

That Science Gang presents...

THE ALPHABET OF AWESOME SCIENCE



EDUCATION RESOURCES

Pre-Visit and Post-Visit notes

For additional resources, please visit: <https://www.thatsciencegang.com/alphabetschools>

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ABOUT THAT SCIENCE GANG

That Science Gang creates “Science Theatre” for young people and their families. We facilitate collaborations between theatre creators and science communicators to produce science-infused productions that better equip audiences to ask BIG questions about the world around them.

ABOUT THE ALPHABET OF AWESOME SCIENCE

*A scientific race through the alphabet ...
... where fascinating words inspire spectacular science!*

The Alphabet of Awesome Science is an utterly unique theatrical experience – a spectacular show that both figuratively *and* literally fizzles with fun. This performance promotes both English language literacy as well as science literacy, encouraging audiences to engage with beautiful words, as well as captivating scientific phenomena. Professors Lexi Con and Noel Edge are a positive celebration of all things geeky – emboldening audiences to embrace their own individual passions.

ABOUT THESE NOTES

These education resources are divided into two sections – PRE-VISIT NOTES and POST-VISIT NOTES. Each collection provides discussion points and activity ideas that encourage an exploration of *character*, the *English language*, and *scientific ideas*.

We will be adding other resources to our website at various times. Make sure you check them out (plus our curriculum links): <https://www.thatsciencegang.com/alphabetschools>

CREATIVES

Writer / Director / Designer
Cast

Stage Manager
Composer
Voice Over Artists
Sound Designer
Lighting Designer

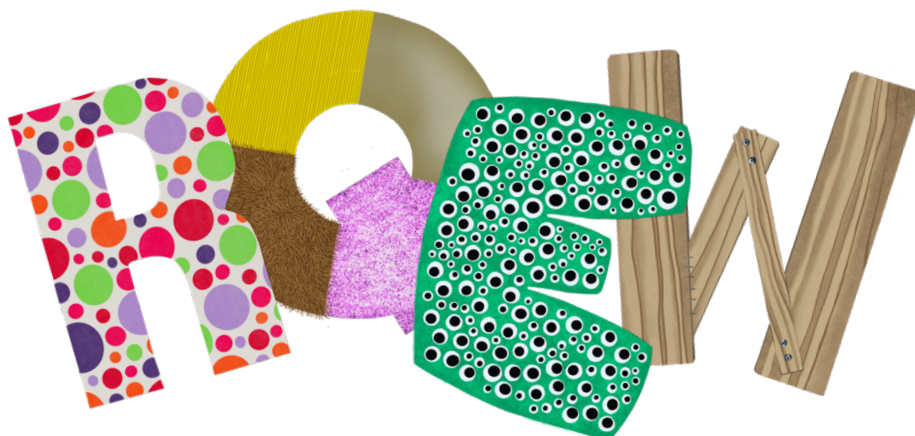
David Lampard
David Lampard – Professor Noel Edge
Abby Hampton – Professor Lexi Con
Amanda Rowe
Mark Simeon Ferguson
Sharon Robertson and Rodney Hutton
Rodney Hutton
Mark Oakley



PRE-VISIT NOTES

CONTENTS

- PRE-SHOW VIDEO
- ABOUT THE SHOW
- THE CHARACTERS
- THE WORDS
- WORD SEARCH
- THE SCIENCE



PRE-SHOW VIDEO

The professors have prepared a video for you to watch before you see the show!

You'll find this video on both the EXPLORE and SCHOOLS pages of our website:

- <https://www.thatssciencegang.com/alphabetschools>
- <https://www.thatssciencegang.com/alphabetexplore>

ABOUT THE SHOW

Join professors Lexi Con and Noel Edge (the Word Nerd and the Science Freak) for a thrilling voyage through the alphabet – where great big chewy sesquipedalian words inspire mind-blowing scientific surprises.

Professor Lexi Con has curated a curious collection of her favourite words (one for every letter of the alphabet) with each word providing Professor Noel Edge with an inspirational jumping off point for 26 quirky scientific demonstrations – that squish and squirt, float and fly, erupt and explode.

Together, this dad-joke quipping, prank-pulling pair of polished professors strut their stuff in a performance that's equal parts explosive, messy, spectacular, hilarious, fascinating, and gross. And if things weren't exciting enough, every show is completely different, with audiences determining the order in which the letters are revealed and explored.

Plus, did we mention, this is a race? This plucky pair of professors have just 52 minutes to complete their alphabetical, scientific countdown. That's just 2 minutes per experiment! Will they make it in time...?



THE CHARACTERS

The Alphabet of Awesome Science is performed by two professors – Professor Lexi Con and Professor Noel Edge. Lexi is an expert lexicographer (she prefers to be called a ‘word nerd’) and Noel is an expert science communicator (he prefers to be called a ‘science freak’).

As a class, or in small groups, consider the following questions:

- What do you think a lexicographer might do?
- What do you think a science communicator might do?
- Is there a ‘thing’ that you are passionately ‘geeky’ about?
- Do you think it would be possible to turn that passion into a career?
- How many different types of careers / jobs can you think of?
- What job do you want to do when you leave school?



THE WORDS

During **The Alphabet of Awesome Science**, Professor Lexi Con will introduce you to a delightfully delicious degustation of uncommon, rare, archaic and even obsolete words – one for every letter of the alphabet (plus a whole lot more thrown in for free!).

Before you are introduced to Lexi’s list, you might like to explore your own relationship with words...

As a class, or in small groups, consider the following questions:

- Do you have a favourite word? Why do you think you like this word so much?
- Do you have a least favourite word? Do you know why you don’t like this word?
- What is the longest word you can think of (or find)? What does it mean?
- What is the shortest word you can think of (or find)? What does it mean?

ACTIVITY: CREATE YOUR OWN “ALPHABET OF AWESOME...”

Imagine that you are going to create your own “Alphabet of Awesome...”. What would that alphabet be? Maybe *The Alphabet of Awesome Animals...* or *Food...* or *Anatomy...* or *Gross Things*? Or perhaps something else entirely? Pick a topic, and then find a word related to that topic for each letter of the alphabet...

WORD SEARCH!

25 of Lexi's words from **The Alphabet of Awesome Science** can be found in the *Word Search* puzzle below – that's ALMOST one for every letter of the alphabet. Lexi's word for the letter F is waaaaaay too big to fit in this puzzle! You'll have to see the show to discover what it is! Can you find ANY of these tricky words?

Each word runs either horizontally or vertically - there are no diagonal words!

N	Q	G	Q	Z	K	Y	X	M	V	O	R	N	I	C	E	A	U	X	X
B	U	A	C	N	W	L	U	C	I	F	E	R	O	U	S	O	P	A	U
D	I	N	S	R	X	I	D	E	O	P	R	A	X	I	S	T	K	N	K
H	C	N	B	E	Q	B	W	T	Y	U	S	H	U	Z	X	T	Y	T	Y
D	Q	U	R	V	V	H	I	M	Z	P	A	B	U	L	O	U	S	H	R
J	U	L	C	I	E	F	R	W	C	X	T	J	V	W	U	Y	G	I	I
O	I	A	O	V	R	B	B	D	Z	X	Q	F	Z	X	O	O	A	C	O
C	D	R	R	I	T	R	L	P	L	E	N	I	S	P	H	E	R	E	L
O	L	G	Y	S	I	U	E	Q	Z	X	D	E	D	O	L	E	A	T	E
S	I	I	B	C	G	M	B	K	L	W	Q	Z	X	V	B	Y	K	Q	X
E	B	T	A	E	U	O	C	V	W	S	W	Z	E	P	H	Y	R	Y	Y
R	E	H	N	N	M	U	X	P	W	X	Z	Q	Q	W	B	L	P	U	Y
I	T	E	T	C	F	S	A	O	S	P	U	M	E	S	C	E	N	T	E
O	Q	R	I	E	I	Z	V	B	N	M	O	B	T	U	R	A	T	E	P
U	U	M	C	G	A	Q	N	J	K	T	E	F	G	D	R	G	K	K	S
S	L	E	G	D	T	T	M	E	T	A	G	R	O	B	A	L	I	S	E
X	L	N	W	E	E	F	K	E	R	U	M	P	E	N	T	Y	H	J	N
O	A	T	R	T	N	E	P	H	E	L	O	C	O	C	C	Y	G	I	A
J	G	S	G	H	H	O	R	R	E	S	C	E	N	T	V	M	G	T	R
X	E	W	T	E	N	E	B	R	O	U	S	B	C	G	M	Z	Z	N	Y

A _____
 B _____
 C _____
 D _____
 E _____
 F ???
 G _____
 H _____
 I _____

J _____
 K _____
 L _____
 M _____
 N _____
 O _____
 P _____
 Q _____
 R _____

S _____
 T _____
 U _____
 V _____
 W _____
 X _____
 Y _____
 Z _____



THE SCIENCE

During **The Alphabet of Awesome Science**, Professor Noel Edge is inspired by Lexi's words to create and present a series of quirky and spectacular science demonstrations – exploring the fields of chemistry, physics, biology, meteorology, cryogenics, acoustics... as well as many more.

Scientists are always discovering new things about the world around us (and inside us... and beyond our atmosphere!) so Noel will never run out of fascinating facts to share with audiences.

As a class, or in small groups, consider the following questions:

- People often want to know, "Why is the sky blue?" or "How do flies walk on the ceiling?" or "What is belly button lint?". What do you want to know about the world?
- What are some of the problems facing the world right now that scientific research might be able to help with or even solve?
- Have you seen any science reported recently in the news?
- Can you think of any scientific breakthroughs or discoveries?
- If you could make a scientific breakthrough, what would it be? That is, what would you like to discover or solve?
- Can you create a list of 26 'science things' – one for every letter of the alphabet?



POST-VISIT NOTES

CONTENTS

- POST-SHOW VIDEO
- WEB SERIES
- THE CHARACTERS
- THE WORDS
- LEXI'S ALPHABET
- WORD SEARCH
- THE SCIENCE
- MORE FROM THAT SCIENCE GANG



POST-SHOW VIDEO

Now that you've seen the show, the professors have a video they'd love you to watch...

You'll find this video on both the EXPLORE and SCHOOLS pages of our website:

- <https://www.thatsciencegang.com/alphabetschools>
- <https://www.thatsciencegang.com/alphabetexplore>

WEB SERIES

Along with the POST-SHOW video above, the professors have prepared a series of other videos for you to watch. These can be accessed from both the EXPLORE and SCHOOLS pages on our website. You'll find these under the menu "WEB SERIES".



WORD PLAY... with PROFESSOR LEXI CON

Join Lexi in a series of videos that will have you poking, prodding and playing with words. Lexi also needs YOUR help – to create **The Alphabet of Awesome Neologisms**.



SCIENCE STUFF... with PROFESSOR NOEL EDGE

Noel has curated a collection of videos from That Science Gang that dive deeper into some of the science explored during **The Alphabet of Awesome Science**.



THE CHARACTERS

Professors Lexi Con and Noel Edge are what's known as a 'double act'. That is, a comedy performance involving two people.

Double acts were originally created for British musical hall and American vaudeville performances. They have evolved over the years and can now be found in many types of theatre performance, as well as on television and in film.

Famous double acts include:

- Abbot & Costello
- Laurel & Hardy
- Matt Lucas & David Walliams (Little Britain)
- Adam Savage & James Hyneman (MythBusters)
- Lano & Woodley
- Kath & Kim
- Hamish & Andy
- The Umbilical Brothers
- Tom & Jerry
- Bert & Ernie

Double acts often rely on an 'imbalance' between two characters to create comedic situations. This creates 'tension', as well as an opportunity for misunderstandings and misinterpretation.

Professor Lexi Con and Professor Noel Edge are very similar in many ways, however, they are also very different.

As a class, or in small groups, consider the following questions:

- Describe Professor Lexi Con. What are her personality traits? What do you think she likes? What do you think she dislikes?
- Describe Professor Noel Edge. What are his personality traits? What do you think he likes? What do you think he dislikes?
- How are Lexi and Noel similar?
- How are Lexi and Noel different?
- Describe the relationship between the two characters? Are they friends? Or do they just work together? Or something else...?
- How do you think Lexi and Noel met? Create a backstory for these two characters...



ACTIVITY: CREATE YOUR OWN DOUBLE ACT

Working in pairs, create your own double act! Consider the questions below and then create a short script for your new comedy duo. Is your act best suited to the stage or screen? Consider performing your act for the class – or creating a video.

- Who are the two characters?
- What are their jobs?
- What are their character traits?
- How are the two characters similar? How are they different?
- Why do the pair work so well together?
- What kind of a performance would they create together?

THE WORDS

On the next page, you'll find a list of all the crazy cool words that Lexi Con introduced as part of **The Alphabet of Awesome Science** – as well as their definitions. Were there any words on that list that you recognised? If so, well done! Lexi's collection includes examples of uncommon, rare, archaic and obsolete words.

Uncommon: *An out of the ordinary or unusual word*

Rare: *A word that is not often used*

Archaic: *A very old or old-fashioned word*

Obsolete: *A word that is no longer used*

As a class, or in small groups, consider the following questions:

- What is your favourite word on the list? Why?
- What is your least favourite word on the list? Why?
- Can you create a sentence (or story!) using any one of the words?

ACTIVITIES: WORD GAMES

Below are suggestions for some fun and creative word games. Work individually or in small groups to build sentences, poems, and stories according to an increasingly difficult set of rules and ideas...

- Create a *pangram*
 - *That is, a sentence that includes every letter in the alphabet*
- Create an *acrostic*
 - *That is, a poem where the first letter of each new line spells out a word*
- Write a sentence where each new word begins with a new letter of the alphabet
 - *Try this using the letters of the alphabet in sequence (from A to Z)...*
 - *Try this using the letters of the alphabet in any sequence...*
- Write a complete story where each new sentence begins with a word that begins with a new letter of the alphabet.
 - *Try this using the letters of the alphabet in sequence (from A to Z)...*
 - *Try this using the letters of the alphabet in any sequence...*



LEXI's ALPHABET

A is for...	ANNULAR	<i>ring-like, ring-formed, ringed</i>
B is for...	BRUMOUS	<i>foggy, wintry</i>
C is for...	CORYBANTIC	<i>wild; frenzied</i>
D is for...	DEDOLEATE	<i>to cease being unhappy</i>
E is for...	ERUMPENT	<i>bursting forth</i>
F is for...	FLOCCINAUICINIHIPILIFICATION	<i>the action of estimating something as worthless</i>
G is for...	GUMFIATE	<i>to puff up, cause to swell</i>
H is for...	HORRESCENT	<i>shuddering; expressive of horror</i>
I is for...	IDEOPRAXIST	<i>a person who is impelled to carry out an idea</i>
J is for...	JOCOSERIOUS	<i>half jocular, half serious</i>
K is for..	KYRIOLEXY	<i>the use of literal expressions</i>
L is for...	LUCIFEROUS	<i>that brings, conveys, or emits light</i>
M is for...	METAGROBALISE	<i>to puzzle, mystify, confound</i>
N is for...	NEPHELOCOCYGIA	<i>the act of seeking and finding shapes in clouds</i>
O is for...	OBTURATE	<i>to block or stop up</i>
P is for...	PLENISPHERE	<i>a perfect sphere</i>
Q is for...	QUICQUIDLIBET	<i>whatever one pleases</i>
R is for...	REVIVISCENCE	<i>revival</i>
S is for...	SPUMESCENT	<i>having the appearance of foam or froth</i>
T is for...	TENEBOUS	<i>full of darkness, dark</i>
U is for...	ULLAGE	<i>unfilled space in a container</i>
V is for...	VERTIGINATE	<i>to tun around, spin, or rush dizzily</i>
W is for...	WIRBLE	<i>to whirl; to eddy</i>
X is for...	XANTHIC	<i>relating to a yellow colour</i>
Y is for...	YEPSEN	<i>an amount that can be held in a person's hands cupped together</i>
Z is for...	ZEPHYR	<i>of a wind: to blow gently or mildly</i>

For even more information about these words, visit our website:

<https://www.thatssciencegang.com/ouralphabet>



WORD SEARCH!

25 of Lexi's words from **The Alphabet of Awesome Science** can be found in the *Word Search* puzzle below – that's ALMOST one for every letter of the alphabet. The word that is missing is *floccinaucinihilipilification* – it's waaaaaay too big to fit in this puzzle!

Each word runs either horizontally or vertically – there are no diagonal words!

N	Q	G	Q	Z	K	Y	X	M	V	O	R	N	I	C	E	A	U	X	X
B	U	A	C	N	W	L	U	C	I	F	E	R	O	U	S	O	P	A	U
D	I	N	S	R	X	I	D	E	O	P	R	A	X	I	S	T	K	N	K
H	C	N	B	E	Q	B	W	T	Y	U	S	H	U	Z	X	T	Y	T	Y
D	Q	U	R	V	V	H	I	M	Z	P	A	B	U	L	O	U	S	H	R
J	U	L	C	I	E	F	R	W	C	X	T	J	V	W	U	Y	G	I	I
O	I	A	O	V	R	B	B	D	Z	X	Q	F	Z	X	O	O	A	C	O
C	D	R	R	I	T	R	L	P	L	E	N	I	S	P	H	E	R	E	L
O	L	G	Y	S	I	U	E	Q	Z	X	D	E	D	O	L	E	A	T	E
S	I	U	B	C	G	M	B	K	L	W	Q	Z	X	V	B	Y	K	Q	X
E	B	M	A	E	I	O	C	V	W	S	W	Z	E	P	H	Y	R	Y	Y
R	E	F	N	N	N	U	X	P	W	X	Z	Q	Q	W	B	L	P	U	Y
I	T	I	T	C	A	S	A	O	S	P	U	M	E	S	C	E	N	T	E
O	Q	A	I	E	T	Z	V	B	N	M	O	B	T	U	R	A	T	E	P
U	U	T	C	G	E	Q	N	J	K	T	E	F	G	D	R	G	K	K	S
S	L	E	G	D	R	T	M	E	T	A	G	R	O	B	A	L	I	S	E
X	L	N	W	E	R	F	K	E	R	U	M	P	E	N	T	Y	H	J	N
O	A	T	R	T	N	E	P	H	E	L	O	C	O	C	C	Y	G	I	A
J	G	S	G	H	H	O	R	R	E	S	C	E	N	T	V	M	G	T	R
X	E	W	T	E	N	E	B	R	O	U	S	B	C	G	M	Z	Z	N	Y

Annular
 Brumous
 Corybantic
 Dedoleate
 Erumpent
F – TOO BIG for the puzzle!
 Gumfiat
 Horrescent
 Ideopraxist

Jocoserious
 Kyriolexy
 Luciferous
 Metagrobalise
 Nephelococcygia
 Obturate
 Plenisphere
 Quicquidlibet
 Reviviscence

Spumescient
 Tenebrous
 Ullage
 Vertiginate
 Wirble
 Xanthic
 Yepsen
 Zephyr



THE SCIENCE

During **The Alphabet of Awesome Science** Professor Noel Edge introduced you to a whole stack of scientific facts – and performed some pretty spectacular demonstrations.

As a class, or in small groups, consider the following questions:

- How many of Noel's demonstrations can you remember?
- Can you remember which demonstrations matched to which of Lexi's words... and why?
- Of all the things you learned, what would you like to know more about?
- Which of Noel's demonstrations would you like to try?

MORE FROM THAT SCIENCE GANG

If you'd like to spend a little more time with some science in the classroom, then check out these web series:

This Show is NOT Rubbish!

<https://www.thatssciencegang.com/thisshowisnotrubbish>

Let's Explore

<https://www.thatssciencegang.com/letsexplore>

