

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

# SUPER QUESTERS



## ACTIVITY PACK

#SuperQuesters [www.questfriendz.com](http://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**.

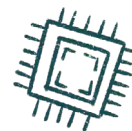
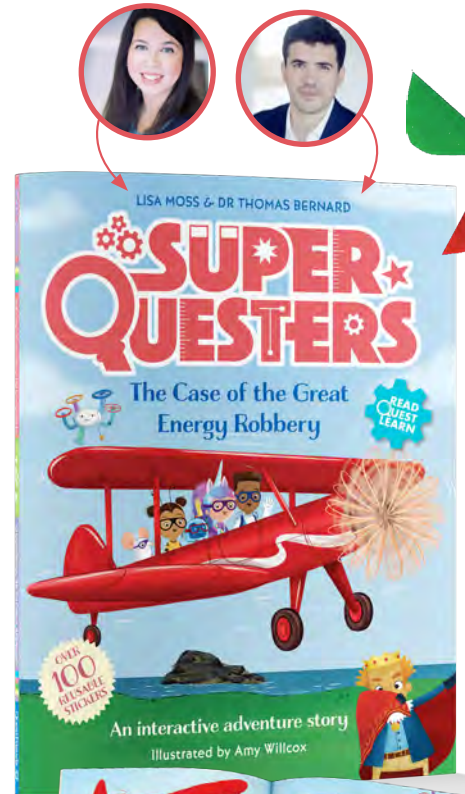
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It's time to Read, Quest, Learn!

## 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.

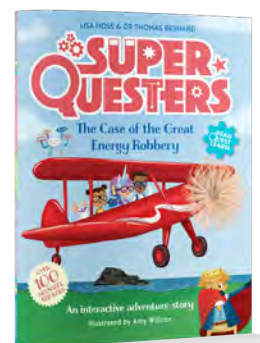


# SUPERQUESTERS

## 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

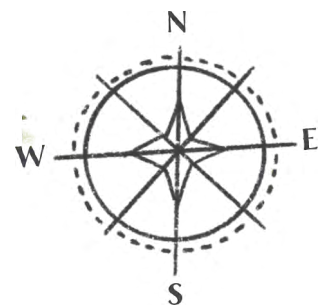
Can you create a flight plan to guide the SuperQuesters on their mission in Questland.



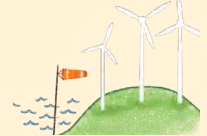




Answer the questions below and draw the route on the grid to complete the plan.



### 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



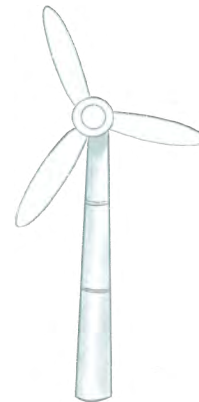
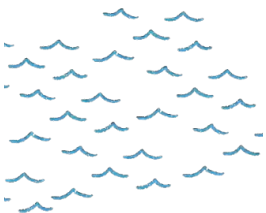
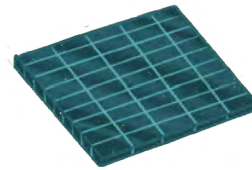
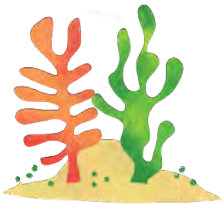
STEM SKILLS: navigation, spatial recognition

# 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.



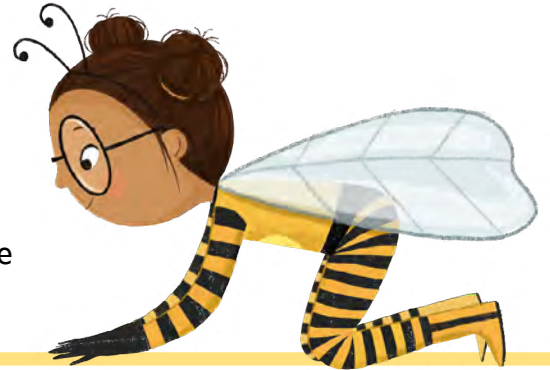
STEM SKILLS: problem solving, reasoning

# SUPERQUESTERS

## Bea Bumble's Renewable Energy Contraption

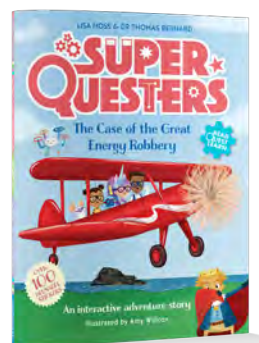
In the story *The Case of the Great Energy Robbery*, the SuperQuesters explore renewable energy sources such as wind, sun and waves.

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.

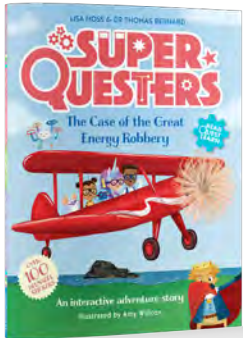


Think carefully about how the device will get and store the energy.  
For example:

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



# SUPERQUESTERS



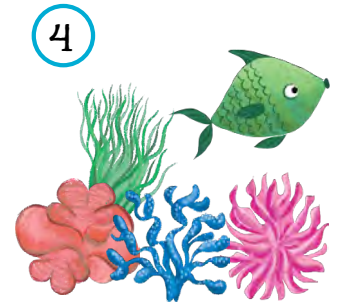
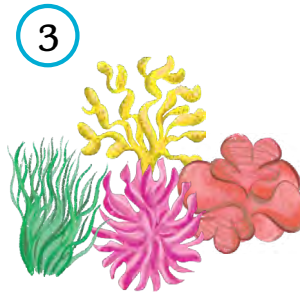
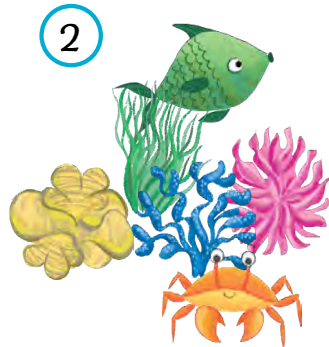
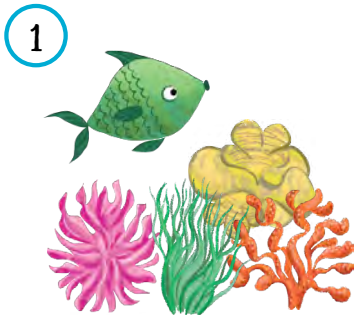
## Lillicorn's Seaweed Search

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

Discover more at: [www.questfriendz.com](http://www.questfriendz.com)



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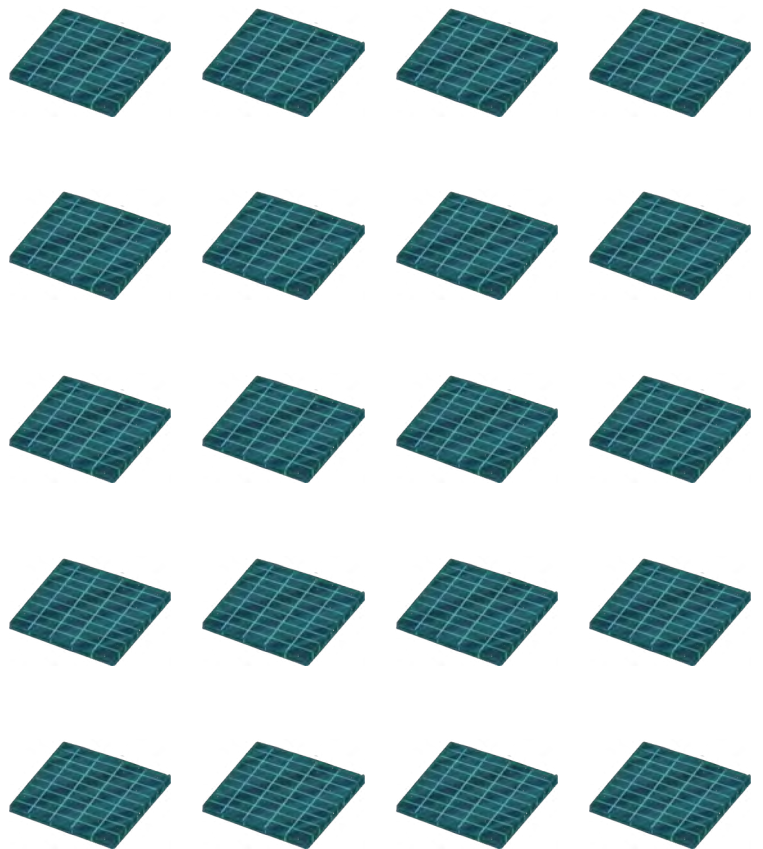
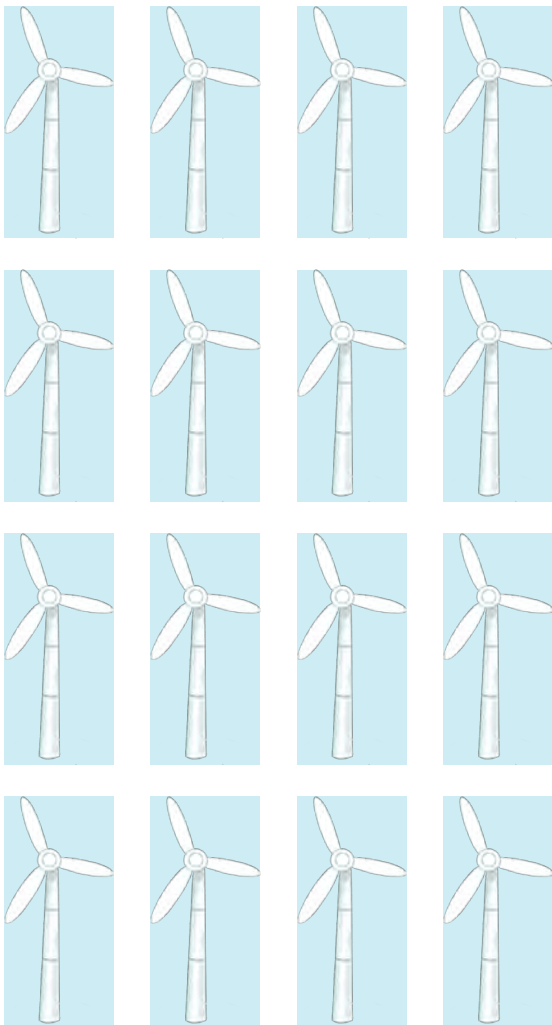
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# SUPERQUESTERS

## 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

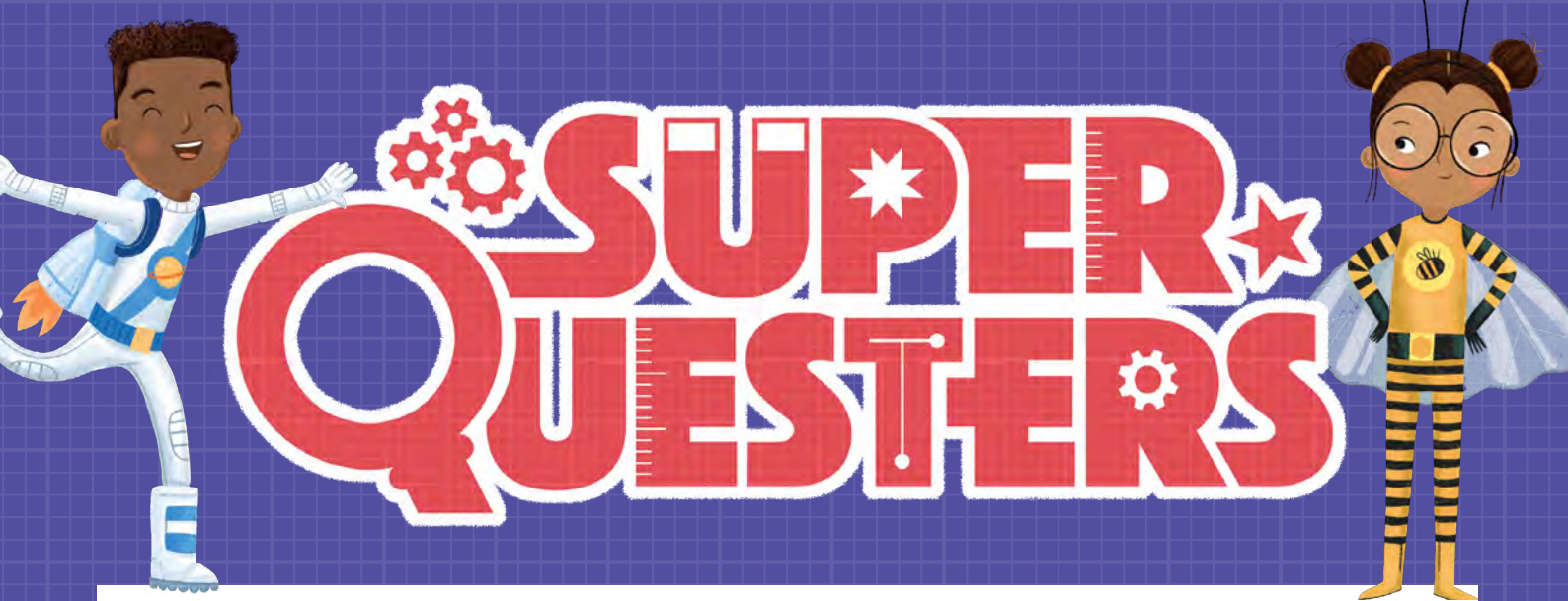
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# SUPER QUESTERS

## AWARD CERTIFICATE



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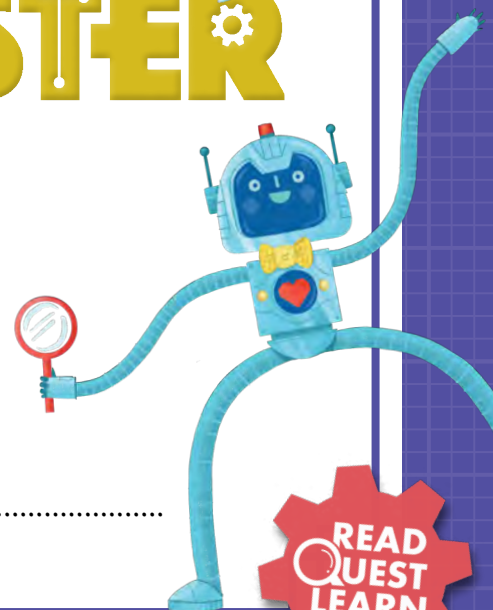
is a fully qualified



The Case of the Great Energy Robbery

# SUPER QUESTER

Congratulations!



Date: .....

Signature: .....



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# SUPER QUESTERS



READ  
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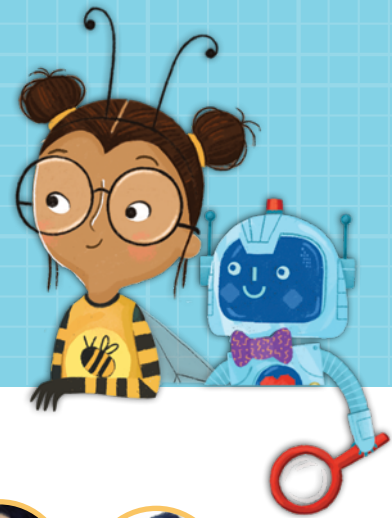


## ACTIVITY PACK

# SUPER QUESTERS

## The Case of the Missing Memory

BY LISA MOSS & DR THOMAS BERNARD



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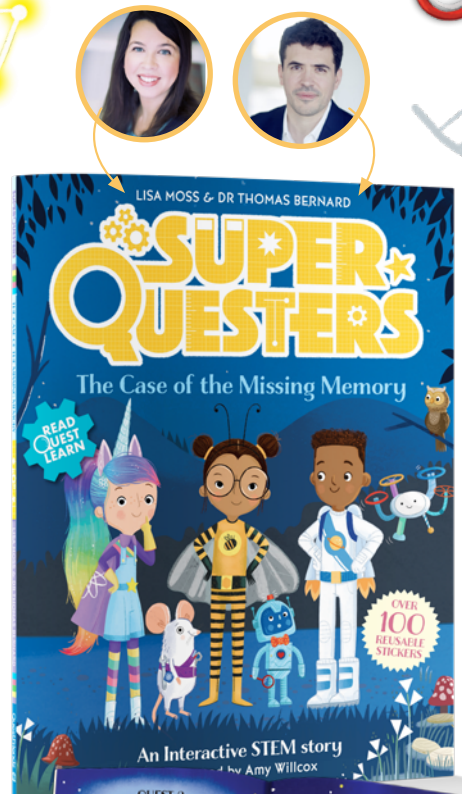
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It's time to Read, Quest, Learn!

### 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 Missing Memory*, when Bea's robot B-bot malfunctions after installing a new dance software, the three friends put their heads together and return to Questland in search of the cause. Upon arrival, the trio discover that Lord Grumble is wreaking havoc with his new Memory Machine, stealing memories from everyone. Can you help them to restore normality to Questland before it's too late? 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.



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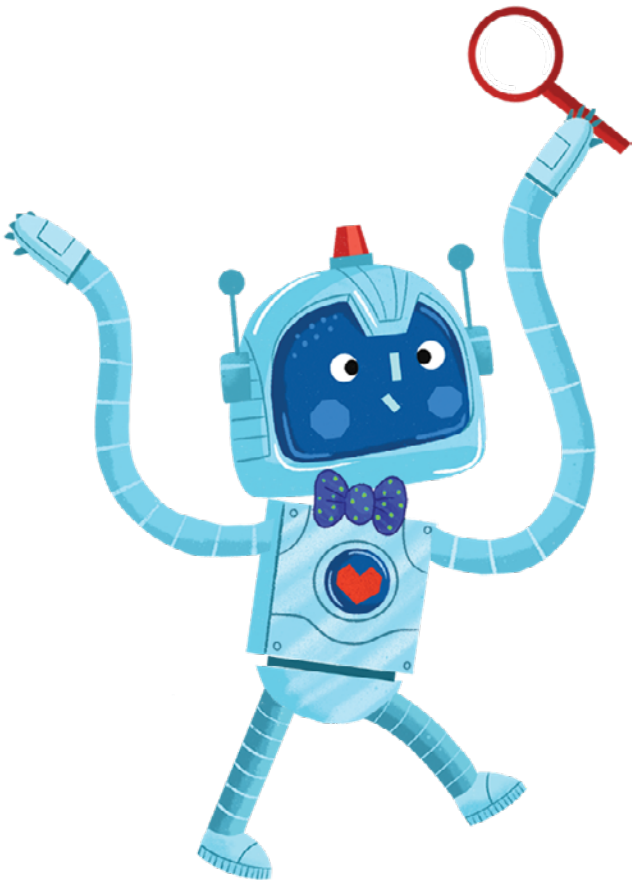
# SUPERQUESTERS

## Bea Bumble and B-bot's Design Challenge

In *SuperQuesters: The Case of the Missing Memory*, the SuperQuesters learn about robotics, coding and computing memory. They find out that B-bot malfunctioned when they tried to install new dance software because he needed more memory.



Design your own robot below.



# SUPERQUESTERS

## Leo Zoom's Programming Challenge

Follow the instructions below to help Leo Zoom to find the object he is searching for in Questland. Draw a circle around it once you have identified it!

Note: Leo has used Python as the programming language which is one of the most well-known programming languages.



```
Def function_Where_Is_Object
if not food:
    if floats:
        if red:
            print("Object is found. Mission accomplished!")
        else:
            print("Object not found!")
    else:
        print("Object is still not found!")
else:
    print ("Object is not there!")
```



STEM SKILLS: Coding, debugging

# SUPERQUESTERS



## Lillicorn's Sorting Challenge

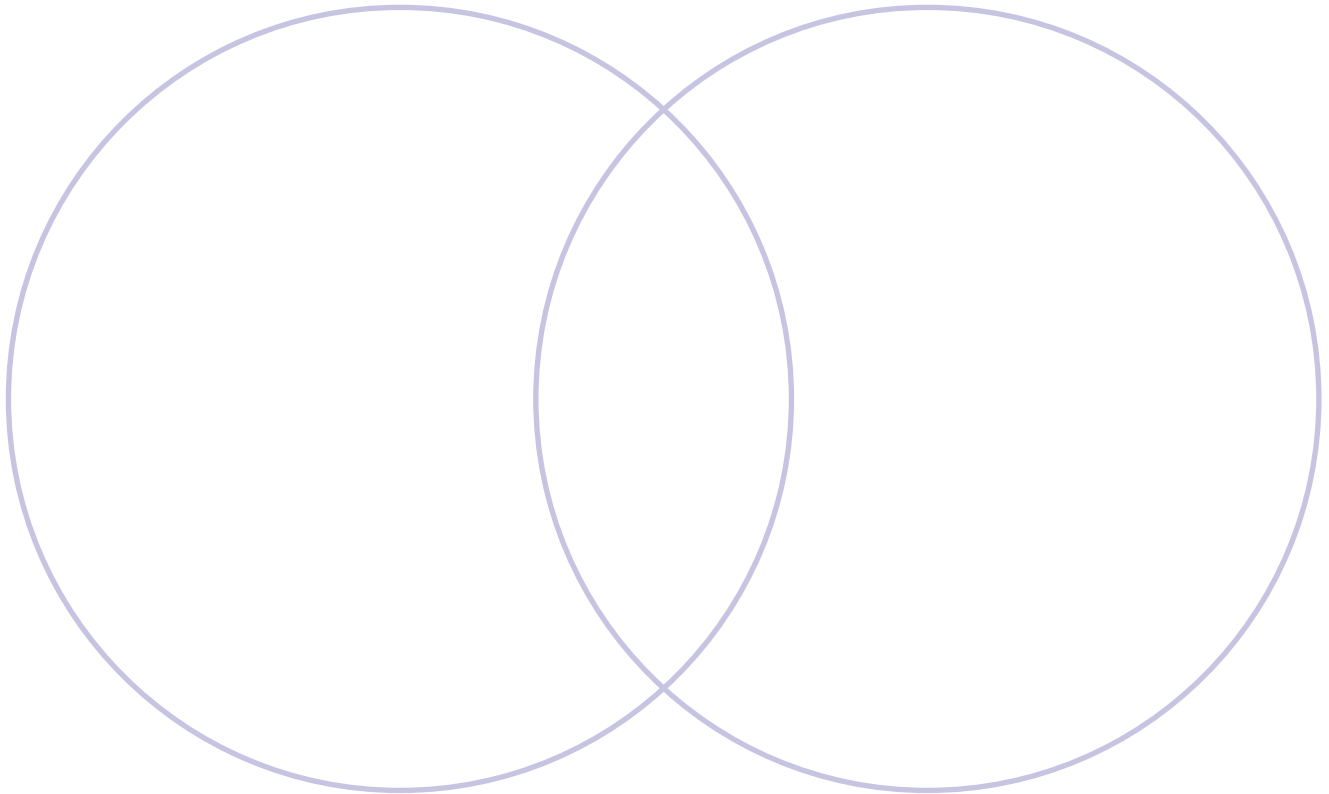
Can you help Lillicorn to sort all the items according to **planets** and the colour **red**?

Cut out each item and stick in the correct circle(s).



Red

Planets



STEM SKILLS: Sorting

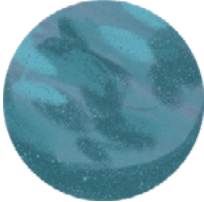
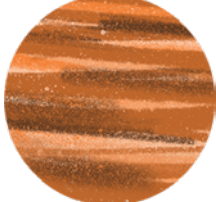
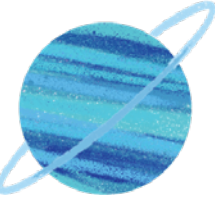

# SUPERQUESTERS

## Amelia Drone's Coding Challenge

Can you help Amelia Drone to collect all of the planets on her way to meet Leo Zoom?  
Draw arrows in the blocks from **Start** to **End** (including those with planets).

**Note:** You can only land on the same block once.  
**Try to complete the quest in 11 steps.**





STEM SKILLS: Coding, sequencing

Discover more at: [www.questfriendz.com](http://www.questfriendz.com)



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# SUPERQUESTERS

Draw your future self. What will you be when you grow up?

Share your dreams for your future. What are your superpowers and strengths?  
What problems will you solve?

## Lillicorn Facts

**Superpower:** loves to explore

**Strength:** finding answers to big questions

**Special STEM skill:** experimenting with liquids, solids and gases

**Future dream:** Chemical engineer



## Bea Bumble Facts

**Superpower:** dreaming up amazing creations

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## Leo Zoom Facts

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**Future dream:** Astronaut



My SuperQuesters name is \_\_\_\_\_

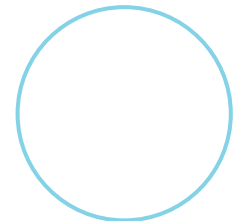
## My Facts

**Superpower:** \_\_\_\_\_

**Strength:** \_\_\_\_\_

**Special STEM skill:** \_\_\_\_\_

**Future dream:** \_\_\_\_\_





# SUPERQUESTERS

## Leo Zoom's Spaceship Design Challenge

Leo Zoom is an awesome astronaut and loves space travel. Can you help design a new space ship for his next adventure in Questland?

Draw your space ship in the space below.





# SUPER QUESTERS



## AWARD CERTIFICATE

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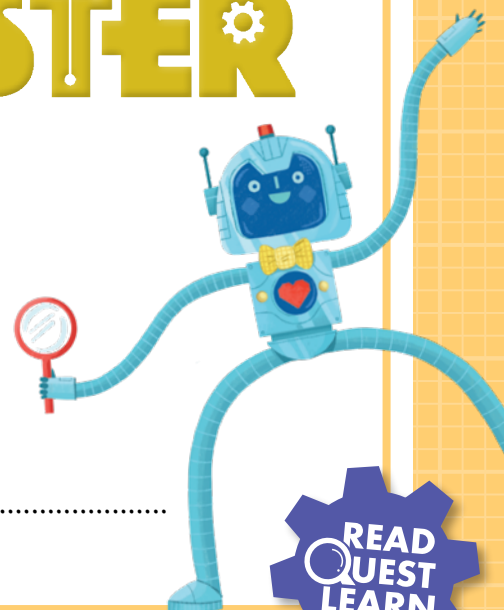


is a fully qualified

The Case of the Missing Memory

# SUPER QUESTER

Congratulations!



Date: .....

Signature: .....



A STEM-sational new book series for  
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# QUESTERS SUPER



READ  
QUEST  
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# ACTIVITY PACK



# SUPER QUESTERS

The Case of the Stolen Sun  
BY LISA MOSS & DR THOMAS BERNARD



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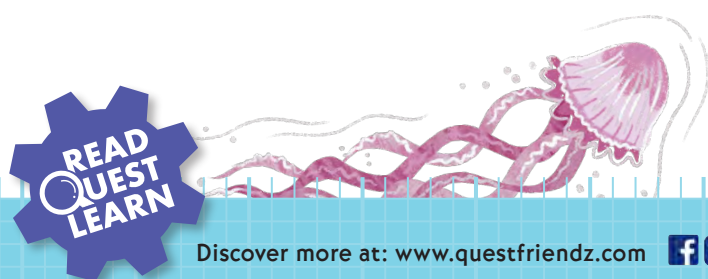
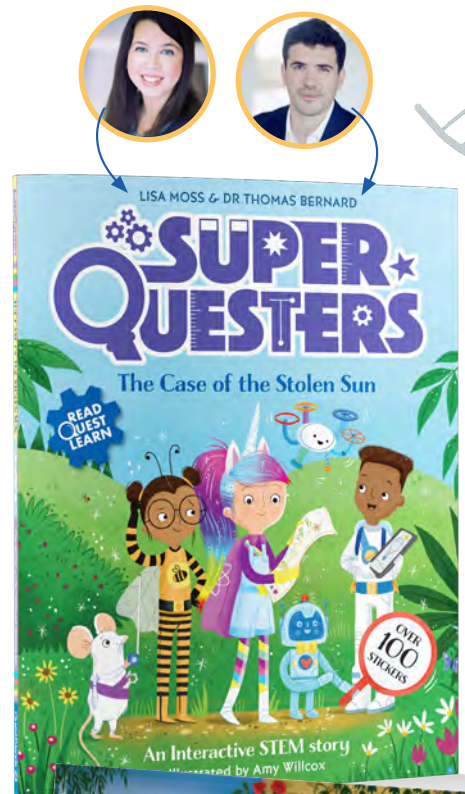
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## ABOUT THE BOOK

Launching with *SuperQuesters: The Case of the Stolen Sun*, the SuperQuesters series is a unique new concept in storytelling combined with hands-on learning.

In *SuperQuesters: The Case of the Stolen Sun*, Lilli, Leo and Bea unite to solve the challenging science problem 'what makes things go up?' as the SuperQuesters, Lillicorn, Leo Zoom and Bea Bumble. Can their readers help to solve the quests to track down Lord Grumble and return the stolen sun to Questland before it's too late? 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.



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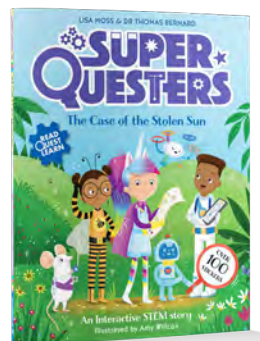
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# SUPERQUESTERS

## Bea Bumble's Hot Air Balloon Design Challenge

In *SuperQuesters: The Case of the Stolen Sun*, the SuperQuesters find out how something as heavy as a hot air balloon can leave the ground (answer: because the hot air rises and fills the balloon).

Design your own hot air balloon below.



# SUPERQUESTERS



## Atom's Logic Challenge

You can count things in many different ways.

Can you help Atom to count the mushrooms by answering the questions below?



How many mushrooms include the colour red?

How many mushrooms include more than two colours?

How many mushrooms do not include the colour blue?

How many mushrooms include two colours?

How many mushrooms do not include the colour purple?

How many mushrooms include the colour green?



STEM SKILLS: Logic, reasoning

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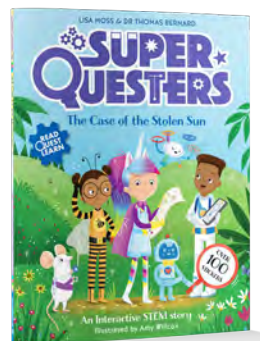
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# SUPERQUESTERS

## Leo Zoom's Flying Challenge

The Queen of Questland floats up in the air in a hot air balloon.  
What other things can you think of that go up in the air?


Draw them in the space below.



# SUPERQUESTERS






## B-bot's Coding Challenge

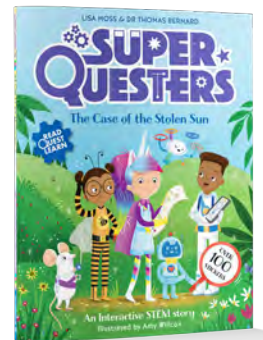
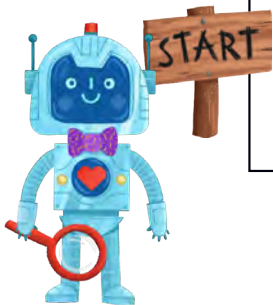
Can you help B-bot to collect all the classroom items on his way to meet Bea Bumble? Draw arrows in the blocks from **Start** to **End** (including those with classroom items).

Watch out for the Snapettes, they won't let you pass!  

You can only land on the same block once. Try to complete the quest in 9 steps.





STEM SKILLS: Coding, sequencing

Discover more at: [www.questfriendz.com](http://www.questfriendz.com)



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# SUPERQUESTERS

## Create Your Own SuperQuester Challenge

Draw yourself as a member of the SuperQuesters gang.

What will you wear? What are your superpowers, strengths and special STEM skills?

### Lillicorn Facts

**Superpower:** loves to explore

**Strength:** finding answers to big questions

**Special STEM skill:** experimenting with liquids, solids and gases



### Bea Bumble Facts

**Superpower:** dreaming up amazing creations

**Strength:** learns from her mistakes

**Special STEM skill:** designing and building inventions



### Leo Zoom Facts

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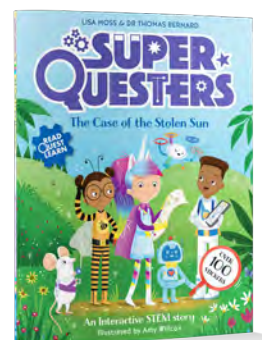
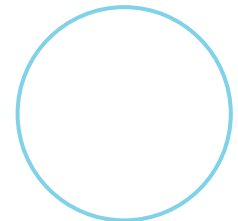
My SuperQuesters name is \_\_\_\_\_

### My Facts

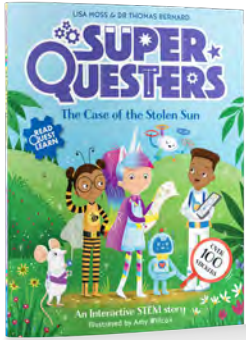
**Superpower:** \_\_\_\_\_

**Strength:** \_\_\_\_\_

**Special STEM skill:** \_\_\_\_\_



# SUPERQUESTERS



## Lillicorn's Sorting Challenge

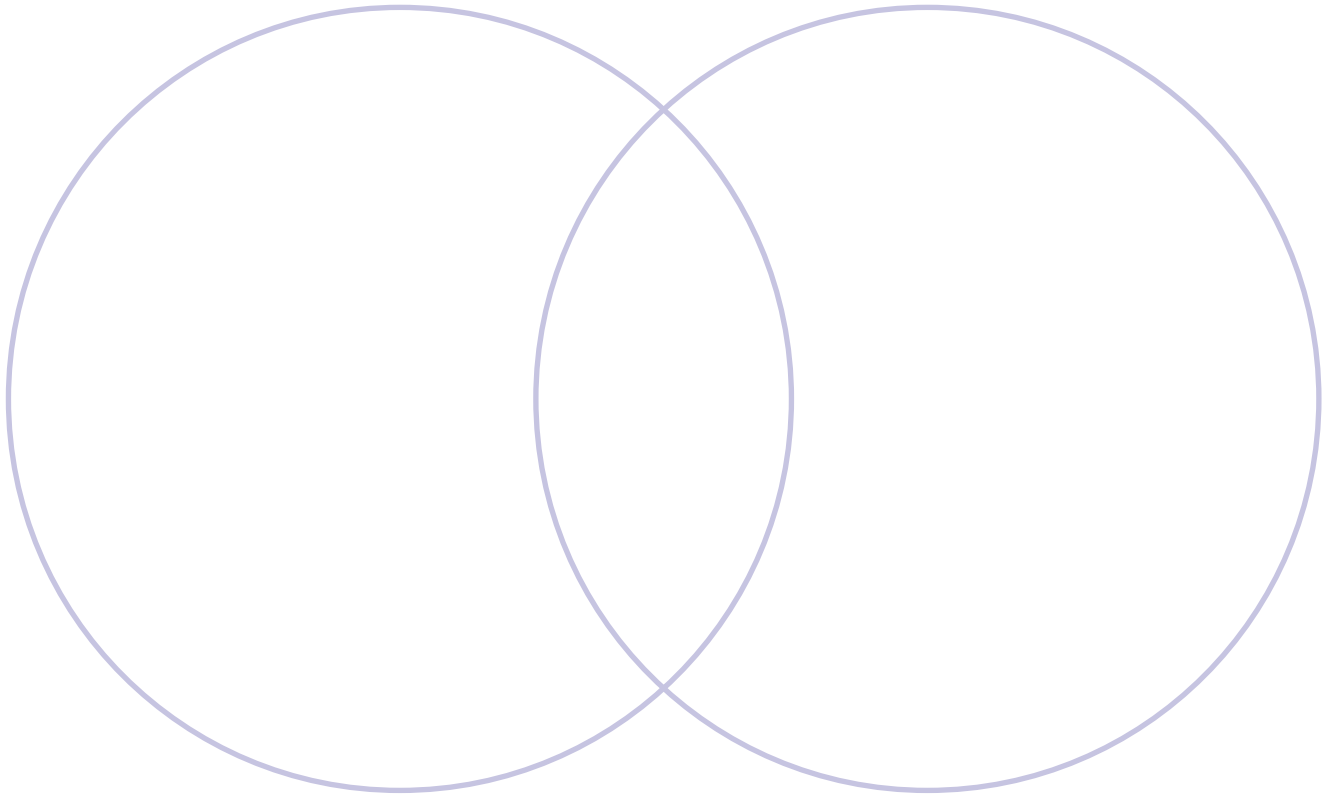
Can you help Lillicorn to sort all the items according to **sea life** and the colour **green**?

Cut out each item and stick in the correct circle(s).



Sea Life

Green



STEM SKILLS: Sorting

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# SUPER QUESTERS



## AWARD CERTIFICATE

This is to certify that

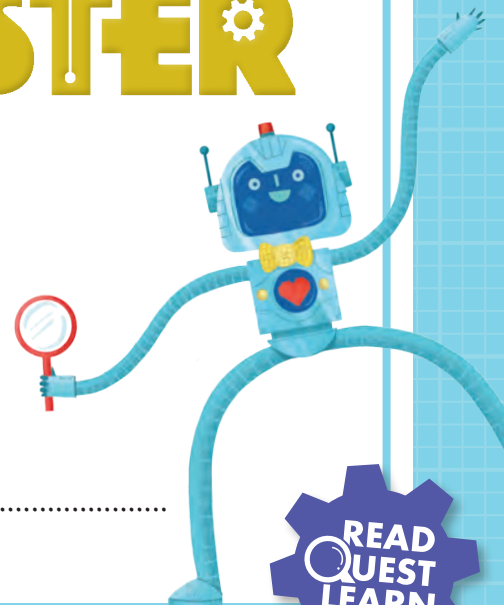


is a fully qualified

The Case of the Stolen Sun

# SUPER QUESTER

Congratulations!



Date: .....

Signature: .....

