

A STEM-sational book series for
adventure seekers and super problem-solvers

SUPER QUESTERS



ACTIVITY PACK

#SuperQuesters www.questfriendz.com @QuestFriendz





SUPER QUESTERS

The Case of the Great Energy Robbery
BY LISA MOSS & DR THOMAS BERNARD



Welcome to the SuperQuesters Activity pack!

We're delighted to introduce you to the SuperQuesters series, which has been expertly designed by authors Lisa Moss and Dr Thomas Bernard to develop STEM skills for children aged 4+. Perfect for fans of *Ada Twist Scientist*, *Izzy Gizmo*, *Look Up!*, and the *Fantastically Great Women* series and superhero enthusiasts, these fantastic books are ideal for children who love learning through play.

SuperQuesters is a young fiction adventure series at its heart with a non-fiction educational twist. Each adventure addresses a specific scientific question and the central characters become their alter ego superheroes, the SuperQuesters, journeying to magical Questland to answer the question for the reader. Readers are invited to help the SuperQuesters complete their 'mission' by interacting with a series of activities (the STEM quests) to arrive at the answer. While completing each overarching 'mission' in Questland the reader develops **12+ different STEM skills** such as **coding**, **abstraction**, **logic** and **trial and error**, covering key aspects of the **Key Stage 1 Computing, Maths and Science National Curriculum**.

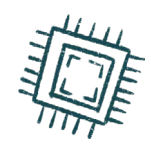
This activity pack has been created for use at home, in the classroom, for home-schooling or at after school clubs with creative and interactive activities to help make STEM learning fun and engaging. The SuperQuesters books are available to buy from your local bookshop or online.

It's time to Read, Quest, Learn!

ABOUT THE BOOKS

The SuperQuesters series is a unique new concept in storytelling combined with hands-on STEM learning.

In *SuperQuesters: The Case of the Great Energy Robbery*, when Leo's mum challenges Leo, Lilli and Bea to figure out how to power a model airplane using a special biofuel that can be made from an ingredient in their very own garden, the friends start investigating and return to Questland in search of a solution. Upon arrival, the trio discover that the Lord Grumble is up to his dastardly tricks, stealing energy throughout Questland from the sun, wind, water, animals and crops, and sending it back to his secret hideout on Black Rock Island. Can you help them defeat evil Lord Grumble and return the stolen energy to Questland? The SuperQuesters show that *anything* is possible with **clear thinking**, **logic** and **patience**. With over **100 reusable stickers** in each book, plus a **reward chart**, **glossary** and **answer page**, children will love charting their progress and celebrating their success.

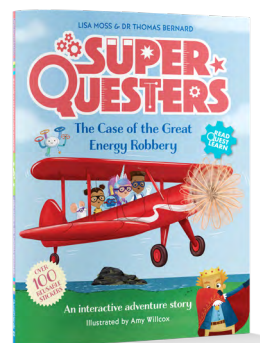


SUPERQUESTERS

Leo Zoom's Renewable Energy Machine

Leo Zoom loves flying and one day hopes to travel into space. However, this uses a lot of fossil fuels. *The Case of the Great Energy Robbery* explores biofuels, such as sunflower oil, animal waste and seaweed, that can fuel machinery and power engines.

Help Leo design an aircraft that uses biofuels using the ones mentioned in the story, or research to find some other possibilities.



SUPERQUESTERS

Create a Flight Plan for the SuperQuesters

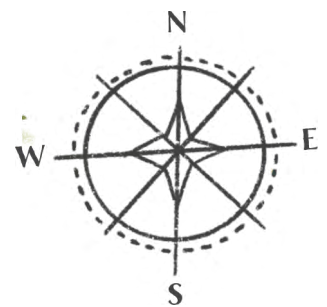
Can you create a flight plan to guide the SuperQuesters on their mission in Questland.



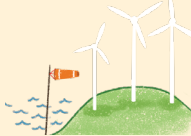




Answer the questions below and draw the route on the grid to complete the plan.



Instructions:

1. Begin at location: **RUNWAY** and place an **X** on the grid.
2. Move **NORTH** one block and then two blocks **EAST**. *Where are you?*
.....
3. Move one block **EAST** and then **SOUTH** one block. *Where are you?*
.....
4. Move one block **SOUTH** and then two blocks **WEST**. *What do you see?*
.....
5. Move one block **WEST**, then one block **SOUTH** and three blocks **EAST**. Place an X on the grid.



		 Solar panels	
 Runway			 Wind turbines
	 Farm animals	 Sunflowers	
 Seaweed			 Black Rock Island



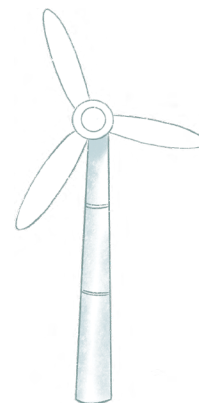
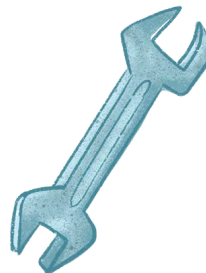
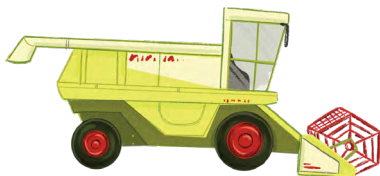
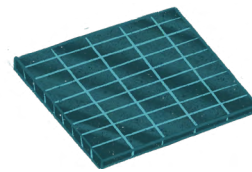
STEM SKILLS: navigation, spatial recognition

SUPERQUESTERS

Lillicorn's Renewable Energy Sources Challenge

Can you help Lillicorn find the items linked to renewable energy? Draw a circle around everything that is either a source of, or that collects renewable energy.

Hint: Did you know that renewable energy sources are natural resources that can be replaced faster than they are used and which cannot run out.



STEM SKILLS: problem solving, reasoning

Discover more at: www.questfriendz.com



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SUPERQUESTERS

Bea Bumble's Renewable Energy Contraption

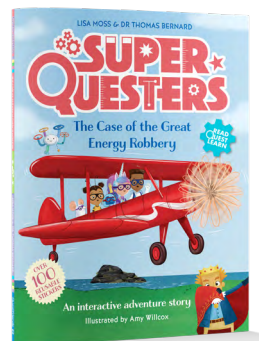
In the story *The Case of the Great Energy Robbery*, the SuperQuesters explore renewable energy sources such as wind, sun and waves.

Using these and other renewable energy sources, design a useful contraption to help with chores at home or in the garden and avoid using fossil fuels.

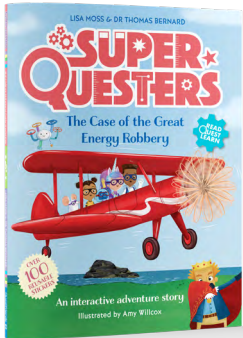


Think carefully about how the device will get and store the energy.
For example:

- A wind powered lawn mower
- A solar powered Hoover.



SUPERQUESTERS



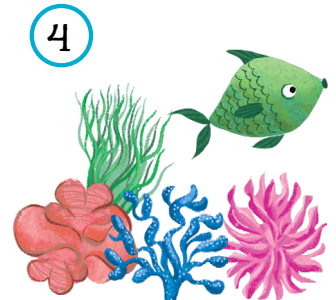
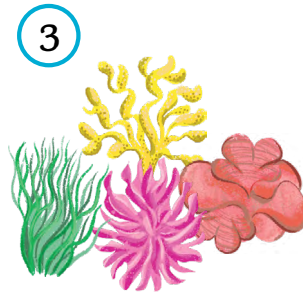
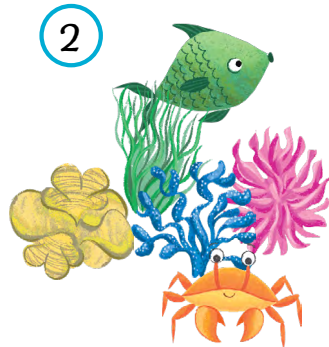
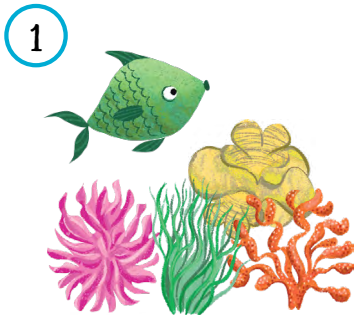
Lillicorn's Seaweed Search

Lillicorn is researching how seaweed can be used to make renewable energy. She has discovered several seaweed forests in Questland .

Can you follow the instructions to help Lillicorn find the correct seaweed forest.



```
FUNCTION Which_Seaweed_Forest{  
  IF (pink_seaweed) THEN {  
    CONTINUE;  
  }  
  IF (NO crab) THEN {  
    CONTINUE;  
  }  
  IF (fish AND blue_seaweed) THEN  
  {  
    PRINT ("You found the correct seaweed forest!");  
    RETURN (CorrectSeaweedForest);  
  }  
}
```



READ
QUEST
LEARN

STEM SKILLS: coding, branching (IF THEN statements), problem solving, troubleshooting

Discover more at: www.questfriendz.com



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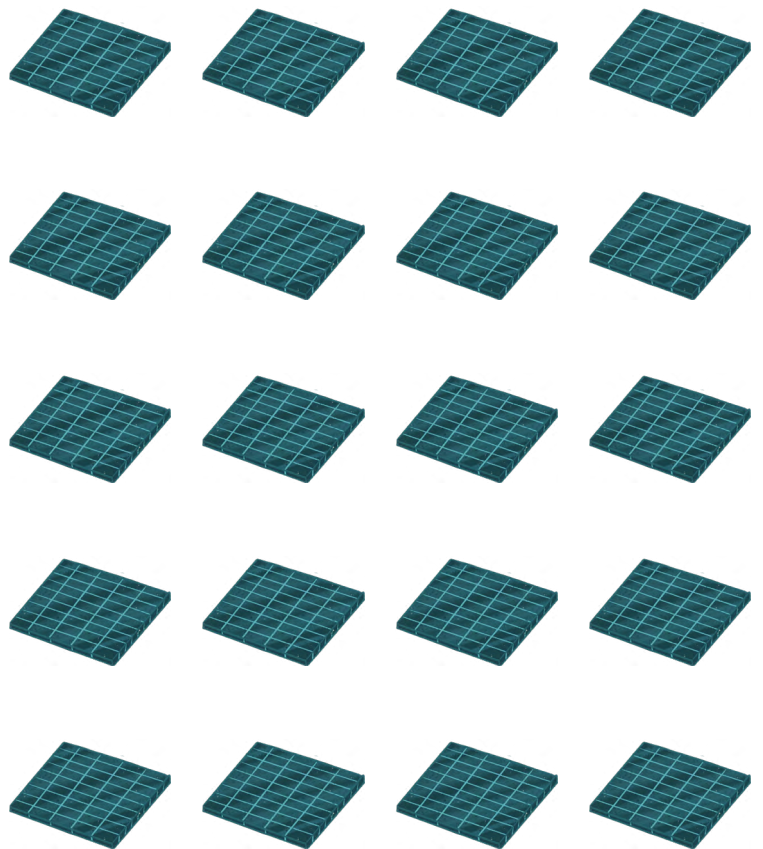
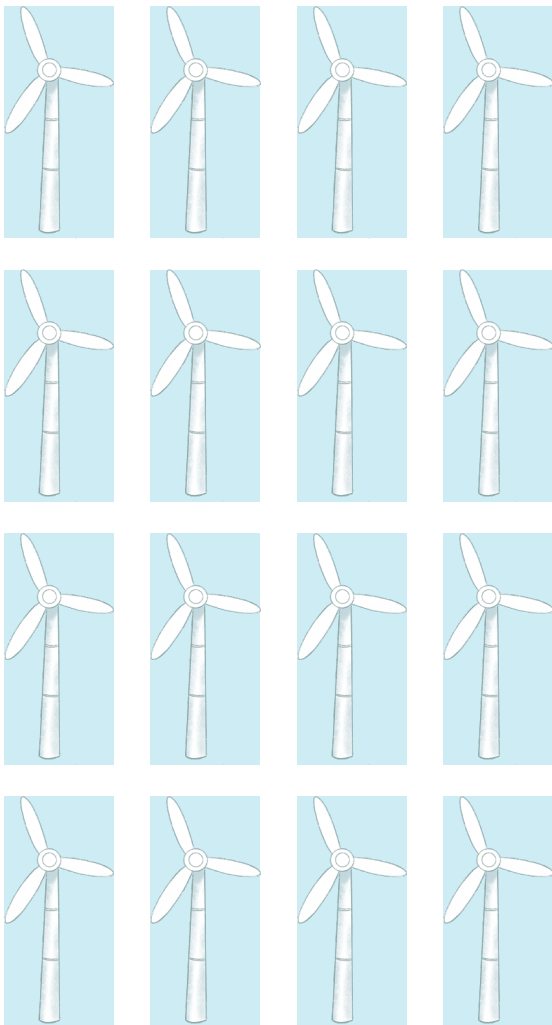
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Bea Bumble's Renewable Energy Investigation

Bea Bumble has discovered that some of the wind turbines and solar panels are not working in Questland. Can you help her work out how many she needs to repair?

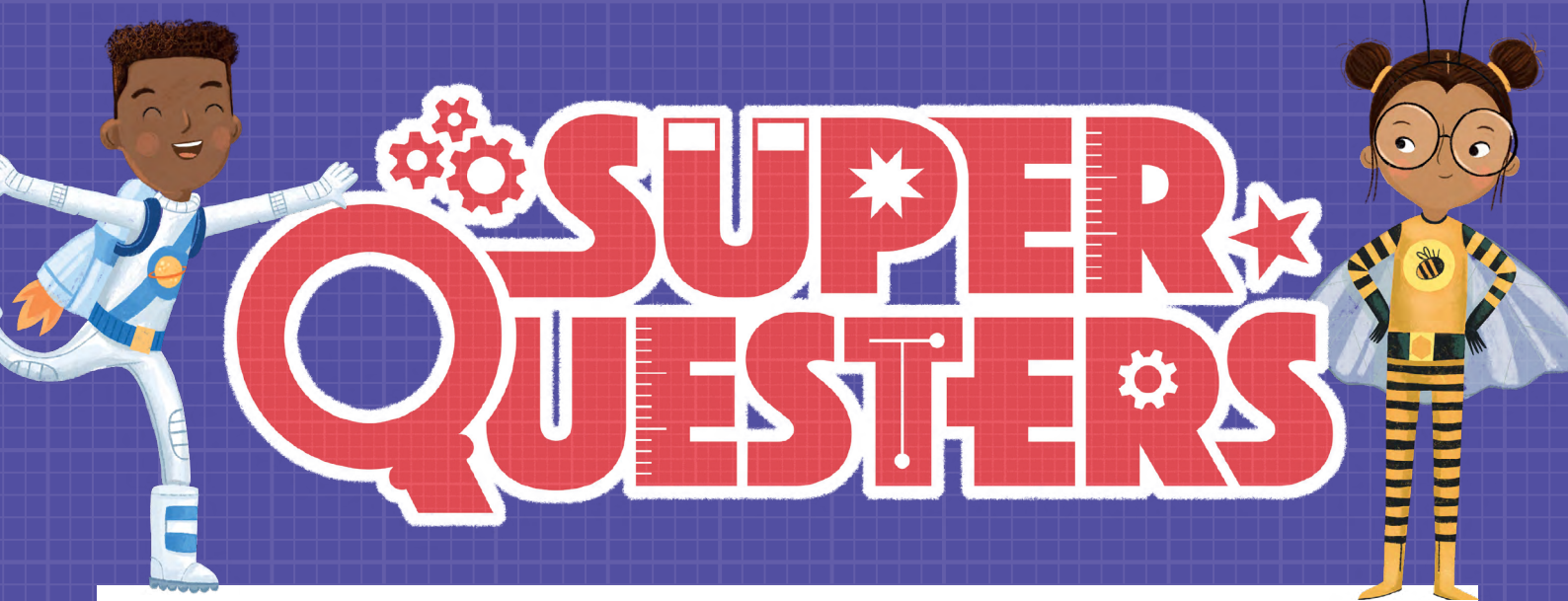
Help her by drawing an X on half the wind turbines and drawing a circle around one quarter of the solar panels to indicate that these are **working** so they do not need to be repaired. Then count the wind turbines and solar panels that are left so that she knows how many are **not working** and need to be repaired.



Total wind turbines and solar panels that are not working =



STEM SKILLS: problem solving, reasoning, troubleshooting



SUPER QUESTERS

AWARD CERTIFICATE



This is to certify that



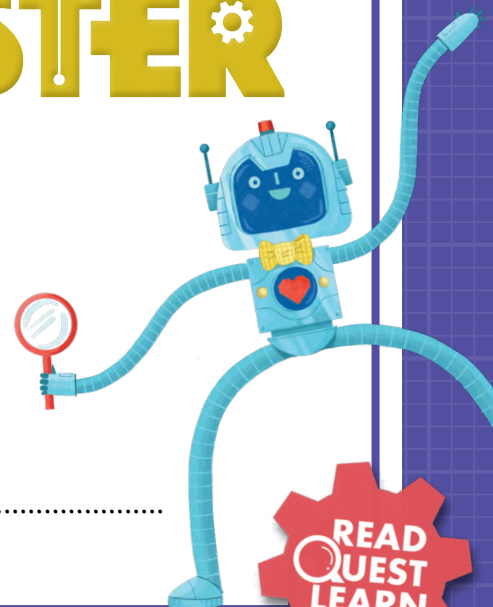
is a fully qualified



The Case of the Great Energy Robbery

SUPER QUESTER

Congratulations!



Date:

Signature:

