today she has 2 yellow flowers, 3 red flowers, 4 orange flowers and 1 pink flower. She wants to plant them in a straight line along the front of her garden.</p> <p>Draw some possible arrangements. Is it possible to draw a line of flowers so that no two flowers of the same colour are together?</p> <p><i>Access Mathematics or Education Perfect for 20 (min)</i></p> |
| Break | | | |

| | | | | | |
|------------------|--|---|---|---|--|
| <p>Afternoon</p> | <p>Science <u>Researching living things across Asia: The Sumatran Tiger</u> Read the article from Sheet 1, 'Could Sumatran tiger study lead to better forestry management?' and answer the questions on Sheet 2. Sheet 2 also has an optional activity, where you can complete your own Sumatran tiger research.</p> | <p>ARTS Freeze frame statues: They have 30 seconds to change into the statue provided by the leader. Students in a circle create:</p> <ul style="list-style-type: none"> • a dragon • a monster • a loathsome creature • the special door • a tree in a sinister forest • a villain spying on an innocent character • a young person escaping out of a window. | <p>HPE Ball skills With any size ball that is available practice: - toss and catch (one hand, two hand, add in clapping patters and left and right hands) - throw at a target (underarm and overarm from an increasing distance) - bounce and catch (one hand or two hand, add clapping patterns) -kick at a target (from the ground kick, from hands, from increasing distances)</p> | <p>Media Arts Ask for an adult's permission to watch the YouTube video 'Can I Animate Christmas Cookies?' (press Ctrl + click to open the link below). https://www.youtube.com/watch?v=6c0wfpRnVA8&list=PL46K63kc5-8TpRPsDmfjL_KC4ZK1qkdlc&index=4 Pay attention to how the storyboard was created. Choose an object you have at home and come up with an idea for an animation you could create. Draw a simple storyboard on paper to show your ideas. OPTIONAL: If you have access to an iPad, you may like to have a go at creating your own stop motion animation using the free app 'Stop Motion Studio'. There are video tutorials in the app to help you if you get stuck.</p> | <p>Chinese Copy the characters Answer the question.</p> |
|------------------|--|---|---|---|--|

Science Week 1 Day 1

Sheet 1: Could Sumatran tiger study lead to better forestry management?

Posted by Kevin Heath on January 24, 2012

Sumatra Island of Indonesia is an important habitat for the elusive and rare Sumatran tiger but it is also a valuable resource that is essential for the future development of the country. The island is an important place for forestry, plantations and farming. Can the Sumatran tiger survive in such a changing environment?

A new landscape study of the tiger could give useful guidance in putting together a more sustainable forestry and agricultural policy for this wildlife rich region of Indonesia. The study published in *PLoS ONE* took a look at the habitat requirements of the Sumatran tiger and how it interacted with agroforestry in central Sumatra.

Where does the Sumatran tiger prefer to live?

While the tiger is known to be dependant [sic] on forests for survival there is still a lot to learn about the way that the tiger lives. This latest work tried to discover the preferences of tigers as they live and move around the island.

One surprising finding was that tigers strongly preferred habitat sites away from water. This went against the presumptions of the researchers.

On a broad scale the researchers found that tigers likelihood of being found increased with altitude and forest area. The likelihood of tigers being found dropped off the further away from the forest centre you went.

At a more refined landscape level the likelihood of tigers being found increased with understory cover and altitude. The chances of a tiger being found decreased the closer to a human settlement you went.

Within a forest habitat tigers strongly preferred the sites that were furthest away from a water source, had denser understory cover, lower levels of disturbance and higher altitudes with a steeper slope.

Some plantation types are more tiger friendly than others

The study seemed to show that some development is more tolerated by tigers than others. forestry plantations of acacia were better than oil palm plantations which in turn was [sic] better than rubber plantations and mixed-agricultural fields. The worst type of plantation for tigers seemed to be coconut.

The study team did point out that the order of types of plantations were [sic] specific to the study area of central Sumatra and could be different elsewhere depending on the scale of the plantation types and age of establishment.

While the study offers a range of considerations for agroforestry companies the researchers suggest that two very practical land management practices could reap substantial rewards for tiger conservation.

2 key agroforestry practices for tiger conservation

Foresters and plantation owners could improve tiger habitat by simply allowing a dense understory to grow within the plantation. Tigers are ambush hunters and while there appeared to be ample prey animals in many plantations there was insufficient ground vegetation for tigers to hunt effectively. Low level vegetation would also help tigers to move around the different reserves and protected sites.

The second practice that foresters and plantation owners should consider is effective worker management. By organising works within the plantations and forests effectively it should be possible to cut the disturbance in the forests. Less disturbance will encourage tigers to travel through plantations as they move around the island.

The researchers suggest a network of wildlife corridors and stepping-stones using these practises [sic] could connect up reserves and protected areas.

The researchers also point out that one of the implications of more tiger friendly agroforestry is the increased risk of human–tiger conflict. They suggest that as the risks increase there should be public awareness and education programmes put in place to increase understanding and build support for local wildlife.

Source: Heath, Kevin 2012, *Could Sumatran tiger study lead to better forestry management?* (Wildlife News) <http://wildlifenews.co.uk/2012/could-sumatran-tiger-study-lead-to-better-forestry-management/>
Used with permission.

Sheet 2

Read the information on the sheet *Could Sumatran tiger study lead to better forestry management?* and answer the questions below.

1. What was the prediction?

2. Which prediction by the researchers was proven to be incorrect?

3. How did the research hope to benefit tigers?

4. What problems do improving tiger habitats present?

OPTIONAL TASK

5. If possible, add your own research notes about Sumatran Tigers. Please gain parental permission if using the internet and follow our safe internet usage guidelines. You may include information about their: scientific name, classification, appearance, behaviour, habitat, diet, lifecycle and other interesting facts.



Image By Captain Herbert - Own work, CC BY-SA 3.0, <https://commons.wikimedia.org/w/index.php?curid=8120885>



Scientists discover 'headless chicken monster' in Southern Ocean

October 23, 2018 8:14AM News Corp Australia Network

ANIMALS

Reading level: Green

A deep-sea cucumber known as a "headless chicken monster" has been filmed in the Southern Ocean for the first time using camera technology developed by Australian researchers.

The creature was filmed off East Antarctica and it is the first time the species has been seen in the area.

"Some of the footage* we are getting back from the cameras is breathtaking*, including species we have never seen in this part of the world," Australian Antarctic Division Program leader Dirk Welsford said.

The creature, *En ypniaestes eximia*, has only been seen before in the Gulf of Mexico and was captured in the Southern Ocean by cameras developed by the Australian Antarctic Division.

It is known as a "headless chicken monster" because that's what it looks like.

Our oceans are home to an incredible number of amazing sea creatures

"The housing that protects the camera and electronics is designed to attach to toothfish longlines* in the Southern Ocean, so it needs to be extremely durable*," Dr Welsford said.

"We needed something that could be thrown from the side of a boat and would continue operating reliably* under extreme pressure in the pitch black for long periods of time."

The information collected from the cameras is being presented at the annual Commission for the Conservation of Antarctic Marine Living Resources meeting starting in Hobart yesterday.

Australia's commissioner for the meeting will push for a new East Antarctic Marine Protected Area.

"The Southern Ocean is home to an incredible abundance* and variety of marine life, including commercially sought-after* species, the harvesting of which must be carefully managed for future generations," commissioner Gillian Slocum said.

The 10-day Antarctic conservation meeting will also include proposals on how to respond to climate change.

WHAT IS A SEA CUCUMBER?

Not a vegetable or a fruit!

A marine animal with a tough, leathery skin in a group of creatures called echinoderms, with starfish and sea urchins.

Scientists have captured footage of a deep-sea swimming sea cucumber known as the 'headless chicken monster'.



Tube feet that look like tentacles around their mouths gather algae, tiny aquatic animals and waste into its mouth.

Fish and humans eat sea cucumbers. They are a delicacy — a special-occasion food — in Asian cuisines*.

Home is the ocean floor. Some species live in shallow water, others in deep water. There are about 1250 known species found all around the world.

Defence against attack is pretty spectacular! Some discharge sticky threads to capture enemies. Others can mutilate* their own bodies. And others shoot their organs out of their anus*. The good news is they quickly grow their organs again.

Source: *National Geographic*

QUICK QUIZ

1. Which ocean was the sea cucumber found in?
2. What is *Enypniastes eximia*?
3. Where else in the world has this creature been seen?
4. The camera used to film the creature has to be very strong to withstand pressure. Why?
5. Why is the film of this creature being shown at the meeting?



Scientists discover Lego lost at sea could survive 1300 years

AFP and The Sun, March 19, 2020 6:45PM Kids News

ENVIRONMENT

Reading level: Green

Lego bricks are so tough they could survive in the sea for 1300 years, according to new research.

Scientists analysed blocks, made of a plastic called acrylonitrile-butadiene-styrene, that washed up on the coast of southwest England after being lost from a container ship that was hit by a massive wave during a storm in 1997.

They confirmed the ages of individual pieces, weighed them, then compared them with unused pieces from the 1970s and 1980s.

It allowed them to work out the rate at which the plastic was eroding* in the salt water.

The Plymouth University study came to the conclusion the bricks could survive in the sea for anywhere between 100 and 1300 years.

Dr Andrew Turner, associate professor in environmental sciences, said: "Lego is one of the most popular children's toys in history and part of its appeal has always been its durability*.

"It is specifically designed to be played with and handled, so it may not be especially surprising that despite potentially being in the sea for decades, it isn't significantly worn down.

"However, the full extent of its durability was even a surprise to us."

Dr Turner said the study highlighted the potential impact that some plastics can have on the environment.

Volunteer groups in southwest England have found thousands of bits of Lego and other plastics during regular beach clean-ups.

LEGO FOR THE FUTURE

Lego has promised its bricks will be 100 per cent sustainable by 2030.

The acrylonitrile-butadiene-styrene most Lego pieces are made from is a petroleum-based* substance.

For now, 2 per cent of its plastic pieces, or 80 of the around 3600 construction pieces, are made of a sugarcane-based polyethylene.

These pieces are mostly trees, leaves and bushes in the kits, which do not have to meet the same durability requirements as bricks, which have to stick together tightly.

It is a technical challenge, as Lego wants to ensure customers do not notice any difference between the old plastic and any new materials. New pieces must have the same physical properties as the old ones: strength, colour fastness and sticking power, in order to remain compatible* with older pieces.

Lego vice-president Tim Brooks said Lego is also making cautious advances in the field of recycled plastic. "Recycled materials is a very interesting area but you need to understand where that material comes from," Mr Brooks said.

The company refuses to share its production secrets, but insists it reuses its own plastic waste products in its production.

Antidia Citores, spokeswoman of the environmental group Surfrider Europe, said replacing one plastic with another would not reduce emissions.

"Changing one plastic for another is not a revolution, not in terms of pollution or carbon emissions," she said

FAST FACTS

- Lego is a Danish company based in Billund, western Denmark.
- The name Lego is a contraction in Danish for "Leg Godt" or "Play Well".
- In 2018 BBC reported that Lego makes 75 billion bricks a year.
- It's estimated there are about 80 bricks for every person on Earth.

QUICK QUIZ

What is acrylonitrile-butadiene-styrene a type of?

Why do Lego pieces keep washing up on the English coast?

What does Antidia think about Lego's attempts to change the type of plastic?

What country is Lego from?

How many Lego bricks are there thought to be for every person on Earth?



TIMETABLE ACTIVITY 1

READ THIS FIRST

I've decided that I want to start catching the bus to and from school. My mum has been dropping me off and picking me up, but to be honest, I feel like I want to start doing a bit more for myself; it's not as though I'm in Kindy any more!



Also, my mum has a new job in a completely different part of town, which is making it tricky.

Allowing enough time to drop me off at school in the mornings and still get to work on time means leaving so early. Even then, we still seem to sit in peak traffic and my mum gets stressed out about being late for work. It's not a great way to start the day! After school, my mum's found it hard to get away from work on time and I end up hanging around waiting when I'd rather get home. It also seems like an unnecessary journey in the car, which obviously isn't great for the environment.



The best option for everyone seems to be for me to start using the bus to get to and from school.

I picked up a local bus timetable (I'm pretty sure I can look up the bus times online too) and the times are also displayed on the bus stops.

I live 5 minutes' walk from Appleby Road. I'm pretty sure this is my nearest bus stop. I go to school at Applecroft School, which is at the other end of School Close. I need to be at school for 8.30am, except on Wednesdays when I have a drum lesson before school, so I need to be there for 8am. I've seen where the bus stop is on School Close – I think it's a five-minute walk from school.



Wednesdays are busy for me. School finishes at 3pm, but I need to get to netball training, which is at Barton Recreation Centre. I could walk it, but it feels like



a long way when I'm carrying my sports gear. Training usually finishes around 4.30pm, by which time I'm keen to get home.

DO YOU THINK YOU'D BE ABLE TO HELP ME WORK OUT WHICH BUSES I SHOULD CATCH? I'VE NOT DONE THIS BEFORE AND COULD DO WITH A HAND.



TIMETABLE ACTIVITY 1

BUS TIMETABLE – CITY CENTRE TO TAYLOR STREET

| Stop | City Centre | Appleby Road | Smith Street | Barton Way | School Close | West Street | Taylor Street |
|------|-------------|--------------|--------------|------------|--------------|-------------|---------------|
| A | 07:10 | 07:14 | | 07:20 | 07:25 | 07:27 | 07:30 |
| B | 07:30 | 07:34 | 07:38 | 07:40 | 07:45 | 07:47 | 07:50 |
| C | 07:45 | | 07:53 | 07:55 | 07:55 | 07:57 | 08:00 |
| D | 08:00 | 08:04 | 08:08 | 08:10 | 08:15 | 08:17 | 08:20 |
| E | 08:10 | 08:14 | | 08:20 | 08:25 | 08:27 | 08:30 |

BUS TIMETABLE – TAYLOR STREET TO CITY CENTRE

| Stop | Taylor Street | West Street | School Close | Barton Way | Smith Street | Appleby Road | City Centre |
|------|---------------|-------------|--------------|------------|--------------|--------------|-------------|
| A | 15:20 | 15:23 | 15:25 | 15:30 | 15:32 | 15:36 | 15:40 |
| B | 15:40 | 15:43 | 15:45 | 15:50 | 15:52 | 15:56 | 16:00 |
| C | 16:00 | 16:03 | 16:05 | 16:10 | 16:12 | 16:16 | 16:20 |
| D | 16:20 | 16:23 | 16:25 | 16:30 | 16:32 | 16:36 | 16:40 |
| E | 16:40 | 16:43 | 16:45 | 16:50 | 16:52 | 16:56 | 17:00 |



| QUESTIONS | ANSWERS |
|--|---------|
| Which bus should I catch to school usually (A, B, C, D or E)? → | |
| What time would I need to leave home to catch this bus? → | |
| Which bus should I catch on a Wednesday when I have to be at school for 8 o'clock (A, B, C, D or E)? → | |
| How much earlier would I have to leave home on a Wednesday? → | |
| If I missed the earlier bus, how long would I have to wait for my next bus and what time would it get me to school? → | |
| I've noticed that some buses don't stop at Appleby Road. Would it be an option to walk to a different stop? What do you think? → | |
| Which stop should I get on and off at? → | |
| How long will the bus journey take me? → | |
| My friend, Joe gets on the bus at Smith Street. I'd like to catch the bus to school with him, but I'm not sure which bus he gets. Have you got any idea? → | |
| Which bus do you think I should usually catch home? → | |
| Which bus should I catch to netball training on Wednesdays after school? → | |
| If training finishes around 4.30 – which bus would I catch home? → | |
| If training runs late and I don't get away until 5pm, what time do you think the next bus would be? → | |



Bucky, Calamity, Bella, Zippy and Jet are the subjects of an Australian-first happiness study

Donna Coutts, May 28, 2019 7:00PM Kids News

ANIMALS

Reading level: Green

A world-leading scientist is studying dolphins in Australia to find out if they are happy.

Animal behaviour expert Dr Isabella Clegg is in Coffs Harbour, NSW for the Australian-first study into the welfare* of five dolphins at the Dolphin Marine Conservation Park.

The dolphins' carers and park owners would like to know whether Bucky, Calamity, Zippy, Bella and Jet would be happier in their pool or in a sea-pen sanctuary in the nearby harbour.

Zippy, Bella and Jet have never been in the ocean. Bucky and Calamity were both born in the wild but were later rescued.

All five dolphins are Indo-Pacific bottlenose dolphins and are the only dolphins at the marine park.

Dr Clegg will study the dolphins in their current home in the tourist park's pools and the results can then be compared with future studies if the dolphins are moved to sea pens.

Dr Clegg completed a major research project (called a PhD) in 2017 at the University of Paris in France on dolphin welfare and how to measure animal emotions.

In this study, she will look at the personality of each of the five dolphins and their behaviour with each other and with humans.

If they are moved to sea pens, the dolphins can be studied again to help everyone decide where the dolphins are happiest. If they are found to be happier in the pools, they can come back from the sea pens.

"A lot of projects and places want to (create sea pens) because they assume it will be better for the animal's welfare." Dr Clegg told ABC.

"But it's really important to check by doing such a welfare study before and after they move just to ensure* that they are in a better situation than before."

Animal activists — people who work to improve the welfare of animals — have protested in the past about dolphins being kept in captivity* at Dolphin Marine Conservation Park.

Dr Clegg told ABC that so far, she had seen positive signs of the dolphins' welfare at the park and "good social bonds*" between the animals.

The marine park announced in March that it will no longer breed dolphins in captivity, making its current family the last generation in captivity.

The decision means Sea World in Queensland is the last marine park in Australia to continue breeding dolphins in captivity.

DR CLEGG'S FIRST STUDY

The three-year research project Dr Clegg carried out at a marine park in France involved watching dolphins in three different situations: alone in a pool, alone in a pool with toys and playing with a human trainer or carer in the pool.

The dolphins showed their enthusiasm for playing with humans by actions such as being more active, swimming around the pool more, spending time at the side of the pool and "spy hopping", which is peering above the water surface to look in the direction trainers usually come from.

"All dolphins look forward most to interacting with a familiar human," Dr Clegg told BBC.

Neither the French study nor the Australian study can tell us whether dolphins prefer being in the wild over being in captivity, but the French study told researchers dolphins like interacting with people.

VIDEO: Dolphins frolicking in the ocean around a surfer at Secret Harbour, Perth, WA

THE DOLPHIN FAMILY

BUCKY: male born around 1970, named after Nambucca, NSW, the place from where he was rescued in 1970. He and his mother Sandy became stranded on an oyster bed and became badly sunburnt and dehydrated*. Father to Zippy, Bella and Jet.

CALAMITY: female born around 1981, rescued from the Tweed River, NSW, in 1992 after becoming tangled in discarded fishing line. She was released into the river but was rescued again 18 months later tangled in fishing line and plants and badly injured. Mother to Bella and Jet.

ZIPPY: male born June 26, 1988 at Dolphin Marine Conservation Park. Dad is Bucky and mum is another rescued dolphin named Buttons. The name Zipper is a play on his mother's name.

BELLA: female born July 11, 2005 at Dolphin Marine Conservation Park. Dad is Bucky and mum is Calamity.

JET: male born December 3, 2009 at Dolphin Marine Conservation Park. Dad is Bucky and mum is Calamity.

INDO-PACIFIC BOTTLENOSE DOLPHINS

- Also called Indian Ocean bottlenose dolphins or spotted bottlenose dolphins
- Scientific name *Tursiops aduncus*
- Grow to 2.6m long and weigh up to 230kg
- Live around the entire coast of mainland Australia but not around Tasmania
- Also lives close to the coast of India, South China, the east coast of Africa and countries bordering the Red Sea
- Not listed as threatened or endangered

GLOSSARY

- **welfare:** health and happiness
- **ensure:** make certain something will happen
- **captivity:** opposite to in the wild
- **social bonds:** relationships with other animals, including humans

Week 1 Day 5 Mathematics – Barbie Bungee from National Council of Teachers of Mathematics <http://illuminations.nctm.org>

In this activity, you will simulate a bungee jump using a Barbie® doll and rubber bands.

Before you conduct the experiment, formulate a hypothesis:

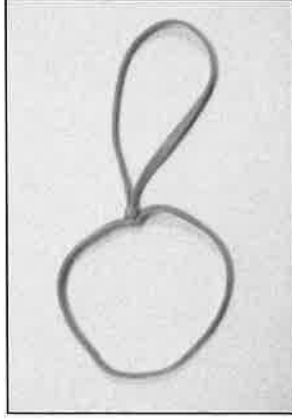
I believe that _____ is the maximum number of rubber bands that will allow Barbie to safely jump from a height of 400 cm.

Now, conduct the experiment to test your hypothesis.

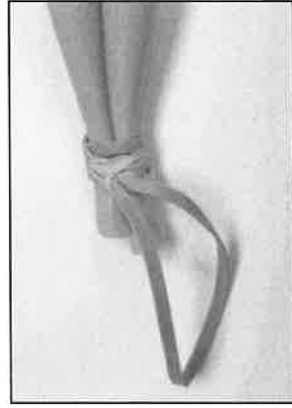
PROCEDURE:

Complete each step below. As you complete each step, put a check mark in the box to the left.

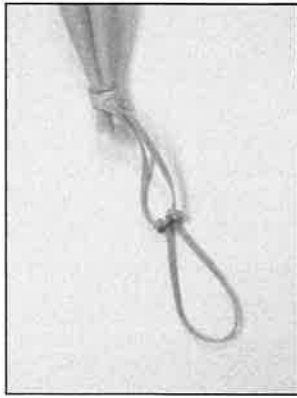
1. Tape a large piece of paper to the wall from the floor to a height of about six feet.
2. Draw a line near the top to indicate the height from which Barbie will make each jump.
3. Create a double-loop to wrap around Barbie's feet. A double-loop is made by securing one rubber band to another with a slip knot, as shown (below left).



4. Wrap the open end of the double-loop tightly around Barbie's feet, as shown (below right).



5. Attach a second rubber band to the first one, again using a slip knot, as shown below.



6. With two rubber bands now attached, hold the end of the rubber bands at the jump line with one hand, and drop Barbie from the line with the other hand. Have a partner make a mark to the lowest point that Barbie reaches on this jump.
7. Measure the jump distance in centimeters, and record the value in the data table in Repeat this jump several times and take the average, to ensure accuracy. Accuracy is important—Barbie's life could depend on it!
8. Repeatedly attach two additional rubber bands for each new jump, measure the jump distance, and record the results in the data table.
9. Complete the data table below.

| NUMBER OF RUBBER BANDS (X) | JUMP DISTANCE IN CENTIMETERS (Y) |
|----------------------------|----------------------------------|
| 2 | |
| 4 | |
| 6 | |
| 8 | |
| 10 | |
| 12 | |

