**How to run a Gopher Science Lab day**

Gopher Science Labs empowers students to experience teaching as part of their own learning process. Through Gopher Science Labs secondary school teachers guide their students and show them how to safely demonstrate, teach and explain a range of practical activities. Once a student gains confidence, they become the teacher, showing their peers and younger students how to complete the experiments during a special Gopher Science Lab day event.

The accompanying activities booklet for teachers is used to support the lab day and contains 10 activities; 7 shorter morning activities and 3 longer afternoon activities. Initially the short activities are taught to sixth form or other secondary school students by their teachers. After training, the students or teachers then arrange a special lab day event where primary school students and teachers are invited to participate.

At the start of the lab day, a teacher from the host school introduces the format of the day, and then the trained secondary students take over. In the morning, the primary students take part in a circus of 7 activities facilitated by the secondary students. Each trained student can teach individuals, pairs or small groups from the primary schools. Every primary school student spends up to 30 minutes on each activity, and learns simple hands-on science. During the afternoon the teacher from the host school, possibly with their student helpers, will deliver one or more of the afternoon activities. These take longer to demonstrate and so this time primary students may take part as a class or as additional helpers at the front of the classroom. Later once the participants return to their primary school, they are encouraged to arrange their own in school lab sessions where they can teach the practical knowledge they have gained to their classmates or younger year groups.

By taking part in a lab day students can learn and teach each other in the safety of a teacher supervised classroom, but with a degree of independence to encourage them to take some control of their learning and to feel ownership of the activities they teach to other students. The format is flexible, allowing teachers to choose which activities are used, to best suit their school and the participating students.

Potentially sixth formers could teach year 7 students, who go on to teach year 6 students from their old schools, who then proceed to teach year 5 students. At each stage there is a high level of teacher supervision, to ensure safety and offer guidance. After the first set of students have been fully trained, knowledge is cascaded in a student led way.

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**Gopher Science Labs was developed by the Royal Society of Biology and the Biochemical Society.**