

# Introduction

S-TEAM has been created to change the way science is taught in schools across Europe and beyond. Its task is to make it easier for teachers to use inquiry-based or 'investigative' methods when teaching science. These methods should increase student motivation and engagement with science. In turn, this means more scientifically-literate citizens, and more students taking up careers in science, technology, engineering and mathematics.

S-TEAM does not claim to offer an instant cure for the problems of student engagement with science. Instead, it will draw upon a wide range of existing knowledge about how to teach science effectively. This knowledge needs to be shared between teachers, schools, national systems and researchers.

S-TEAM will achieve this by focusing on teacher education and professional development activities. We recognise that all national education systems are different, and that teaching and learning practices are not the same everywhere. Our training packages and other materials will be tailored to specific national contexts, whilst including state of the art knowledge from around the world of science teaching.

## Supporting Science Teaching

S-TEAM is a support action aimed at science teachers and teacher educators. This means more than just distributing information. A central theme of S-TEAM is that new practices should not be imposed on teachers and teacher educators. There needs to be collaborative development of materials and methods, as in the successful SINUS project in Germany.

Delivering this kind of support cannot be done without the cooperation of policymakers. Nor can it be done without the cooperation of teachers. This is reflected in three principles which we are committed to upholding:

- Lifelong Learning
- Partnership
- Extending repertoires of action for teachers

Some of the areas of science teaching supported by S-TEAM include:

- Argumentation
- Collaborative curriculum development
- Dialogic teaching
- Pupil Motivation
- Teaching for Scientific literacy
- Video-based resources in science teacher education

- Objectives
- Milestones
- What is Inquiry-based science teaching ?
- Advanced methods and methodologies
- Scientific literacy for S-TEAM
- Teacher Professional Development TPD
- Coherence - an overall framework?
- References