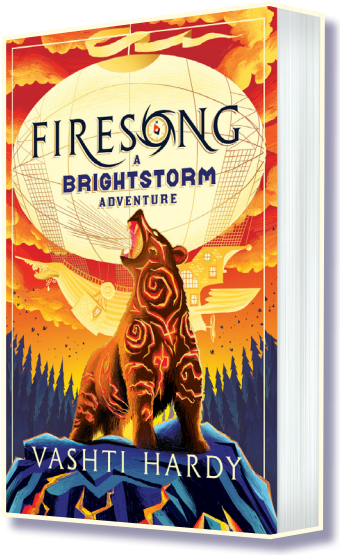
# FIRESONG

## A BRIGHTSTORM ADVENTURE

BY VASHTI HARDY

## CONTENTS






THE EXPLOSIVE FINALE TO THE BRIGHTSTORM TWINS' TRILOGY BY VASHTI HARDY


SCHOLASTIC

# FIRESONG A BRIGHTSTORM ADUENTURE BY VASHTI HARDY YEAR 5 LESSON PLAN

**Objectives**

- To explore how a zip line works
- To use their knowledge of forces to explore how a zip line works
- To design, test and evaluate a zip line prototype

**Outcomes**

- Children will explore, design, test and evaluate a zip line and share their findings using technical language and vocabulary. The children will use their knowledge of forces to help construct a prototype of a zip line.

**Resources**

- ***Firesong A Brightstorm Adventure*** by Vashti Hardy book
- Glue sticks, Masking tape, sticky tape, string (thick and thin), pipe cleaners, straws, lolly sticks, cardboard, paper cups, cardboard tubes
- **Resource Sheet 1 - *'You can't jump over a lava river'***
- **Resource Sheet 2 - *'Crossing the gap'***
- **Resource Sheet 3 - *'Evaluating'***

**Lead in**

Read chapter 26, 'Welby House', from page 332 with the children. What plan do the children think that Arthur and Maudie can come up with to help Gaia, the Great Bear?

> *Arthur leapt up and looked out the window as lights in the streets and houses extinguished. "The central pitch-lamp system has gone down! Things don't seem to be calming down." He turned back to Maudie, now shrouded in darkness. "We can't lose sight of what we need to do. We're the only ones who can stop it."*

Read this part on page 335.

> *Maudie joined him in a grin. "We go up." "Up?" asked Gan. Maudie gave her a wry smile. "We're not going through the streets, we're going over."*
> *"I always thought you two were a bit daring, but that sounds impossible."*
> *"Says the girl with a bow – this should be right up your alley, so to speak," said Arthur with a smile. "Anyway, the houses are closer than you think. The terraces are quite tight, if you know the right way to go and where the buildings are closest. We can leap the roofs until Sovereign Street." "But again, you can't jump over a lava river," said Gan.*
> *"Could we get a rope across, Maud? Between the corner of Sovereign Street and the Lontown Chronicle tower?"*

Read the rest of the chapter with the children and on **Resource Sheet 1 - *'You can't jump over a lava river'***, ask the children to make a list of all the equipment that Arthur and Maudie collect, e.g. rope, nails, etc… The children also need to consider the reasons why each of these items were needed. The children need to draw a diagram of how they think Arthur and Maudie will get across the lava river from the rooftops.

*Continued…*

**Task**

Read chapter 27, 'Pursuing the Bear', from page 345 to the end of page 350 where Arthur uses the bow to cross the square to get to where Maudie is.

Using **Resource Sheet 2 - *'Crossing the gap'***, get the children to design and create their own prototype of a working 'zip line' to allow them to cross a gap. They will need to decide what type of materials they will need which will mean they can successfully make sure it will allow weight to be added to travel across the gap. It is important to make sure that the children understand the two main forces being applied on the object/person as it moves on the zip line. These are gravity and friction (although air resistance is also a force being applied at the same time). The key elements are; that there should be a gradient to the zip line (but not too great), the object* should be smooth enough to allow it to move along the line, and not too heavy so as to prevent the line from remaining taut.

Provide the children with as many of the following items to choose from:

- Glue sticks, Masking tape, sticky tape
- String (thick and thin), pipe cleaners, straws, lolly sticks, elastic bands
- Cardboard, paper cups, cardboard tubes

**The object could be something the teacher provides (for example, a wooden block, multilink, small Lego person etc) or something the children make to 'travel across' with (a tube, inverted V made out of lolly sticks etc)*

Reinforce with the children that the success criteria for this is:

1. That the zip line is able to hold the weight (think about the gravity)
2. That the zip line remains in place
3. That the object does not stop once it has been moved at the start (think about friction vs air resistance)
4. To ensure the object gets from one side to the other safely (without crashing into the end)

**Extension**

Each group should show their zip lines and evaluate each other's prototype using **Resource Sheet 3 - *'Evaluating'***. This should be done with respect for each task with WWW (What Went Well…) and what could be improved for each one. The key here is that no criticism should be given without a possible solution to how it could be made better.

# SHEET 1 – 'YOU CAN'T JUMP OVER A LAVA RIVER'

After reading chapter 26, 'Welby House' (from page 332), make a list of all the things that Arthur and Maudie (with the help of others in the house) collect. Add in your reasons why they might have needed each of the items they collected.

| Item | Why did they need it? |
|---|---|
| | |
| | |
| | |
| | |
| | |

How will Arthur and Maudie (and Gan who also goes with them) get over the lava river? Draw a diagram showing this. Remember they are going to travel over the rooftops and between houses.

# SHEET 2 – 'CROSSING THE GAP'

Design a zip wire to allow an object to travel across two places, e.g. two desks, a cupboard and a desk, etc… The prototype needs to work and get your object safely across.
Think about these things to make it successful:

- That the zip line is able to hold the weight (think about the gravity)
- That the zip line remains in place
- That the object does not stop once it has been moved at the start (think about friction vs air resistance)
- To ensure the object gets from one side to the other safely (without crashing into the end)

Once you have designed it, you need to make a working prototype of your design.

**Use the design sheet on the next page.**

# SHEET 2 – 'CROSSING THE GAP'

# DESIGN SHEET

**What you will need (Resources and Equipment)**

**What are your success criteria for your working prototype?**

**Your design** - ***Remember to label what you have used and how it will work!***

# SHEET 3 – 'EVALUATING'

Evaluate each groups prototype. Think about what things went well with the prototype and what things could be improved and how.

| What went well? | What could be improved and how? |
|---|---|
| | |
| | |
| | |
| | |
| | |
| | |
| | |

# FIRESONG A BRIGHTSTORM ADUENTURE BY VASHTI HARDY YEAR 6 LESSON PLAN

**Objectives**

- To understand how to relate scientific understanding to a creative activity
- To be able to reason and justify points of view to others

**Outcomes**

- Children will be able to represent their own 'supersapient' using their ideas from the book
- Children will be able to identify and explain what features and traits it has and give reasons for their answers

**Resources**

- ***Firesong A Brightstorm Adventure*** by Vashti Hardy book
- Various materials from: papier mache, wire, tissue paper, cloth
- **Resource sheet 1 - *'Supersapients'***
- **Resource sheet 2 - *'My supersapient being'***

**Lead In**

Read the song from page 247-248.

*The beat of earth is strong, strong,*
*Forged from the roars of time.*
*Hum! Hum! Thrumming high.*
*It calls, we call, the voices.*

*When the stars were to begin,*
*Flame on shoulder, water of hand.*
*They called to the great sky,*
*"Bring, begin! Buds, grow! Sea, land!"*

*They came with the wind, wind,*
*Like dark woe slaying wisdom.*
*While the stars all danced as one,*
*It calls, we call, the voices.*

*Then the chains of men laid down,*
*Cold of heart, imprisoned shores.*
*They laid claim to the great sky.*
*"Bring, submit! Hold, fear! One, all!"*

*The beat of the eight is strong, strong,*
*Forged from the roars of time.*
*Hum! Hum! Thrumming high,*
*It calls, we call, the Firesong.*

*Continued…*

Explore the first verse and final verse with the children. What is different about the final verse? (Key is that it mentions eight in the final verse.)

Then read chapter 33, 'The Alliance of Eight', and read to this part,

> *All eyes fell on him. "It's to do with the supersapients and the Firesong," he said. "When Gaia, the earth-bear, sang the complete song, I noticed that the first verse and the last mirrored each other, except in the last it mentions the 'eight'. It's been bothering me for a while, and I didn't have a chance to ask Gaia, but I think it might mean there are eight super-sapients in the Wide."*
>
> *Octavie nodded thoughtfully. "That could make sense."*
>
> *Arthur leant forward. "We know the thoughtwolves and the earth-bear can communicate telepathically, so it's likely that the earth-bear would know about the existence of other super-sapients. She as much as hinted that to me. We know of the thought-wolves, the fire-bird, the darkwhispers and now the earth-bear. That means there are possibly four more out there somewhere."*

Using **Resource Sheet 1 - *'Super Sapients'***, ask the children to sketch the supersapients they know, and then to sketch what they think the unknown supersapients might be and might look like.

**Task**

Read this part of chapter 33, 'The Alliance of Eight',

> *"A creature that speaks through thought? There is a myth that such a creature exists in Nadvaaryn!" said Gan. "All children grow up with the serpent of the sands story."*
>
> *"There is no evidence it is based in fact," said Batzorig.*
>
> *"A sand serpent, wow! I wonder what the others might be, and where they'll be," Maudie mused.*

Using the ideas they have discussed from the book and come up with as a class, use **Resource Sheet 2 - *'My supersapient being'***, to identify the traits and features of the being they are imagining. Where would it live? What would it eat/drink? What would it look like? What senses would it rely on? What special powers would it have? Once they have identified these, they can draw it too.

**Extension**

Create a 3D version of their supersapient using either papier-mâché or wire to shape it (perhaps in Giacometti style). If this is not possible then a collage to give the being more depth could be completed using scrunched up tissue paper or cloth.

# SHEET 1 – 'SUPERSAPIENTS'

After reading the poem from pages 247 and 248, and chapter 8, 'The Alliance of Eight', sketch the supersapients that are known to the children and the Alliance of Eight. Also add in sketches of what you think the unknown suppersapients are and where they might be found, e.g. in the sea, mountains, etc…

# SHEET 2 – 'MY SUPERSAPIENT BEING'

What do you think an unknown supersapient might look like? What traits might it have? What features might it have? Where would it live? What would it eat?

Design and create your own idea of a supersapient.

**Supersapient name and picture**

**Habitat (picture and description)**

**Description of Supersapient**

# CURRICULUM LINKS FOR FIRESONG A BRIGHTSTORM ADUENTURE BY VASHTI HARDY

**UKS2 English – pupils should be taught to:**

**Reading comprehension:**

- Maintain positive attitudes to reading and understanding of what they read
- Discuss and evaluate how authors use language, including figurative language, considering the impact on the reader
- Distinguish between statements of fact and fiction
- Retrieve, record and present information from non-fiction
- Participate in discussions about books that are read to them and those they can read for themselves, building on their own and others' ideas and challenging views courteously
- Provide reasoned justifications for their views

**KS2 Art:**

Pupils should be taught to develop their techniques, including their control and their use of materials, with creativity, experimentation and an increasing awareness of different kinds of art, craft and design.

Pupils should be taught:

- to create sketch books to record their observations and use them to review and revisit ideas
- to improve their mastery of art and design techniques, including drawing, painting and sculpture with a range of materials [for example, pencil, charcoal, paint, clay]
- about great artists, architects and designers in history.

**KS2 Science**

The principal focus of science teaching in upper key stage 2 is to enable pupils to develop a deeper understanding of a wide range of scientific ideas. They should do this through exploring and talking about their ideas; asking their own questions about scientific phenomena; and analysing functions, relationships and interactions more systematically. At upper key stage 2, they should encounter more abstract ideas and begin to recognise how these ideas help them to understand and predict how the world operates. They should also begin to recognise that scientific ideas change and develop over time. They should select the most appropriate ways to answer science questions using different types of scientific enquiry, including observing changes over different periods of time, noticing patterns, grouping and classifying things, carrying out comparative and fair tests and finding things out using a wide range of secondary sources of information. Pupils should draw conclusions based on their data and observations, use evidence to justify their ideas, and use their scientific knowledge and understanding to explain their findings.

**Living things and their habitats**

Pupils should be taught to:

- Describe the differences in the life cycles of a mammal, an amphibian, an insect and a bird
- Describe the life process of reproduction in some plants and animal
- Describe how living things are classified into broad groups according to common observable characteristics and based on similarities and differences, including micro-organisms, plants and animals

*Continued…*

**Forces**

Pupils should be taught to:

- explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object
- identify the effects of air resistance, water resistance and friction, that act between moving surfaces
- recognise that some mechanisms including levers, pulleys and gears allow a smaller force to have a greater effect

**KS2 Design and Technology**

Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home, school, leisure, culture, enterprise, industry and the wider environment].

When designing and making, pupils should be taught to:

**Design**

- use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups
- generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design

**Make**

- select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately
- select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities

**Evaluate**

- investigate and analyse a range of existing products
- evaluate their ideas and products against their own design criteria and consider the views of others to improve their work
- understand how key events and individuals in design and technology have helped shape the world

**Technical knowledge**

- apply their understanding of how to strengthen, stiffen and reinforce more complex structures
- understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]
- understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]
- apply their understanding of computing to program, monitor and control their products