# Suggested Teaching Programme

### Session 1: The Brief & Research
Introduce the students to the design brief you have chosen from the three suggested. In their groups, students use a range of sources to begin to understand how a structure or mechanism might be created.

### Session 2: Generate & evaluate ideas about mechanisms.
Have out the range of materials that will be used to make the students' eventual design and allow time for them to experiment with the materials and mechanisms. Interrogate how movement is generated and use kit to simulate movement.

### Sessions 3 & 4: Construct a Prototype (Engineer visit one)
Use a planning sheet to help them develop their initial designs. You could use a sheet individually or in groups. In an initial session, each of the team members can draw four designs before choosing one and refining it further.Students work as a team to create a 'working' model of their design. Throughout this process, encourage the students to refer to the original design brief as well as their findings from the first week.

### Session 5: Detailed Design
Have the students test their prototype against the original design brief. They should identify any weaknesses in the design and any other aspect that can be improved. They should then go through the design process again, using the planning sheet, to finalise their prototype.

### Sessions 6 & 7: Manufacture (Engineer visit two)
With their improved designs, students should produce a final product of their work, paying careful attention to the details of their design and ensuring that all mechanisms work correctly.

### Session 8: Evaluate
Students will need to test the product again and evaluate its effectiveness, relative to the brief. An informal presentation will need to be made that explains the design brief and specification generated as a group for the Presentation Day at the Royal Albert Hall – presentations will be done in three sets of 5 schools (whilst the remainder of the schools visit these five stations) so students are not expected to present to the entire room.