

# The STEPS Young Engineers Award

STEP 4	LESSON PLAN	DISCUSS
<b>REFERENCE TEACHERS GUIDE CHAPTER 3 STEP 4</b>	<b>Time Required</b> 45mins – 2hrs.	<b>Date</b>
<b>Subject</b> Science and Engineering	<b>Class Level</b>	
<b>Strand</b> Environmental awareness and care, Materials	<b>Strand Unit</b> Science and the environment, Properties and characteristics of materials	
<b>Title</b> TALK – Make a presentation		
<b>Objectives</b> Present the project to others.		
<b>Skills Required</b> Working scientifically: communicating and presenting; Designing and making: evaluating		

Learning Objectives	Learning Activities
<b>Students will:</b> <ul style="list-style-type: none"> <li>Learn to reflect and evaluate as a team</li> <li>Learn communication skills</li> </ul>	<b>Prepare (10-15mins)</b>  This step is optional for those who do not arrange a STEPS volunteer school visit. We strongly recommend doing this step; it is an excellent way to consolidate the work done so far and to prepare for the Project Summary (STEP 5). It is also an ideal opportunity for the young students to practice presentation skills.  <b>Instructions</b>  Hand out Project Books and prototypes, as well as any rough work or reflection exercises. Write the suggested headings (below) on the board. Option to <a href="#">show a Youtube video</a> of a good presentation. Teams might like to do a practice run-through of their presentation for a few minutes at the end. Presentations should be 5-7 minutes per team (or as you think fit).

	<p><b>Suggested Headings</b></p> <ul style="list-style-type: none"> <li>- <b>Introduction</b> - Describe the project and prototype. What does it do? Who does it help?</li> <li>- <b>Drawing</b> – Discuss the drawing. What did you think would be difficult to build? How did you come up with lots of ideas as a team?</li> <li>- <b>Building</b> – Discuss how it was built. Did you encounter problems sticking to the drawing? What were they? How did you solve them?</li> <li>- <b>Materials</b> – Tell us about how you chose the materials. Give an example of a material you chose and why you chose it. Did it work the way you wanted it to?</li> <li>- <b>Overview</b> – What part of the project worked best? Would you do anything different if you were doing it again?</li> <li>- <b>Questions</b> – Ask the audience (and visitors) if they have any questions. Answer them thoughtfully.</li> </ul>
	<p><b>Present</b></p>
<p><b>Students will:</b></p> <ul style="list-style-type: none"> <li>• Learn presentation skills</li> <li>• Learn to listen to questions and respond thoughtfully</li> <li>• Listen to other teams and ask interesting questions</li> </ul>	<p><b>Instructions</b></p> <p>Each team presents their project and prototype to their class and, perhaps, visitors. Encourage other teams to ask at least one question to each presenting team at the end. Option to use Power Point (or similar).</p> <p><b>School Visitor Ideas</b></p> <ul style="list-style-type: none"> <li>• <b>STEPS Volunteer Engineer</b> – sign up for a visit from a STEPS Volunteer Engineer. Presentations must be prepared in advance.</li> <li>• <b>Invite a local engineer or engineer parent</b> – Ask a local engineering firm or engineering students to come in to listen to the presentation and ask questions.</li> <li>• <b>Non-engineer visitor</b> – The external visitor does not need to be an engineer. A teacher from another class or visiting teacher can listen to the presentations and ask questions.</li> <li>• <b>Parents Showcase</b> – Invite parents in to listen to the presentations and to ask questions.</li> <li>• <b>Peer audience</b> – invite other classes in to listen and ask questions.</li> </ul>
<p><b>Resources</b></p>	<p>Project Books, Prototypes, rough work, reflection exercises (STEP 3) Optional Power point/projector</p>
<p><b>Integration</b></p> <p>English oral language – verbalising ideas, solutions and methods as a team</p>	