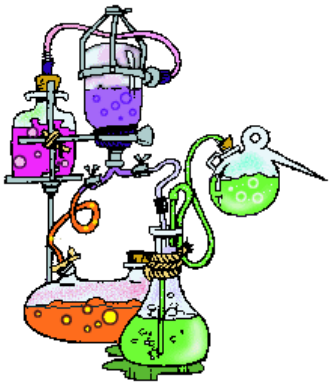
Leaders in Science

Log Book



Name:.....

Tutor Group:.....

If found, please return to:.....

Telephone: .....

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INTRODUCTION

Congratulations on stepping up to the challenge of becoming a Leader in Science.

This programme gives you the opportunity to work together with a small team of students to explore more areas of science and share your ideas and workshops with groups of primary school children.

You will be supervised by and work closely with a scientist or scientists from GlaxoSmithKline (GSK).

The aims of the programme for you are:

- To widen your knowledge of science outside of the school curriculum
- To respond to new challenges
- To develop self-confidence and self-belief
- To develop a sense of responsibility
- To develop new skills including leadership communication, time management and teamwork
- To share your enthusiasm for science with the younger generation

QUESTIONAIRE

To be completed at the beginning of the programme.

On a scale of 1 (low) – 10 (high), how confident do you feel:

1. Talking in front of your peers?
2. Working in groups?
3. Working individually?
4. Discussing new concepts in science?
5. Explaining complex ideas to others?
6. Organising groups of people?
7. Organising resources?

On a scale of 1 – 5, where do you think you currently stand?

8. Knowledge of science outside the curriculum?
9. Practical application of science?
10. Knowledge of current 'hot topics' in science?

EVIDENCE COLLECTION

To help you get the most out of the programme, you should collate a portfolio of evidence to show what you have done within the programme, and what you have achieved through it.

This could include:

- Details of any tasks you plan to undertake
- Evidence of tasks completed, which might include written evaluations or photographs of workshop output
- Resources created for your workshops
- Other evidence of your workshops, e.g. feedback from the younger students and primary school teachers and copies of the pupils' work
- Anything else you wish!

To help you, there are pages in this log book to record notes from each session.

WORKSHOP PLANNING

You will have a session on leadership and communication skills, which you should use to help you plan how you will deliver your workshops. You will have a session after both Science sessions to think about ideas for workshops and will have help in planning them. You will then work with your team to prepare workshops to take into local primary schools. Effective workshop leadership requires, among other things, careful preparation and honest reflection.

Some general points:

1. Your overall aim needs to be **appropriate to the learners** you are teaching (both conceptually and practically). Keep your **overall aim in mind at every step** of the planning process. Ask yourself how each task, activity or instruction is helping you achieve your overall aim.

2. Try planning from a **spidergram or mindmap** first. Discuss all your ideas within your group and then be selective in plotting these into a more standard plan using the template provided in this booklet.

3. Some people find it very useful to **plan backwards**. Starting from the final activity which shows that your aim has been achieved work backwards and this will also help you with your stage-aims.

4. Be realistic with your timing and make sure that your main aim is implemented in time for it to be achieved by the end of the lesson.

5. Keep **handouts to a manageable number**- (think about using the board and blank sheets for students to fill in themselves).

6. **Write your reflections as soon as possible after the lesson so that they're fresh in your mind and revisit your comments to learn from them before delivering future lessons**

EXAMPLE WORKSHOP PLAN

Workshop Title: The State of Things

Main aim of the workshop: To teach solids/liquids/gasses

Subsidiary aim: To improve students' practical skills

Personal aim: To improve my explanation of scientific ideas to others

Materials needed: Kettle, pan, bowel, chocolate, stirrer hotplate, spoon

Stage	Aim	Duration	Leader	Activity	Key Ideas	Comments/Reflections
1	*Introduction*	*10 min*	*Joe Bloggs*	*Q and A followed by explanation*	*Three different states of matter – solid, liquid and gas*	*Questions took longer than expected, allow more time next time.*
2	*Hands-on learning*	*20 min*	*Sarah Jones*	*Melting chocolate, boiling water*	*Substances can go reversibly from solid, to liquid, to gas*	*Chocolate part got quite messy, maybe think of an alternative next time!*
3	*Round up*	*10 min*	*John Smith*	*YouTube clip and any other questions*	*Consolidate learning*	*Went really well, good feedback from Teachers and students.*

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Materials needed:

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SELF-EVALUATION/ REFLECTION

Workshop title:

Workshop date:

Workshop Objective(s):

How well do you feel that the lesson objective was fulfilled and what evidence do you have of that?

What went well in the lesson?

How well did you work together as a team?

Any other comments?

If you could do it again, what would you do differently?

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PROGRAMME FEEDBACK

Thank you for taking part in the Leaders in Science programme! We couldn't do it without you! As this is a new scheme, we'd be really grateful for your feedback so we can improve it in future years.

Have you gained any new skills through Leaders in Science?

Have you learnt any new science through Leaders in Science?

Did you find the topics covered interesting and relevant?

Are there any other science topics which you feel would work well with this programme?

Did you find the workshop planning sessions helpful, and if not how could this be improved?

If you could change one thing about the programme, what would it be?

Any other comments:

Thank you for your feedback!