

# Primary school children can teach biomedical sciences to their peers - a collaboration between university and young scientists

## Pupil-led biomedical lessons for primary school children – a pilot study.

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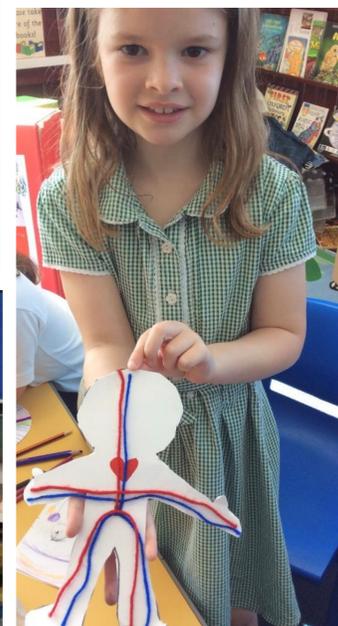
### INTRODUCTION

- In 2017, the Scottish Government published a strategy that recommended increasing science education at primary school level.
- Our institution had previously developed a large range of activities to help older pupils learn about pharmacology and physiology, but we had little experience with younger students.
- This pilot study aimed to develop a series of activities for primary school pupils and teachers, with children encouraged to take the lead in presenting what they had learned.

### SUMMARY OF WORK

- Primary 2 children (n=25) were given the opportunity to trade in classroom points for a lesson on a variety of biomedical topics.
- Pupils could choose to present a topic as a 2-3 slide PowerPoint presentation/poster and help organize 1-2 activities for the class.
- Resources and possible activities were provided by the University of Aberdeen but pupils had to design the activity themselves.
- Topics included the brain and heart. For the brain, pupils presented posters, made neurons from pipe cleaners, built brain hats (shows different regions of the brain and associated functions) and discussed what maintains brain health.
- For the heart, pupils described heart functions, used red and blue wool to show the network of arteries and veins in the body, found their pulse, and discussed cardiovascular health and medicines.
- Fabric human organ kits were also sent to various remote and rural primary schools across Dumfries & Galloway to assist those who had reported that they had few resources to help their pupils learn about science.

### RESULTS



Examples of learning activities developed and led by pupils



### FEEDBACK FROM TEACHERS

- The success of the first event led to more being requested by the school.
- Quotes from teachers included:

“very successful lesson”

“after one student led the lesson others wanted to do similar activities”.

“all of room 9 were very, very engaged during the pupil led lesson about the brain”

“the student told the class about the brain and organised children into groups to complete activities”

“another fantastic pupil-led lesson about the heart, enjoyed by the whole class”

### CONCLUSIONS & FUTURE WORK

- This pilot study demonstrated that involving primary school students in biomedical learning activities can foster leadership, improve presentation skills, encourage pupil-led research and stimulate interest in pharmacology and physiology at a very young age.
- Due to the success of this event, we plan to offer such classes to other primary schools and are putting together science activity packs that we can send to schools across the north of Scotland.
- These would include instructional videos to help primary teachers in remote and rural areas undertake such biomedical activities even when university staff cannot take part.

