



<https://be-rural.eu>

Dr Joanna
Sadler

University of
Edinburgh (UK)

joanna.sadler@ed.ac.uk

Three-day virtual BE-Rural summer school for teachers interested in developing bioeconomy curricula



Leaders in Science

Science for the next generation

www.leadersinscience.co.uk

 @LiSScotland



What is Leaders in Science?

- Schools outreach programme
- Led by graduate scientists, PhD students or equivalent
- Cascade learning through the generations

“If you can't explain it to a six year old, you don't understand it yourself”



2015

Funding for
science outreach
project



2017

Expanded to 2nd school
(Hertfordshire, England)



2019

Pilot LiS in Edinburgh,
Scotland



2020

Students qualify for
YSL award

2015

Founded LiS

(Hertfordshire)



2018

LiS collaboration
with IBiolC Skills

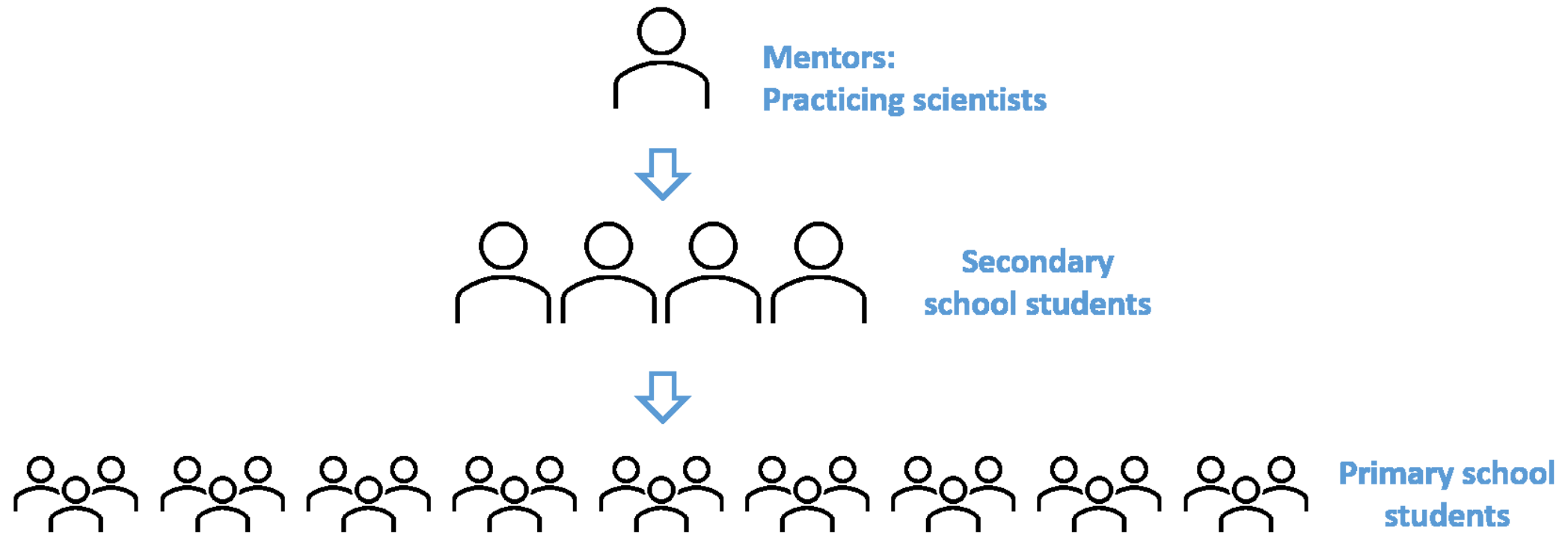


2020-2021

LiS runs in Glasgow
and Edinburgh

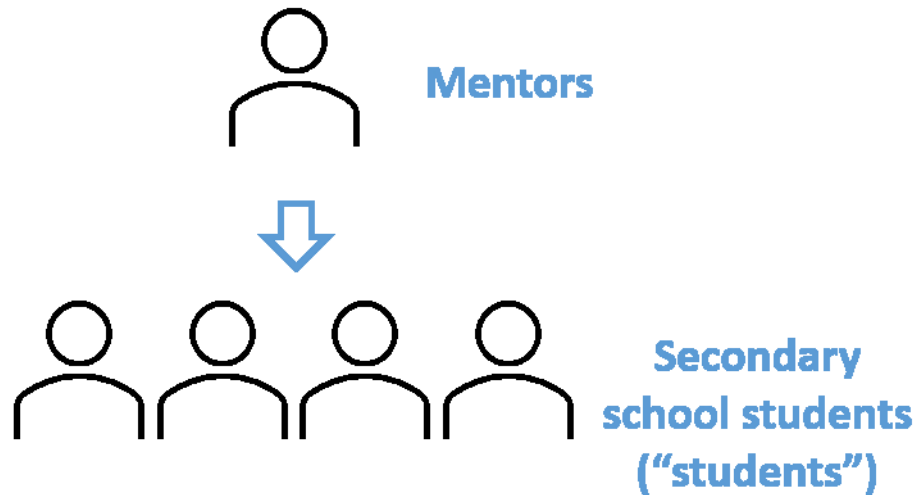


“Those who teach, learn”



How does it work?

Part 1



Aims

- **Inspire** students beyond school curriculum
- Develop **communication, leadership and teamwork skills** of mentors

Content

- Mentor **training**
- Weekly sessions with students
- Off-curriculum science **workshops**
- Brainstorming sessions
- Leadership, communication and teamwork skills workshops

Outcomes for Mentors

- Confidence
- Teamwork, leadership, communication skills
- Rewarding to see students develop

Outcomes for Students

- New scientific learning
- Scientific 'role-models'

How does it work?

Aims

- **Inspire** primary school students with hands-on workshops
- Develop **communication, leadership and teamwork skills** of students

Content

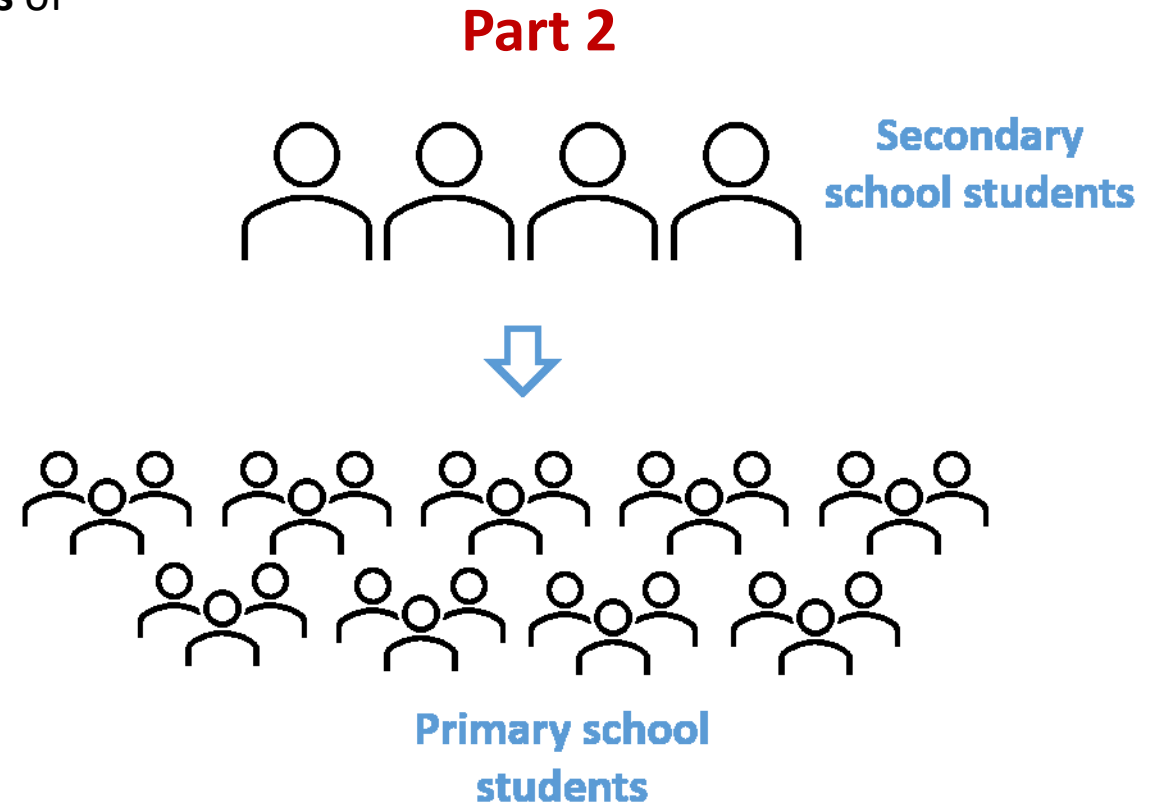
- Mentors help students develop **workshops**
- Students deliver workshops in local primary schools
- **Reflection and feedback**
- Repeat workshops
- Programme wrap-up and reflection

Outcomes for Students

- Confidence
- Teamwork, leadership, communication skills
- Experience of working with younger children

Outcomes for Primary school students

- Fun workshops
- Scientific 'role-models' for primary school students



How does it work?



Example schedule...

Term 1

Week	Content
1	Introductions
2	Workshop 1
3	Brainstorming and discussion on workshop 1
4	Workshop 2
5	Brainstorming and discussion on workshop 2
6	Leadership and teamwork workshop
7	Workshop planning 1
8	Workshop planning 2
9	Workshop practice 1
10	Workshop practice 2

How does it work?



Example schedule...

Term 2

Week	Content
1	Final practice
2	Primary school visit 1
3	Feedback and reflection
4	Primary school visit 2
5	Student-led debate
6	Wrap-up and feedback
7	Awards evening

What do the mentors say?



*“Having the pressure of making sure we delivered good quality material to the college students was a big **step outside my comfort zone**. That was a great thing for me and my **work (specifically scientific presentations) benefitted tremendously.**”*

*“It was really quite a **special experience** for me teaching the students various aspects of science... – it’s how **I imagine a proud parent feels!**”*

*“The Leaders in Science programme has been a **very rewarding experience**...It has also been a **delight watching the students increase in confidence** with each session”*

*“Mentoring for Leaders in Science helped me **grow in confidence, transformed the way I communicate science and opened my eyes to rewarding careers in science outside of the lab**”*

What do the teachers say?



*“Seeing my class develop in confidence last session was one of the **highlights of my teaching career** and I’d love to continue the project!”*

Secondary school teacher, 2020

*“It was fantastic watching the students so **engaged** in these **interactive workshops**”*

Primary School Teacher, 2019

Resources



www.leadersinscience.co.uk

Resources for students



Leaders in Science

Science for the next generation

RESOURCES FOR STUDENTS

Download Leaders in Science course log book [here](#).

Useful websites for workshops ideas:

[Title Pros Tinkering Guide](#)

[University of Kansas Resources for Science Classes](#)

[Science Kids website](#)

[Science Bob](#)

[Hands on Science workshops](#)

[A Handyman's Guide to Tinkering](#)

[Experiments you can do with bottles from around the house](#) – special thanks to Michelle for spotting this!

Thank you to everyone who has got in touch tell us about useful sites they have found! If you'd like us to add another link to this page, please let us know via the Contact page.

Resources



www.leadersinscience.co.uk

Blog



Leaders in Science

Science for the next generation

KEEP LEARNING FROM HOME! 5 IDEAS TO GET YOU STARTED...

Posted on *March 30, 2020*

So school's been closed and you're learning from home. There's been a huge amount of change in the last couple of weeks and you may still be adjusting to having your classroom at home. Thanks to the amazing power of the internet (thanks again to science and engineering!) there are lots of great websites out there to help.

One thing all of this has really highlighted is just how important scientists are to society. At times like this, it is the scientists that Government are turning to for advice, and the scientists that the public are relying on to develop faster testing, cures and vaccines for Covid-19.

Maybe this has inspired you to think about becoming a scientist one day? Or maybe you would like to learn more and expand your knowledge outside of what you get taught at school?

If so, here are some great online games, tools and activities to get you started. If you come across more that you'd us to add to this list, please Tweet us (#LISScotland) or drop us a line through our contact form to get in touch.

1. [Pepper and Soap: How washing your hands helps stop viruses spread](#)

2. [Love Chemistry? This interactive periodic table has a video for each element! Cool!/
3. \[Want to learn to code and help model diseases one day? Tynker is a great place to start! \\(free access to\]\(#\)](#)

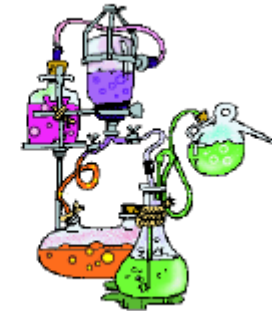


Leaders in Science

Activity log book

Programme structure
Workshop planning tools
Feedback surveys

Log Book



Resources



Mentor resource pack

Programme structure
Feedback surveys

Mentor Resource Pack

Contents

INTRODUCTION.....	2
QUESTIONNAIRE.....	3
PROGRAMME STUCTURE.....	4
QUESTIONNAIRE.....	5
PROGRAMME FEEDBACK.....	7

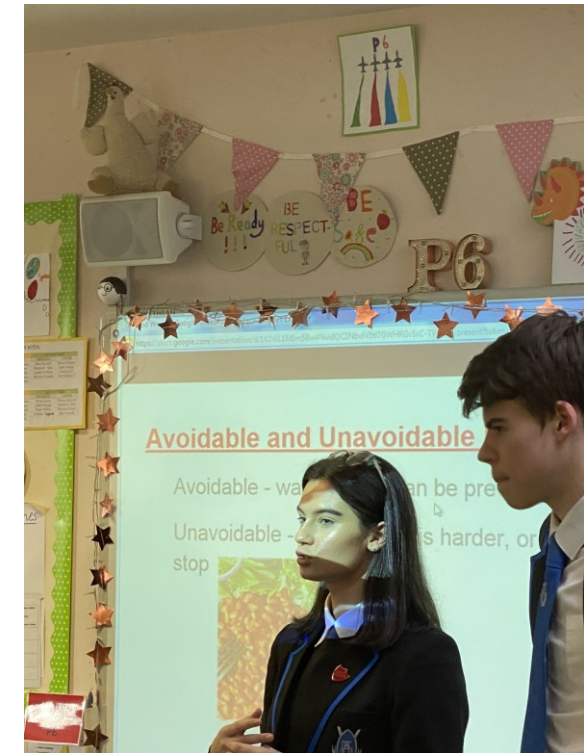
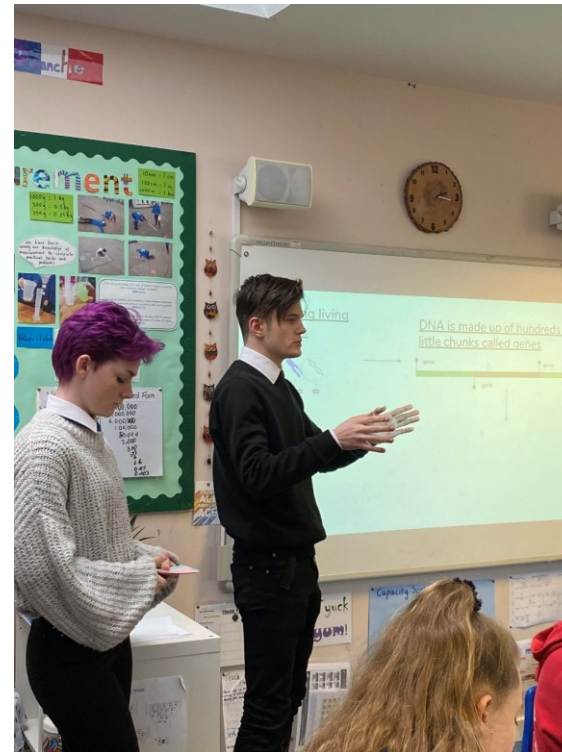
Mentors at Ross High School 2019



Students present at IBioIC Conference



Primary school workshops 2020



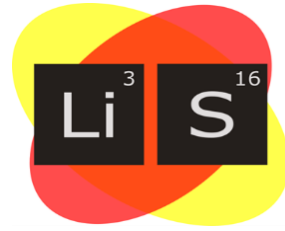
Primary school workshops 2020



Awards night (Hertfordshire)



Thank you



Leaders in Science

Science for the next generation

IBiolC

Mentors past and present

Collaborator schools and teachers

Students

