



Jungle Adventure 2019

STEM Challenge

Leader Information

Leader Brief

These notes are to be used in conjunction with the Team Brief to aid adult leaders to guide the teams through the challenge. All areas should be covered by this document however, if you have further questions please ask the event organisers.

The Scenario

Following the success of last year's medieval siege engine design challenge the STEM themed activity returns for a second year. In keeping with the 2019 camp theme of "Jungles" this year's design challenge revolves around designing a portable bridge capable of making several river crossings.

Groups are invited to design and build bridge prototypes to the specifications provided and bring them along to Springbank Camp to compete against other teams from around Derbyshire. There will be an opportunity for minor adjustments to be made on camp with the assistance of Engineering Consultants from Rolls-Royce. However, there will not be time to start the challenge from scratch and materials will not be provided by the organisers. The specified materials are relatively cheap to source so should not be an impediment.

Role of Adult Leaders

As adult leaders your responsibility is for the safety of the young people undertaking the challenge. You are strongly discouraged from helping them design the bridges and evidence of this will result in points being deducted. The aim of the challenge is to give young people the opportunity to take part in a fun and engaging activity where they will learn about the challenges faced in engineering. As part of the judging at the camp, teams will be questioned about how they designed and built their bridges.

The Team

Please ensure that before the activity starts the team have decided the roles as stated in the Team Brief. If preferred you may choose to rotate the roles between sessions.

Safety

Manufacture and testing of the bridges present potential hazards. As such, before commencing the activity please ensure that appropriate risk assessments have been carried out and that safety measures are in place. Use of sharp tools such as craft knives may be performed by adult leaders to instructions provided by the teams or you may supervise the young people using the equipment themselves if covered by your group risk assessments.

Hiring of Tools and Services

You are asked to stick to the specified materials and tools as shown in the Materials and Equipment list.

Budget

The aim is to complete the bridge to a budget of £6000. The team should provide a cost breakdown using the prices as shown in the Materials and Equipment list. Care should be taken as spending more than the budget will result in points being deducted.

Testing Before the Event

Testing before the event is permissible during the design phase if your team(s) wish to. If your team wishes to test their bridge during the design phase then equivalent weights should be manufactured. In order to be representative any weights should be approximately 200g and no larger than 8x8x8cm; they may be cubic or cylindrical. Weights should rest on the top surface of the bridge.

Feedback

If you have feedback on any stage of this activity please pass your comments to the event organisers so that future events can be improved.

Questions & Queries

If you have any questions relating to this years' STEM Challenge, please get in touch with the Events & Entertainment team.

Email: EandE@springbank.org.uk

We would like to thank Rolls Royce for their support of this event.



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