

# How does a safety match ignite?

**It's all over in a fraction of a second.** A brilliant flash of light and the match is on fire, ready to start a BBQ, light a candle or ignite a Bunsen burner. But how does it work?

The safety match is actually far more complex than some volatile chemicals on a stick. It is a highly ordered chemical sequence that ensures that the match will light, stay lit and eventually go out.

So what is this chemical cascade?

A match is lit by striking it against the side of the matchbox. The reddish material coating the side of the box is made of red phosphorus, a stable form of the highly volatile white phosphorus made infamous during the Vietnam War. It is mixed with abrasives such as tiny fragments of glass to create heat through friction.

When you strike a match the red phosphorus is converted to white phosphorus for a fraction of a second, just enough to cause a spark of heat by reacting with oxygen in the surrounding air.

This heat then ignites the first chemical on our journey – potassium chlorate. This is an oxidising agent, fuelling the spark into flame using oxygen stored in its molecular structure.

While this produces the distinctive flame when a match is struck, it will quickly burn out if it can't ignite the next step in the reaction.

Antimony trisulphide – the same stuff that gives gold-coloured fireworks their colour – is ignited by the potassium chlorate and continues to burn steadily. The antimony is responsible for keeping the match head lit long enough for the underlying wood to catch fire and for you to light that candle.

The distinctive smell of a safety match is also thanks to the antimony, which when oxidised, forms sulphur oxides.

The match is now lit and ready to go to work. Paraffin wax coating the match ensures that the flame travels down the match in a controlled fashion.

*Submitted by Barry Cleveland in the hope that the technical team from a certain match company reads it and absorbs the information required to produce matches which will stay alight....*

## WYNPRESS

The Rotary Club of

Wynberg



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### President

Keela van Niekerk 0720401131

### Secretary

Monique Bayes 0832580389

### Treasurer

Rob Murphy 0837267060

### Editorial Board

Barry Cleveland, Stephanie Thomas, Hugh  
Maunder, Stephen Bredenkamp

### May in Rotary

Youth Service

**Wynberg Rotary meet every Thursday,**

**6 for 6.30pm,**

**Palm House, Wynberg.**

For more information about our club, like us  
on Facebook or visit our website:

**[Wynbergrotary.org.za](http://Wynbergrotary.org.za)**



**BE THE INSPIRATION**

	<h1>Minutes: 2 May, 2019</h1> <p>Compiled by Barry Cleveland</p>
Attendance	15 members present = 60%,
Fellowship	7 May: Mike's birthday
From the President's chair	<p>Keela attended POETS workshop at District Conference (see below). She confirmed the report that Lina has 'retired' from Rotary, but has been awarded Honorary Membership.</p> <p>An application for financial assistance for the Library Corner project has been submitted to District. On a 1:1 sharing basis, this could realise between R5 000 and R25 000.</p>
Members' Moments	<p><b>Barry</b> announced that Jackie James' club, Noon Gun RC has recently inducted two new members, his son Andrew and daughter-in-law Claire.</p> <p><b>Hugh's</b> son Kingsley plays Touch Rugby for England, and their team beat the USA team last weekend.</p> <p><b>Dennis</b> related a telephone credit card scam in which he was asked to confirm a transfer of R6 000 to China. He didn't fall for it!</p> <p><b>Keela</b> achieved a time of 2hr. 20mins in the 2 Oceans Half Marathon. Husband Stephen did an impressive 1hr. 43mins.</p>
Slots	<p><b>Keela</b> announced that Bruce will be travelling to Sweden in May on a Friendship Exchange. He will be given slides of Cape Town + the various activities engaged in by Wynberg RC.</p> <p><b>Bruce</b> explained that the District exchange has been put together by Newlands RC, and will extend between 17 and 31 May in Stockholm. Over the years he and Marlene have hosted 3 sets of American, and 3 sets of Norwegian visitors.</p>
Report back from POETS	<p>Keela announced that Assistant Governor for her year in office will be Jenny Howard.</p> <p>District Governor for 2019/20 will be David Holtzhauzen.</p> <p>DG for 2020/21 will be Mike Mills.</p> <p>Wynberg RC is 'almost there' for our Citation.</p> <p>Something which will require some effort is the 'Compliance Report', announced by Peter Hugo, requiring full club financials since 2008.</p>
Swindle	<p>With R1320 as prize, Barry could only find the 2 of hearts (shame!)</p> <p>Dennis won the attendance prize of R15.</p>
President's 'Rotarian of the Week'	Bruce won the President's pot plant for his suggestion of a fun wine evening on 9 May.

*"Life is not a matter of holding good cards, but of playing a poor hand well."*  
**Robert Louis Stevenson**

Duty Roster	May			
	9	16 Soup Evening	23	30 No Meeting
Sergeant	Todd		Barnard	
Wynpress Editorial	Smith		Thomas	
Wynpress Minutes	Thomas		Maunder	
Door Duty	White		Bayes	
Grace	Maunder		Munday	
Loyal Toast	Jackson		Maunder	
International Toast	Overbosch		Schonegevel J	
Speaker Intro and Thanks	N/A			
Entertainment for the month	Jackson, Bayes, Thomas, Gowdy, White			

Dates To Diarise	
9 May	Test The Tastebuds evening
11 May (Saturday)	Steenberg Rotaract – induction of 2019/20 committee. 09.00 at Norman Henshilwood HS.
16 May	Soup Evening at the Mundays' home (Note date change)
23 May	TBA
25 May (Saturday morning)	Induction of President Keela: Vineyard Hotel
27 May (Monday)	Raid on Kirstenbosch RC. Guest Speaker Brian Ingpen: "Shipwrecks along the Coast"
30 May	No meeting (replaced by raid on Kirstenbosch – above)

Imagination is more important than knowledge.

For knowledge is limited to what we now know and understand.

While imagination embraces the entire world,

And all there ever will be to know and understand.

– *Albert Einstein*

## Tailpiece



I officially resign from adulthood. Decisions will be made using the Eenie-meeie-minie-moe method and arguments will be settled by sticking out my tongue. I'll be at recess if you need me.