

# THE SHIP OF CLOUD AND STARS

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For ages  
9+/KS2

**LESSON RESOURCES  
INCLUDING EXTRACTS AND  
DISCUSSION NOTES FOR KS2  
TEACHERS & LIBRARIANS**

## Explore themes of:

- ✓ The Environment
- ✓ Learning About the Past
- ✓ The Power of Legends
- ✓ Hope for the Future

## Subject Checklist

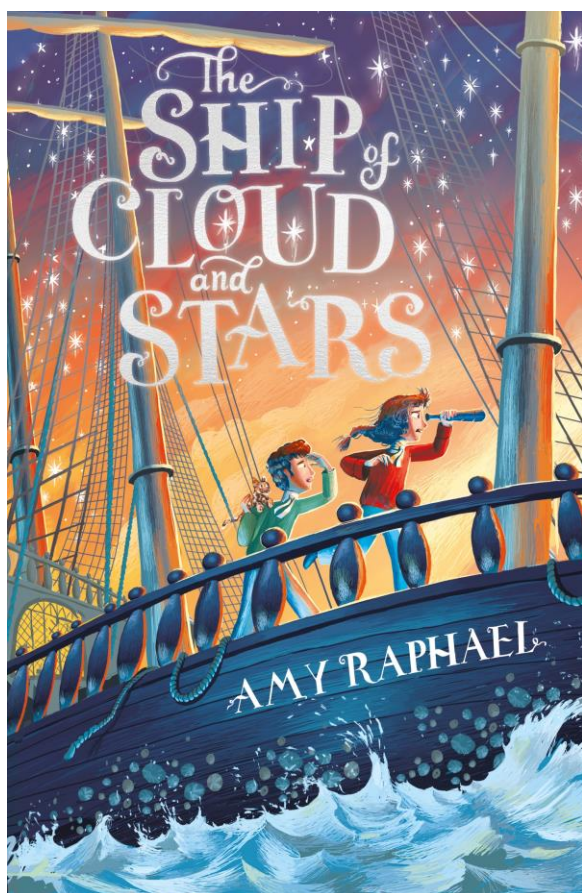
- ✓ Literacy
- ✓ Science
- ✓ Geography
- ✓ Art, Design & Technology
- ✓ PSHE



Resources created by Shapes for Schools

## ABOUT THE BOOK

*From the acclaimed author of **The Forest of Moon and Sword** comes a high-seas adventure for readers 9+. Join Nico on her quest to change the world...*



*Nico Cloud desperately wants to be an explorer, but her parents think adventures aren't for girls. Fate intervenes when Nico chases a kitten on board a ship . . . and then the ship sails out to sea!*

*Nico is an accidental stowaway.*

*Lucky for her, the ship belongs to a famous scientist who is on a quest for new discoveries. But clouds are brewing overhead and cunning pirates are determined to wreck the crew's mission. Can Nico steer the ship to victory and prove her parents wrong?*

**AN EPIC ADVENTURE STORY ABOUT THE POWER OF SCIENCE AND LEGENDS.**

*The*  
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*and*  
**STARS**



## EXTRACT 1: FOSSILS ARE THE PAST

**Objectives:** Understand the process of fossilisation; write a reflection from Nico's perspective describing how fossils help us learn about the past.

Based on pages 29-30 of *The Ship of Cloud and Stars*

...tied with several ribbons so that I will immediately know if Bobby or Charlie have been snooping around. I hold my breath and listen for the sound of footsteps on the stairs. Nothing. The twins have probably built a snowman by now, with a long carroty nose and mean raisin eyes, and no doubt my father's pipe stuck into its pretend mouth.

I take the trilobite fossil carefully out of the box. It might look like a flattened woodlouse, but it's a sea creature that lived hundreds of millions of years ago.

Also in the box, hidden beneath an old copy of *The Times*, is my grandmother's jet brooch. A rose is intricately carved into the black wood. Jet is a fossil that was created when the wood from a monkey puzzle tree washed out to sea in the Triassic period (over 200 million



years ago, which is so hard to imagine that it makes my head hurt, but it's exciting too because it's when dinosaurs roamed). I decide to add the brooch to the puffin bag as a reminder of my warm, kind grandma, who would surely be turning in her grave if she knew how cruel my father had become.

I don't want to think about Father, so I rifle in the box till I find my paper bags of seeds. In one bag there are dark brown acorns, with strange scaly cupules that look like little hats; and in another the dried-out flowerhead of the milk thistle, whose small brown seeds are attached to white parachutes. There are cloth bags full of stripy black and white sunflower seeds, wrinkled horse chestnuts and the Norway maple seeds that flutter to the ground like green insects.

I pick a few favourites and fill a small cloth bag: brown beech seeds, kidney-shaped poppy seeds, the yellow kernels of sweet corn, salad leaf seeds, radish, red pepper,

### DISCUSSION QUESTIONS:

- What is a 'trilobite'? What does it look like? How long ago did it live?
- What are fossils? Why do you think Nico finds them so interesting?
- What is 'jet'? Roughly how long ago was it created?
- Why is the brooch important to Nico? Who does it remind her of?
- How does Nico describe her father? Why would Nico's grandma be 'turning in her grave'?

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## ACTIVITY: FASCINATING FOSSILS!

Fossils are fascinating! Not only do they give us invaluable information about the past and how life on Earth has changed over time, but they are also formed and preserved in different ways. This all depends on the organism and the natural processes or conditions involved.

Check your understanding of fossilisation by matching up some key terms with their definitions below:

<b>Fossilisation</b>	<b>The study of ancient living things, including fossils</b>
<b>Body Fossils</b>	<b>Little particles of rock which build up on top of the skeleton and harden</b>
<b>Paleontology</b>	<b>The preserved remains or traces of a dead organism</b>
<b>Decompose</b>	<b>The name given to the process of a fossil forming</b>
<b>Sediment</b>	<b>When traces of animal tracks or footprints also become fossils</b>
<b>Trace Fossils</b>	<b>When the soft parts of an organism decay leaving only old bones or shells</b>

- Next, sketch a **trace fossil** of your own footprint to be found many, many years in the future! Discuss: where might your trace fossil be found? How would it be preserved? What would it look like? What would it reveal about life in the 21<sup>st</sup> century?
- On page 21, Nico reflects that '*I often imagine what it would be like if Aunt were to invite me on board and welcome me into her world of fossils and stars and equations*'. Write a reflection from Nico's perspective about why you wish to be a scientist like Aunt Ruth. Be sure to include your love of fossils and how they help us learn about the past.

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## EXTRACT 2: SEEDS ARE THE FUTURE

**Objectives:** Correctly order the different stages of a plant's lifecycle; illustrate and label the lifecycle of a plant and research how to grow your own seeds.

Based on pages 65-66 of *The Ship of Cloud and Stars*

I sense that this is my last chance, my only chance, to persuade Aunt not to throw me off *Anthos* at the earliest opportunity. This is what I have been waiting for my whole life: a chance to show what I know, to share my knowledge with someone who cares about the same things as me. With someone who could teach me everything I dream of learning.

I look at all the maps and diagrams and illustrations on the walls around us, cocooning us with facts about the natural world, and take another deep breath. 'I have collected dozens and dozens of seeds. Perhaps hundreds. Capsules, which are just pods really, change from green to brown or from black to red and then they open and the

seeds blow away. So I have to collect seeds as soon as the pods ripen. The birds like to gorge on fleshy berries, so I have to be quick with those too . . .

'As you know, not all seeds look the same. Orchids have delicate seeds like dust. Others I can bash with a stone and nothing happens because their husks are completely impenetrable. But we can't live without either. We are nothing without seeds, Aunt.'

She sighs and takes her seat once again. I can't stop now. 'We depend on plants for every breath of air we take and every mouthful of food we eat. Sometimes I can't sleep at night because I worry that Earth is heading for its sixth mass extinction. The last extinction was around 66 million years ago, when an asteroid hit Earth and *boom!* – all the dinosaurs were killed. But it gave mammals and birds the chance to evolve.'

### DISCUSSION QUESTIONS:

- How many seeds has Nico collected over the years?
- How do seeds change over time? Why does Nico 'have to be quick' with fleshy berries?
- Why does Nico say, 'we are nothing without seeds'? What does she mean by this?
- How does Nico hope to use her seeds to feed the crew on *Anthos*?
- How does Nico convey her passion for the environment in this extract? Give examples.

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## ACTIVITY: THE LIFECYCLE OF A PLANT

Through her love of Science and her inspirational Aunt's help, Nico hopes to be able to 'feed the world' (page 155) by growing precious seeds from the Tree of Hope.

Let's see what you know about the lifecycles of plants! Number these five stages of a plant's lifecycle in the correct order:

Stage  **Seed dispersal** – Seeds are transported, usually by the wind or animals, starting the cycle again

Stage  **Flowering** – Flowers develop, new seeds are made and pollination occurs

Stage  **Germination** – A seed finds itself in the right conditions and a plant begins to grow

Stage  **Seed formation** – New seeds form after fertilisation. The flower dies and fruit develops

Stage  **Growth** – Roots grow below the soil and the stem and flower buds also grow

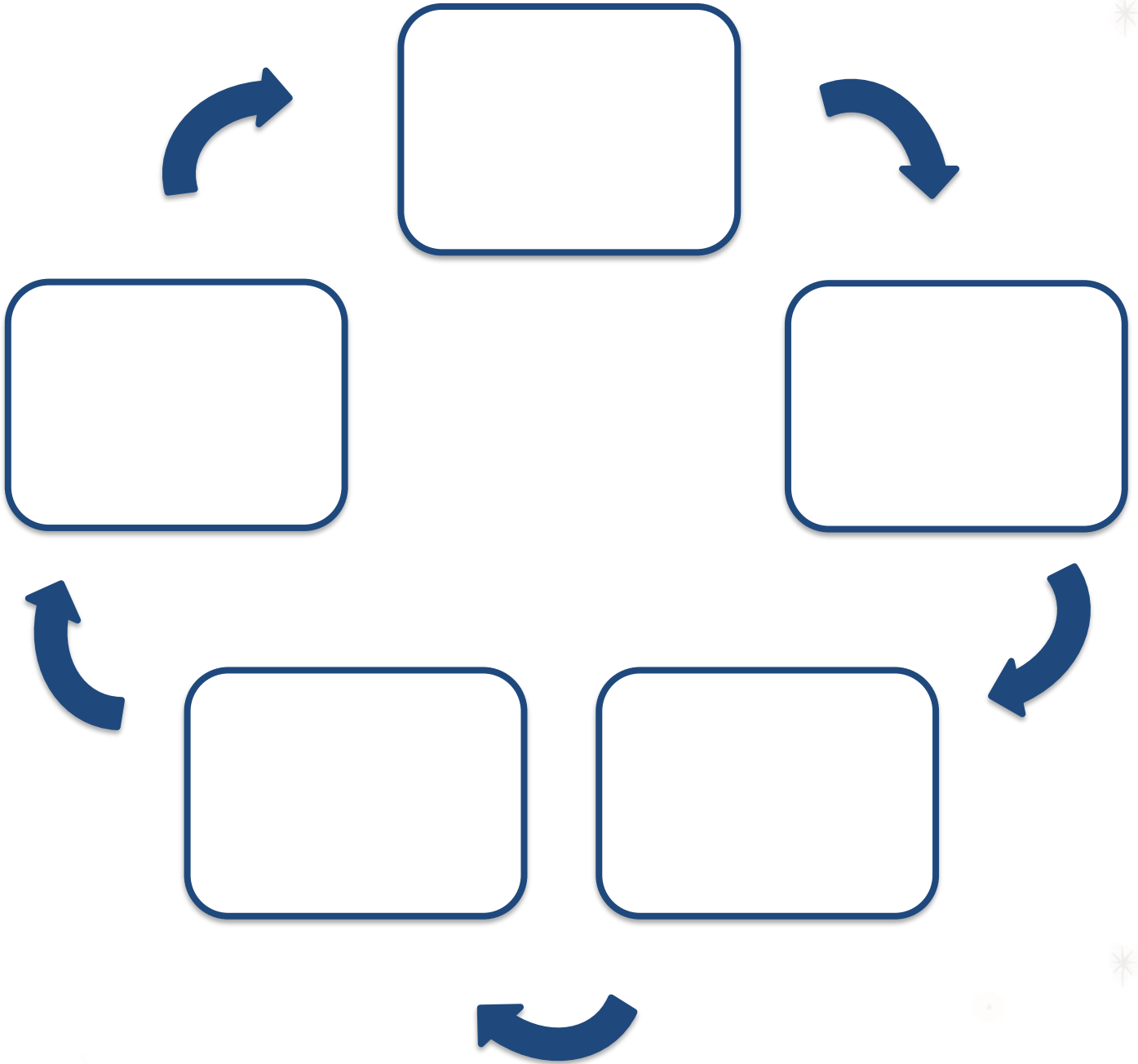
- Use these five stages to fill in the blank template of The Lifecycle of a Plant. Add illustrations in the boxes to show what is happening at each stage, adding in any extra detail or information you can about this process.
- Finally, have a go at growing your own seeds at school or at home. Research, discuss and note down:
  - What are the easiest or most straightforward seeds to grow?
  - What conditions do your chosen seeds need?
  - How are you helping the environment by growing your own plant(s)?
- Take a snapshot or sketch each stage of your plant's lifecycle as it grows before your eyes!

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# THE LIFECYCLE OF A PLANT

Fill in the table below with the five stages of a plant's lifecycle.  
You may want to add in illustrations or extra detail to show what is happening  
at each stage



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## EXTRACT 3: THE TREE OF HOPE

**Objectives:** Consider the significance of the theme of hope in the story; design your own Tree of Hope with things and people that give you hope.

Based on pages 292-293 of *The Ship of Cloud and Stars*

I run my hands through the grass, which is as green as a peacock's feathers and covered in patches of clover that are trying to take over. 'Goodness! I've found a four-leaved clover. I had one of these in my pocket when I left home, but now I've only got a handful of the tiny stones that I picked up on the beach in Cuckmere Haven. I think I must have lost the four-leaf clover somewhere.' I break its stalk and hold it up for Matteo and Leo to see.

'For good luck,' says Matteo, shading his eyes to see.

'They are also associated with dreams, you know,' says Leo.

I put the clover in the pocket of my dress, next to the stones, lie back on the cool grass and watch a wispy cloud drift across the otherwise flawless blue sky.

'My *nonna* once told me that four-leaf clover and elm are connected to prophecies. I don't really understand

how, but she was rarely wrong about these things. I suppose it depends if you believe stories or not.' Leo's calm voice washes over me like warm waves. I close my eyes for a moment and when I open them, the tree is covered with large red flowers. Red spheres of fruit dangle on the branches above me. As round as an apple, but slightly larger. The branches creak with their weight. I reach up and grab the ripest piece of fruit, which is split right open. The seeds are packed tightly together. They are as red as jewels and remarkably shiny, as if they have been individually polished. The seeds coat my hand in sticky red syrup, but when it starts to drip on to my dress, I let the fruit drop to the ground . . .

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### DISCUSSION QUESTIONS:

- What is a prophecy? What is the prophecy or legend of the Tree of Hope?
- Who is Leo? How is his voice described? What does this imply about him?
- Can you spot any similes or metaphors in the extract? What is their effect?
- How else does the writer create vivid imagery in the extract? Give examples.
- What type of tree is the Tree of Hope? What fruit does it bear?

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## ACTIVITY: MY TREE OF HOPE

As a girl who loves exploring and Science, Nico faces great adversity. Yet, she never loses hope or gives up on her quest.

Discuss the questions below, then note some ideas down in note form:

- What challenges do Nico and her aunt face and why?
- Who gives Nico hope and why? Think about: her family, friends, Maria Sibylla Merian
- What gives Nico hope and why? Think about: her interests, things she is passionate about, her plans for the future

Spend a couple of minutes thinking about how these questions relate to you.

Create your own Tree of Hope using the extract to help you. For each of the branches or fruit, note down or sketch something or someone that gives you hope. You might like to consider family, friends, the environment, the future, your passions and interests, and your favourite stories and books.

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