



Primary Problem-Solving Challenge FAQs

What is it?

SATRO's Annual Problem Solving Challenge for Primary Schools in Surrey. Teams of six students take on an unseen problem solving challenge testing their STEM, teamwork and problem-solving skills as well as their ingenuity and creativity.

Where does it take place?

There will be three heats held across Surrey in Guildford, Camberley and Farnham. We ask that you choose your nearest venue.

When?

The heats will take place in October and November 2026, with the final taking place on 9th December 2026 at Guildford College. See the booking form for details.

What time?

Each heat starts promptly at 1pm so please aim to be seated by 12.45pm. The competition lasts 80 minutes and the judging may take a further 30 minutes so each heat should finish by 3.00pm. The timings of the final will be similar.

The cost

We have used charitable funding to subsidise the cost to schools of participating, so the cost for each team is only £30. Invoices will be sent out shortly after schools have signed up.

The teams

Schools should expect to enter one team of six students from Year 6. You may be offered to field a second team if there is space – please wait to be invited to do so.

How do the schools pick the teams?

Entirely up to the schools. You could have an internal competition, choose G & T students, bring members of a STEM club, reward students for effort, ask for volunteers etc.

Can school staff assist the teams during the heat?

No. School staff should not communicate with their team at all during the competition time or during the judging time. It is a student challenge! We recognise that for some SEN students they may need reading/support from a known adult but this will be in discussion at the heat.

ANY BREACH MAY RESULT IN POTENTIAL DISQUALIFICATION

What is the problem?

It's a secret! The teams are given an unseen practical challenge and materials to use at the heat. There will be a set of rules to follow.

How do we keep it a secret for subsequent heats?

We ask that schools taking part do not share the task with anyone (verbally or visually) until the final heat is completed. You are in competition with all the schools so don't give them an advantage!

What materials do the students use?

Some could be found in an office such as paper, card, paper clips plus items like cotton reels or egg boxes. The teams will have 10 minutes to check if there is anything missing from their materials pack and notify the judges who will have spare materials.

Do the students need to bring any equipment?

Yes - basic equipment such as a pencil, pen, ruler, rubber, pencil sharpener, scissors.

Are there any refreshments?

We ask the host schools to supply water, squash, tea, coffee and biscuits. Please identify any dietary requirements via the MS Form by the deadline ahead of each heat.

Is there an area for teachers and other school staff?

There will be space at each event for staff to sit, relax or do marking/planning if they like. Schools usually supply a visitor Wi-Fi code should you need it.

Can parents attend?

Unfortunately not, for safeguarding reasons and because space is limited at all our venues. It is up to you how you transport the team there – own school minibus/parents/contact host school or approach another school for a minibus.

**Can teachers/school staff take photos?**

We ask all schools to complete a photo consent form. Inevitably we will have some students who do not give consent. Therefore, we ask that you only take photos of your own school students. **Please do not share any photos taken at your heat until the last heat has taken place to keep the problem secret.**

How are the teams judged?

We have a team of volunteer judges from the STEM industry who are there to answer any questions, ensure teams comply with the rules and judge each entry. Teams must complete and hand in their design sheet in the first 20 minutes, which is marked by the judges so failure to hand it in on time will result in lost points. The solution could be judged on time taken, number of items moved, accuracy or anything else that we might think of!

Can the teams test before judging?

We would encourage testing and improving your solution before the 75 minutes has elapsed.

Is the event Sustainable?

We incorporate the UN Sustainable Development Goals into our challenge planning. Most of the materials we have used were found in the SATRO office so a minimum amount needed to be purchased. We encourage schools to keep vehicles travelling to the venues to a minimum.

How do you qualify for the Final?

The top three teams from each heat qualify.

Can we substitute students in the final?

If a student from a team that wins one of the heats is unavailable for the final another student can take their place. However, we would not expect a whole team to change!

What is the problem-solving challenge at the Final?

It will not be the same as the heat although it may be linked in some way.

What are the benefits for the students?

The teams are challenged to solve a problem in a given time period using the minimum of resources to be more sustainable. Just like in Industry. The students will develop their essential skills such as problem solving, creativity and teamwork as per the SkillsBuilder framework. <https://www.skillsbuilder.org/universal-framework>

Some quotes from our previous challenges:

When asked, 'What have you learnt?' a student said:

"How to work as a team to build each other's confidence, to create a structure that will suit what we have been asked to create and to manoeuvre quickly as a team to complete the task in time."

Another student said: *"It required the team to think fast and come up with innovative ideas to solve the problem. This was an enjoyable competition, because you had to think creatively and work together to solve the challenges you faced ... It was a good learning experience."*

And another student said: *"Tensions were high, especially as we neared the time limit, but I know that we are all very pleased with the result, and would love to have another go!"*

A teacher said: *"All teams showed excellent communication and perseverance throughout the challenge"*

Any further questions?

If you need more information, please contact Karen (karen.bonthron@satro.org.uk) or Rebecca (events@satro.org.uk)