

November 2nd

Thus saith the Lord,

Stand ye in the ways, and see,
and **ask for the old paths**,
where is the good way,
and walk therein,
and ye shall find rest for your souls.

But they said,

We will not walk therein.

Jeremiah 6:16

Tiny children could learn the words in bold. They could understand that the “path” means the way of life which we should follow to please God. Because God is eternal it is an “old path”. The Bible tells us what God wants us to do. It is like a map of the “old path”.

Jeremiah told the people God's message. What a foolish answer they gave!

Three (groups of) children could use the colour code to produce a dramatic rendering of the verse.

Map work

The M1¹

The first motorways in the world were built in Italy in 1925 and were called *autostrade*. Germany soon followed with her famous *autobahnen*, linking town with town until the country was covered with a complete network of fast motorways.

These roads, designed to carry fast motor traffic safely over long distances, became necessary as soon as the rapid development of the internal combustion engine poured thousands of cars every year onto roads that had been cart-tracks only a few years before.

When the first motorway in England, known as the M1, was opened on **November 2nd** 1959, less than a century had passed since the Locomotive Act of 1865, which made all road vehicles keep to a speed of 4 mph, and said that cars must be preceded by a man on foot carrying a red flag.

Britain was the last major industrial country to build motorways, partly because the countryside is already crowded with a confused network of smaller roads and the construction of a motorway involves so much more planning and extensive engineering work here than in a country less heavily populated.



Stretching from **St. Albans** to within a few miles of **Birmingham**, the M1 was seventy miles long in 1959, with six lanes of traffic. Enough soil had to be moved to make a mountain two miles high and over 200 miles of pipe had been laid to drain away the water from its surface.

By 7 pm on **November 2nd**, over 13,000 vehicles had passed along the motorway and over 100 calls for assistance had been received by motoring organisations from motorists whose cars were unsuited to the demands of sustained high speeds.

¹ Adapted from Owen, Evan, *What Happened Today* Volume 3, available on the *Mothers' Companion* Flashdrive <https://motherscompanion.weebly.com>.

Use an atlas or road map to find out where the **M1** starts and finishes today.

Something to make

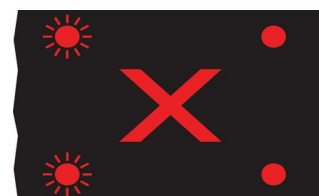
This looks like a good excuse to get out all your toy cars and make a motorway. If you have a long garden path and the weather is good you might (if this is allowed) use some pavement chalks to mark out a stretch of motorway in a suitable scale for your toys. If you are restricted to indoors you could make a very short section and use Lego or similar construction toys to make a bridge and gantries for signs. On some types of hard flooring pavement chalks will work indoors but do “test an inconspicuous area first” to make sure the marks wash away completely before you use them indoors! There are some motorway signs below which you could cut out or copy. You could attach the signs to Lego gantries or posts using blutac.

motorway signs to cut out or copy

Motorway road signs are always blue. Because of the speed at which motorway traffic can move the signs have to be positioned well in advance of the place where a motorist would need to take action.



In England an agency called Highways England manages the variable signs such as those below from seven regional control centres.



There are many other kinds of roads besides motorways. Do you know what these road classifications mean?

A road

B road

unclassified road

byway open to all traffic

restricted byway

bridleway

public footpath

Something to write

Imagine you are going on a road journey without a car. Choose your starting point and your destination. It could be a long journey or just a little one. Think about how you will travel. Will you go by bike, horse or on foot – or perhaps by some other means?² What kinds of road will you use? You might like to look at a map to plan your journey or if you want to journey to an imaginary place you could draw your own map. What time of year will it be when you travel? What will the weather be like? You will need to think about what you will wear; the food you will carry with you. If it is a long journey you will need to find somewhere to stay overnight. When you have thought about all these things and perhaps jotted down the answers to some of the questions, write an account of your journey. You might like to illustrate your writing with a map or some pictures.

Some history to read³

On 2nd November 1899 the Siege of Ladysmith began in South Africa. You will find the background to this event in the Optional Resources files for today which are taken from *Our Island Story* by H E Marshall. You can use an atlas to look up the **place names**. Here you will read of the *Uitlanders*, settlers of British origin who were disliked as “outlanders” by the Boers of South Africa. Paul Kruger, the Boer president, would have nothing to do with them, and, if he had been able, would have driven them out altogether. While things were in this critical state, Dr. Jameson, with troops of Cecil Rhodes's British South Africa Company entered the Transvaal on a raid, intending to get justice for the *Uitlanders*. The *Uitlanders*, however did not support the Jameson raid and the whole affair turned out to the advantage of President Kruger who was able to insist that Dr Jameson should be punished by the British Government. This so encouraged the Boers that, when Britain tried by fairer means to get them to treat the *Uitlanders* with justice, they showed such an obstinate front that it was clear that war was at hand. The Orange Free State joined them; and while both sides were preparing for war, the Boer army invaded Natal. At first the British made their old mistake of thinking too lightly of the power of their enemies. Within a short time one British general was shut up in Ladysmith, another in Kimberley, and a third in Mafeking.

Then came “that dark December week”, when three terrible defeats were inflicted upon British armies, and Britain was plunged into mourning for numbers of her brave soldiers. But the necessary lesson had been learnt. There was a call for volunteers to help at this crisis and men responded from every part of the British Empire.

Lord Roberts, had shown his skill as a general in Afghanistan. A man of small stature, affectionately known to his troops and the wider British public as “Bobs”, Roberts was sent out to South Africa as commander-in-chief, and Lord Kitchener of Khartoum became his right hand man. In February the half-starved inhabitants of Kimberley and Ladysmith were relieved. Three months later Britain was overjoyed at the news of the relief of Mafeking which had been gallantly held by

² Someone who comes to me for piano lessons and lives about three miles away once came on roller-skates!

³ Adapted from Wilmot-Buxton, E.M., *High Roads of History Book VIII. High Roads of Empire History* (London, 1910)

Colonel Baden-Powell, the “inventor” of the boyscout movement. The defeat of the Boer General Cronje put the Orange Free State into British hands and by June the Transvaal was annexed and President Kruger had fled to Holland.

As you will read in the extract from *Our Island Story*, the Boers held out for nearly two years, refusing to acknowledge their loss of independence, and a long and trying warfare continued under the brave and daring De Wet on the side of the Boers and Lord Kitchener on the side of the British. Then on Sunday evening of June 1, 1902, when many people were at church, the glad news was announced that the war that had cost so many lives was over at last.

Five years later a self-governing “constitution” was granted to the Transvaal and Louis Botha, who had fought bravely against the British in the war, took the oath of allegiance to King Edward VII as Premier of Transvaal.

The Boers are sometimes depicted in history books as ignorant people because they only read the Bible. “[V]ery ignorant of everything but farm work... as... the children could not go to school and often the only book they possessed was the Dutch Bible.” says H E Marshall.⁴ This sounds disturbing. Surely a people who lived by the Bible would not really be ignorant. It turns out that this is a half-truth. In 1839 an American missionary, Daniel Lindley, generally sympathetic to the Boers, wrote that they were very superstitious and in need of the gospel. “In most of their houses you will find a Bible...” he wrote in a letter on 17th July 1839, “But this good books is, with a few exceptions, little read and less understood... They are deplorably ignorant and confess it with a characteristic, though to me wonderful, simplicity... I do sincerely believe that the cheapest, speediest, easiest way to convert the heathen here is to *convert the white ones first.*” The Boers were not ignorant because they only read the Bible; if they were ignorant, it was because they did *not* read it.

Some Chemistry and an experiment to do



Do you have a wet suit? If you do it is probably made of Neoprene. On 2nd November 1931, The Du Pont company, of Wilmington, Delaware, announced the first synthetic rubber. At first it was called DuPrene, but from 1936 the name Neoprene was used. Scientists were trying hard to make a synthetic substitute for rubber at this time. How was Neoprene discovered? Scientist Gerard Berchet, had left a sample of a chemical called monovinylacetylene in a jar with some hydrochloric acid for about five weeks. Then his fellow worker Arnold M. Collins happened to look in the jar. He saw it contained some rubbery white material. The hydrochloric acid had reacted with the vinylacetylene. This in turn had polymerized

to become polychloroprene or Neoprene. The new rubber was expensive. However it had some useful properties which natural rubber did not have. For instance, it was resistant to damage from oil and petrol. This made it very suitable for gaskets, hoses and corrosion resistant coatings. Neoprene is a good insulator and also fire resistant and can be made in waterproof and breathable forms.

Look up the highlighted words. Can you find out where natural rubber comes from?

Now for the experiment! You will need an uninflated balloon and you will be using your lips as a temperature sensor!

Holding the relaxed balloon firmly at each end, touch it to your lips. Make a mental note of the temperature you feel with your lips. Now move the balloon away from your lips and stretch it out as far as it will comfortably go. Now use your lips again to feel the temperature of the balloon. Hold

⁴ *Our Empire Story* (London, 1908) p.261

the balloon at full stretch for a few seconds then let it go back to its normal size. Do the lip temperature check again. What do you notice?

You should find that the balloon gets slightly warmer when you stretch it, and then slightly cooler as it shrinks again.

Why does this happen?

Rubber contains millions of randomly coiled long molecules called polymers. Each molecule is made up of shorter molecules known as monomers. At certain points the long polymer chains are joined together or cross-linked (the dots on the diagram), but they are still free to move around or vibrate because of the heat energy in the structure.

When you stretch a piece of rubber such as a balloon, the coiled molecules are pulled straight; when you let go again they can move around again at random through thermal vibrations and go back to the more compact coiled pattern.

When you stretch the rubber balloon you are adding energy to the rubber, which makes it vibrate more strongly. This makes it hotter. Then, when you let go, the rubber molecules must do work to pull the polymer chains back into their compact configuration; since this process uses energy, the balloon has less energy after it has shrunk and so it becomes colder.

