



Year 5 Nano Nagle Lantern STEM Project

Overview:

- Students have been learning about physical sciences (light), the STEM design process and about founder of the Presentation Sisters Nano Nagle

Score: /25

Teacher Feedback	Yes	No
Teacher assistance was required for this assessment		
Feedback required		

Parent Signature:

Parent Comment:

ENGINEERING DESIGN PROCESS

The Problem:

CAMERA, ACTION... There is a big problem that the world is facing! Due to the scarcity of resources and people, LIGHTS have started to slow in their production. The world is facing a shortage of lanterns and without these it will be very hard for people to go one step beyond and make a difference in the world around them.

If the current situation cannot be fixed, humans may find themselves left in the dark about the significance of lanterns and who Nano Nagle was and the impact she had.

The Task:

Research and create a small 'About Me' profile about Nano Nagle and the significance of the LANTERN. Then using the engineering process, **design**, **create** and **build** a brand-new lantern that can be used to provide light to the world.

Project Steps:

Ask – What is the problem? How have others approached the problem?

Imagine – What are some solutions? Brainstorm ideas, choose the best one from current designs

Plan – Draw at least x2 new different lantern designs. Label your diagram, be sure to include a list of materials and steps you will need to take to build and create

Improve – What works? What doesn't? Modify your design to make it better

Create – Follow your plan to create and build your design



	A Excellent achievement	B High achievement	C Satisfactory achievement	D Limited achievement
Engineering principles and systems	Explains, with detail, various ways forces control movement, sound and/or light in a product or system.	Distinguishes and describes various ways forces control movement, sound or light in a product or system.	Distinguishes various ways forces control movement, sound or light in a product or system.	States forces control movement, sound or light in a product or system.
Materials and technologies specialisations	Outlines and consistently applies suitable and safe practices when using a range of materials and components and explains their characteristics and properties.	Outlines and applies suitable and safe practices when using a range of materials and components and describes their characteristics and properties.	Outlines and applies suitable and safe practices when using a range of materials and components and classifies their characteristics and properties.	States a few characteristics and/or properties of some materials and components, applying some safe practices when using materials and components.
Investigating and defining	Defines a problem with clarity, identifies available resources and creates a set of detailed, logically sequenced steps to assist in user decision-making to create a solution for a given task.	Defines a problem with clarity, identifies available resources and creates a set of logical sequenced steps to assist in user decision-making to create a solution for a given task.	Defines a problem, identifies available resources and creates a set of sequenced steps to assist in user decision-making to create a solution for a given task.	States a problem and some resources, listing a set of sequenced steps to assist in user decision-making.
Designing	Develops, clearly communicates and justifies alternative solutions, and uses clearly annotated	Develops and clearly communicates alternative solutions, and uses clearly annotated diagrams,	Develops and communicates alternative solutions, and uses annotated diagrams,	Follows basic design ideas, using simple diagrams or storyboards with few technical terms.

	diagrams, storyboards and a range of appropriate technical terms when following design ideas.	storyboards and appropriate technical terms when following design ideas.	storyboards and appropriate technical terms when following design ideas.	
Producing and implementing	Applies safe and appropriate procedures consistently when using a range of components and equipment to make solutions.	Applies safe and appropriate procedures when using components and equipment to make solutions.	Applies safe procedures when using components and equipment to make solutions.	Applies some safe procedures when using components and equipment.