Student Activities Card Sort





Appendix 1: Card Sort, page 1

Engineering

Involves designing, building, and maintaining things like machines, buildings, and electrical systems

(systems, mechanical, civil, and electrical engineering)

Design

Focuses on creating plans for products using computer tools (CAD), working closely with engineers to make sure everything runs smoothly and safely.

Manufacturing

Involves making things like military vehicles, machines, and equipment, using techniques like welding and metalworking.

Program Management

Involves planning and organizing projects, including setting timelines, managing costs, and ensuring everything is done on time.

Logistics

Involves managing the transportation and delivery of goods, ensuring the right supplies are in the right place at the right time.

Support Services

Provides ongoing maintenance, training, and support for systems, helping to keep everything running well for long-term use.



Student Activities Card Sort





Appendix 1: Card Sort, page 2

Problem Solving	Problem Solving	Problem Solving	Problem Solving
Critical Thinking	Critical Thinking	Critical Thinking	Critical Thinking
Creativity	Creativity	Creativity	Creativity
Innovation	Innovation	Innovation	Innovation
Digital Skills	Digital Skills	Digital Skills	Digital Skills
Communication	Communication	Communication	Communication
Collaboration	Collaboration	Collaboration	Collaboration
Logical Reasoning	Logical Reasoning	Logical Reasoning	Logical Reasoning
Entrepreneurship	Entrepreneurship	Entrepreneurship	Entrepreneurship
Initiative	Initiative	Initiative	Initiative
Analysis	Analysis	Analysis	Analysis
Independent thinking	Independent thinking	Independent thinking	Independent thinking



Student Activities Self Assessment



5 = Expert



1 = No Skills

Appendix 2: STEM Skill Self Assessment, page 1

Rate your current STEM skills using the following scale

	J		<u>'</u>	<u>'</u>
Problem Solving	35	Colla	aboration	
Critical Thinking	35	Logical	. Reasoning	
Creativity		Entrep	reneurship	
Innovation		lni	tiative	

Analysis

Independent thinking

2 = Beginner | 3 = Satisfactory | 4 = Experienced |

Add together all of your ratings to get your "STEM Skills Score":	-
Your Top Skill:	
Your Area for improvement:	

Extension task:

Digital Skills

Communication

For each of the skills, identify a time you have used and/or developed this skill. It could be at school, at home, at work, in a sporting club, church or community group or any other example you can think of.



Student Activities Self Assessment





Appendix 2: STEM Skill Self Assessment, page 2

1. Why are STEM skills important?
2. Which STEM skill do you think is the most important and why?
3. Identify one job that would benefit from the top skill you identified in your self-assessment.
4. From your self-assessment, which 3 STEM Skills would you like to improve?
5. For each of the STEM skills you chose to improve, identify <i>how</i> you will work to improve this skill. What subjects allow you to practice these skills at school? How could you work on them at home?







Appendix 3: Design your Defence Industry team, page 1

You work in Human Resources (HR) and have been asked to hire a team of people to solve on of the problems below. Your job is NOT to solve the problem but bring together the people with the right skills to solve it effectively.

Step One: Choose a problem
Tick one box:
☐ Upgrade a Navy ship: upgrade a Navy ship with new technology for modern systems of communication and running efficiency
☐ A new camouflage uniform: design a functional defence uniform with a camouflage pattern suited to a new environment (e.g. snow, rainforest, desert).
☐ A robot for search-and-rescue missions: develop a robot that can help find and rescue people in dangerous environments like collapsed buildings.
☐ Medical Support in Remote Areas : design a portable medical support system for use in remote areas, including telemedicine capabilities.
Step Two: Identify the requirements
What does the team need to achieve? What kind of tasks will need to be completed?





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Appendix 3: Design your Defence Industry team, page 2

Step Three: Build your team

Looking at the tasks you identified in step two, work out what roles you need to fill. Aim for 4-6 different roles.

Role	What they do
e.g. Logistics coordinator	Manages delivery of supplies and equipment

Step Four: Identify Necessary Skills
When you are interviewing people to fill these positions, what skills are you looking for?

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Appendix 3: Design your Defence Industry team, page 3

Step Five: Justification
Justify why you have chosen these people for your team? Think about why each role is important for the team's success.
Step Six: Challenges
Identify potential challenges the team might face and suggest strategies to overcome them.







Appendix 3: Design your Defence Industry team, page 4

Review and Refine

Review your Defence Industry team. From what you have learnt, you need to make **at least one change** to the team. You could remove someone, add someone or swap someone on your team.

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For each member of your team, research and identify

- the qualifications and training required
- one real-life organisation or employer where the occupation exists
- any subjects in school that help prepare for it

Role	Qualifications	School Subjects	Employer

