Meridian Innovators

DESIGN TODAY
SHAPE TOMORROW.

DESIGN TOOLKIT

Closing Date: Friday 24th February

The winner will be announced in school at the end of the Spring Term.

Introduction

What is the competition about?

Every day, the world is being impacted by technology. Meridian Innovators is a competition which aims to challenge and inspire you to design creative & innovative technology solutions to problems in the world today.

How long does the competition last?

The competition will run twice per year - once during the Autumn Term and once during the Spring Term.

Can I work in a team?

You can enter as an individual or in a group of up to three people. All the names of people in your group must be included in the Workbook.

How many entries can my group submit?

Each group or individual who participates can only enter one design.

Can my design be for anything?

Each term there will be a new design brief which will tell you the theme for the competition that term. Whatever you design must fit the brief.

When and how can I submit a design?

Only the WORKBOOK needs to be submitted by the end of Friday 24th February. This can be done in two ways. It can be emailed to Miss Anelay (Year 2 teacher) through the school office with the subject 'Meridian Innovators' or it can be printed out and put in Miss Anelay's classroom.

Spring 2022-23 – Design Brief

Brief:

This term, we would like you to come up with an idea for a piece of eco-friendly technology. This should be a piece of technology which benefits the environment or a piece of technology which has been adapted so it has a reduced impact on the environment.

You could:

a) Apply renewable energy (solar power, wind power, hydropower or geothermal energy) to something which is has not yet been applied to
b) Think of a current piece of technology which is around today and adapt it so that it is less harmful to the environment
c) Invent a new piece of technology which benefits the environment

To help you get started and to hopefully inspire some of your ideas, **the table below shows a range of examples of eco-friendly technologies which already exist today. The table tells you what the purpose of each piece of technology is and why it is beneficial to the environment. Each column links to one of the three points above.**

A) Applying renewable energy	B) Adapted technology	C) Technology which benefits the environment
• Geothermal systems **Purpose:** Heat buildings **Eco-friendly:** Uses thermal energy from underground instead of gas or coal power • Solar powered water heaters **Purpose:** Heats water in buildings **Eco-friendly:** Uses energy from the sun to produce electricity to heat the water • Solar powered phone charger **Purpose:** Charges phones **Eco-friendly:** Uses energy from the sun to produce electricity to power the phone	• Electric cars **Purpose:** Method of transport **Eco-friendly:** Electric cars use electricity to power themselves. This means that petrol and diesel is not burnt when the car is being used and no harmful gases are released into the atmosphere • Motion sensoring lights which switch off when everyone has left the room **Purpose:** To make lights to turn on automatically when someone enters and exits a room **Eco-friendly:** Reduces energy waste as the lights will automatically turn off if nobody is in the room	• The Interceptor barge **Purpose:** To clean up plastic from rivers **Eco-friendly:** Removes plastics from rivers which would otherwise be harmful or poisonous to animals **See link for more information:** https://theoceancleanup.com/rivers/ • The WOTA Box **Purpose:** To turn wastewater into freshwater for uses such as showering/handwashing **Eco-friendly:** There is less wastewater; meaning less water pollution going into lakes and rivers. It can also help in droughts when less water is available. **See link for more information:** https://earthshotprize.org/winners-finalists/wota-box/

You will need to think about the following questions when coming up with your idea:

1. What is the purpose of the technology?
2. Who would use it?
3. How is it sustainable? (What is it made from and how is it powered?)
4. How does it positively impact the environment?

Don’t forget to include as much detail as you can!

WORKBOOK

Names of group members (and class):

_____

_____

Name of your product:

_____

Purpose: What is it used for?

_____

_____

_____

_____

How does your product work?

_____

_____

_____

_____

_____

_____

How is your product environmentally friendly?

_____

_____

_____

Suggested labels:

- Different parts of the product
- What each part is made from
- How the product works

Labelled drawing: