

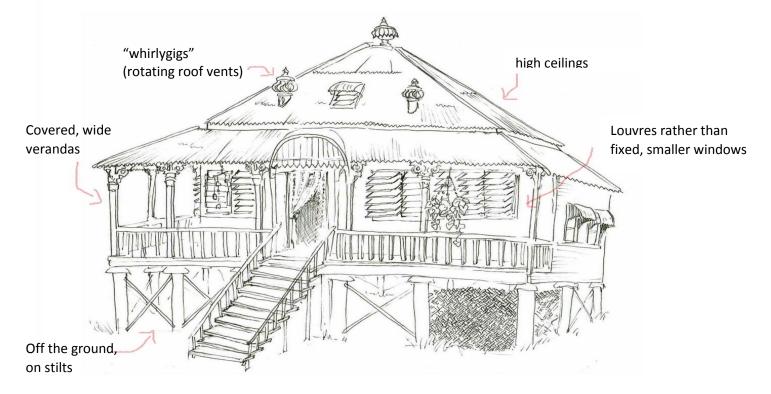
Queenslander homes are made of timber, built on stilts off the ground, have very high ceilings, and often feature wide, covered verandas and lots of window space with louvres rather than large sheets of fixed glass.

They are designed for the type of weather that is typical of North Queensland. North Queensland has a tropical climate. Instead of four seasons, it has a hot, wet season and a cool, dry season. During the hottest months, it has monsoon rains. Monsoon rain is just *crazy* - it seriously buckets down rain, causing lots of flooding (which is a little worrying when you live next to river full of crocodiles!!!).

It is also extremely humid, which means that the air is holding heaps of water. In fact, you can just keep on drying yourself and drying yourself after a shower and think "hey, how come I'm not getting dry?" That's because of the amount of humidity in the air.

Discussion:

Keeping in mind the type of weather in North Queensland, what benefits do the features of a Queenslander house have?



Raymund and the Fear Monster is set in a rural village in the **Philippines**.

Your Place or Mine?

Find the Philippines on a map of the world.

- Is it close to, or far from, the equator?
- Look up the weather in the Philippines.
- Which month has the highest temperature?
- Compare this with where you live.
 - Does it have four seasons, or just two?
 - Which months are the most humid?
 - What is the average yearly rainfall? (compare it to where you live)

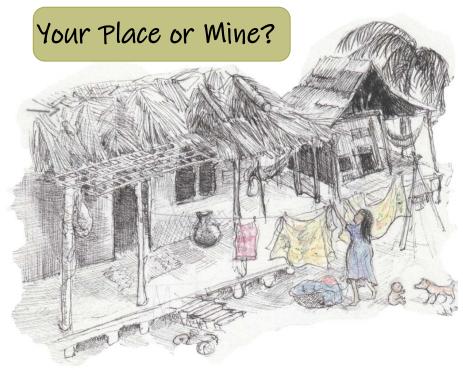
The illustrator of Raymund and the Fear Monster used lots of photos of traditional Philippine village houses called **Nipa** huts.

After having a look at the illustrations (or online) at these traditional homes, can you see any similarities to the Queenslander style homes?

- List the similarities.
- List the differences.
- Why do you think they have been designed in this way?

Many people in the Philippines live in big cities, but Raymund's village doesn't seem to have marked out streets, fences between homes or signs to tell people what to do or where they can go.

• What do you think it would be like to live in Raymund's village? Why?



Sustainable building means designing houses that use as little energy as possible from fossil fuels and use materials that have less impact on the environment.

Many traditional types of houses have been designed to suit the environment and lifestyle of the people that live or lived in them. They were designed to keep people warm or cool well before

modern heating or air conditioning, using natural materials from their local environment.

Attached is a chart with images of houses from different countries around the world. Using the clues, try to match up the country, climate/ environment, building materials and pictures.

Each group will need:

- a bundle of clues, either cut out in advance into strips or as a page (Image A)
- a copy of the unfilled chart, entitled "Traditional Houses from Round the World" (Image B)
- a copy of the answer chart (Image C)
- scissors and glue

INSTRUCTIONS:

Get into groups of three to five, with a strong reader in each group, as the text will contain some unfamiliar and difficult words.

Either the appointed reader (or each in turn) reads out a clue to the group, and they cut out and position the answer where they think it belongs in the chart.

Do not glue the answers into place until the end. The answers can be worked out by process of elimination, so the students may discover that one solution is likely until another clue is presented.

Once all the groups have filled in the chart as best they can, (and remaining where they are), ask each group to give their answers and explain their reason.

When they are satisfied with their answers, the students may glue the answers into place.

Extension:

Students could do a sustainability survey of their school building or home. Does it require a lot of energy to keep warm or cold? Why? (For example, direction of windows, ceiling height, trees etc.) If using their own home, their parents may be a great source of ideas on this!)

Can they use what they have learned from the traditional homes to either:

- a) design a **renovation** for their home or school that will make it more **energy efficient**, **such as adding verandas**, **sun roofs**. Or
- b) design their **sustainable dream home** that they believe will be ideally suited to their local area.

Draw it up as a diagram, labelling the sustainable features.

If the class is interested in ideas for sustainable building, some really unusual sustainable building designs are:

- Windtowers/ windcatchers (Iran)
- Sandbag homes (South Africa)
- Floating School (Nigeria)
- Underground homes (Cooper Pedy, Australia)

Clues

All the types of houses listed are sustainably built using materials resourced from the environment in the which the people live. They are designed to live conveniently and comfortably according to lifestyle and climate.

In a traditional Mexican house, you can sleep under the stars on the flat roof when it's hot.

Round, tent-like structures, traditionally made from the felted wool of sheep and yaks and tied with braided horsehair, are very warm in the freezing cold winters on the grass plains. The panels can be rolled up from the base in hotter weather

The nomadic people of Yemen and other parts of the Middle East and North Africa often herd goats. They weave the dark goat hair to make strong, breathable material that provides shade in the hot desert sun.

The Mongolian grass plains (steppes) have strong winds. Their homes are cylindrical, so that they provide very little wind resistance.

New Guinea has beautiful, thick, tropical jungle.

Tata houses are found in an African country.

Two of the types of houses are used by nomadic people. They can be packed up and moved. Both are used in places with very little trees.

The Mongolian grass plains (steppes) have strong winds. Their homes are cylindrical, so that they provide very little wind resistance.

The word "adobe" means clay or a mud brick. Two of the house types are technically adobe homes, although one is known by a different name.

Bedouin tents are stretched out and pegged low to the ground to protect from scorching winds and sandstorms.

The traditional homes in Benin are partly made with the same material as are the Mexican houses. After it dries out, they seal the outer walls with oil.

There are not many trees in the Mongolian steppes, so wood is not the main material used for their traditional homes.

New Guinea has beautiful, thick, tropical jungle.

Α

The Mexican sun dries out their traditional building material without the help of kilns in the semi-arid climate.

The Middle Eastern desert can get as hot as 54°C (Whoaah, that's hot!) so it's good to be able to pull down the sides of the tent to block out the sun.

In times past, the only way to tough it out against blasting arctic winds was to pile up volcanic rocks and turf and grow a grassy hill overhead as a roof. (Who'd guess that Hobbits and Vikings had something in common?) Nothing could blow these houses over.

Tata houses have round, thatched roofs.

In New Guinea, the whole tribe gathers for important events in this large house, but it's not hot and stuffy, as it's built off the ground so that the wind can blow underneath.

Turf houses often reach a few feet underground where the ground can't freeze, even when it's as cold as $-25^{\circ}C$.

The word "tata" means "fortress". They're the same shape as the yurts, except they have up to three storeys inside and each tata house is joined to the others in a circle by a mud wall, like a mini castle fortress.

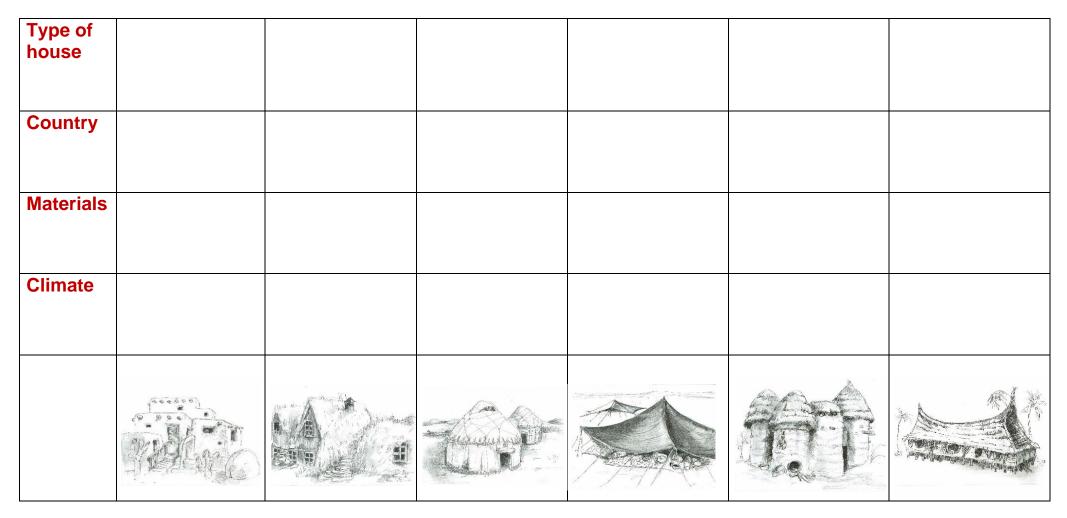
From the top, you can keep a lookout for lions!

The homes in Benin use the top level to store grain in the shared courtyard. They can bring their livestock in at night to protect them from wild animals that hunt at night.

In a traditional Mexican home you can sleep under the stars on the flat roof when it's hot.

Round, tent-like structures, traditionally made from the felted wool of sheep and yaks and tied with braided horsehair, are very warm in the freezing cold winters on the grass plains. The panels can be rolled up from the base in hotter weather

Traditional Homes from Round the World



В

С

These are not in order! Cut out these answers to fit into the correct place in the chart									
Type of house	Country	Climate/ environment	Materials						
Yurt	Benin	Hot, tropical savannah with dry, hot winds	on stilts, timber, vines and palm leaves						
Adobe (Pueblo style)	Iceland	Hot, sandy desert	volcanic rocks, earth and grass						
Tata	Papua New Guinea	Steppe/ temperate, semi-arid	woven goat hair						
Turf house	Mongolia	Humid, tropical region	felted wool with horsehair ropes						
Bedouin tent	Yemen	Semi-arid	mud and dung with thatched roof						
Long house	Mexico & US (New Mexico)	Subarctic	woven goat hair						



Raymund and the Fear Monster

Traditional Houses word search

М	Ρ	А	Ρ	U	А	Ν	Е	W	G	U	I	Ν	Е	А	Н	V	Ρ
Т	С	Е	Ι	L	I	Ν	G	S	J	S	Τ	Ī	L	Т	S	С	Н
Y	Н	L	F	Ν	Ι	Ρ	А	Κ	U	С	L	1	Μ	А	Т	Е	T
U	S	0	Q	U	Е	Е	Ν	S	L	А	Ν	D	Е	R	R	Ν	L
R	Н	Ν	W	I	L	Y	Т	R	0	Ρ	1	С	А	L	D	D	Ι
Т	U	G	Q	С	0	G	D	F	Μ	0	Ν	S	0	0	Ν	W	Ρ
Μ	Μ	Н	Y	Е	U	Μ	Ν	S	Κ	S	С	Q	Ζ	Ρ	W	Q	Ρ
J	1	0	Ν	L	V	F	Μ	0	Ν	G	0	L	Ι	А	0	W	Т
Ζ	D	U	В	А	R	D	Μ	R	Ζ	А	А	W	Т	А	Т	А	Ν
F	L	S	Т	Ν	Е	В	Е	D	0	U	I	Ν	Т	Е	Ν	Т	Е
W	V	Е	W	D	S	S	S	Ζ	Е	Q	U	А	Т	0	R	Y	S
R	Х	А	В	S	Н	Т	U	R	F	Н	0	U	S	Е	Ρ	G	Y

These words are all hidden in the puzzle.

They may go this way 🔪 this way 🔶 this way 🚽

BEDOUIN TENT CEILINGS CLIMATE EQUATOR MONSOON LONGHOUSE LOUVRES ICELAND PAPUA NEW GUINEA MONGOLIA HUMID PHILIPPINES TATA STILTS TURF HOUSE QUEENSLANDER NIPA TROPICAL YURT



The Philippine Rainforest Hide and Seek

The lush, tropical rainforests of the Philippines is incredibly biodiverse, containing some unique flora (plant life) and fauna (animal life). Sadly, through deforestation, this beautiful ecosystem is critically endangered.

Hidden among the illustrations are a variety of plants and animals that can be found in the Philippine rainforest. See how many you can find.

- Tamaraw (Mindoro dwarf buffalo)
- Hornbill
- Kalangay (Philippine cockatoo)
- Bare-backed fruit bat
- Sailfin lizard
- Colugo (flying lemur)
- Philippine tarzier
- Pilandok (mouse deer)
- Visayan warty pig
- Philippine eagle
- Palawan peacock pheasant
- Reticulated python
- Pangolin
- Mindanao flying dragon
- long-tailed macaque

- Jade vine
- Waling-waling orchid
- Rafflesia (also called corpse flower, as it smells like rotten meat)
- pitcher plant (Nepenthes)
- Beehive ginger
- Medinilla magnifica (or Rose Grape, though it's not a grape vine, but an orchid)
- Kris plant (named after the traditional Philippine sword, the kalis, which has wavy sides like the shape of the leaves)
- Strangler fig

Two of the plants listed are **carnivorous**. They attract insects and small animals, including frogs and mice, by their strong scent. Once their prey is trapped inside, the plant slowly digests it.

Which of these plants are they?