

**Home Learning  
Activities  
Year 5  
Spring 2018**



# English

## Class Book - The Silver Sword by Ian Serrailier

- To develop an understanding of life for children in WWII have a discussion about any relatives that were involved and/or affected by the war.
- To further understand the setting for the book research what happened to Poland during WWII
- Find pictures of the Baedeker Bombings of Norwich in 1942.
- When visiting the city, see if you can identify any places which might have been bombed. (Modern buildings surrounded by historic buildings are often a good clue)
- Jan, one the main characters, kept a box of 'treasures' containing items which he found interesting and reminded him of significant times in his life. Do you have any 'treasures' which you keep for their sentimental value as opposed to their financial worth?
- Has anybody in your family, or that you know, ever gone on a difficult journey? If so, can they share their story.

## Grammar

Modal verbs – These are auxiliary verbs that expresses necessity or possibility. Modal verbs include **must, shall, will, should, would, can, could, may, and might**

- Can/can't definitions game - One person makes can/ can't statements about an object, animal, real person, etc. like "I can break it with my hands" and "It can float" until someone works out what they are talking about.
- Guess the Country- Make a list of countries, choose one and give hints about which one you are talking about. For each hint, your partner will try to make a true statement with one of the guessing phrases below, e.g. "It could be France". Continue giving hints and guessing until they reach the point of saying "It must be...". Don't say if they have guessed

the actual correct country or not before that point, only say “That’s true” if the statement they made is possible (including the level of certainty or uncertainty that they used). Say “Actually,…” if there is something that makes that statement impossible, e.g. that you said “They are famous for wine” and your partner guesses “It may be Iceland”. Phrases for guessing It must be... It’s almost certainly... It’s probably... It might be/ It may be... It could (possibly) be... It’s almost certainly not... It can’t be...

- Guess the Person - Make a list of famous people, choose one and give hints about which one you are talking about. For each hint, your partner will try to make a true statement with one of the guessing phrases below, e.g. “It could be Tom Jones”. Continue giving hints and guessing until they feel they are sure enough to say “It must be…” (which means they think there is only one possibility from the list). Before they say “It must be…”, don’t say if they have guessed the actual correct person or not, only say “That’s true” if the statement they made is possible (including having the right level of certainty or uncertainty) and “Actually,…” if there is something that makes that statement impossible. Phrases for guessing:- It must be... It’s almost certainly... → It’s probably... → It might be/ It may be... It could (possibly) be... It’s almost certainly not... → It can’t be...
- Weekend of Possibilities - Make predictions about what you might do over the weekend and see whether they agree with your how likely that thing is to happen
- Modal Verb Pictionary - Slowly draw a picture line by line, getting your child to say what the drawing could be of each time, hopefully increasing in confidence as the drawing progresses.

## Spellings

Highly recommended site (and it is free)

<http://spellingframe.co.uk/>

# Maths

## Multiplication & Division

Know the language of multiplication It is really important to get your child used to the various different words associated with multiplication. Vocabulary related to multiplication includes: ***lots of, groups of, times, multiply, multiplication, multiplied by, multiple of, factor, product, once, twice, three times etc., times by, repeated addition, array, row, column and double.***

Practise multiplication vocabulary by asking questions in various ways, for example:

- What is 8 multiplied by 9?
- Give me three multiples of 5.
- What is the product of 3 and 7? (This means: 'What is 3 multiplied by 7?')
- What is 5 times 4?
- Is 7 a factor of 14? (The answer is yes, because 7 can be multiplied by the whole number 2, to make 14.)

## Fractions, Decimals & Percentages

- In Years 5 they will relate fractions to decimals and percentages. An empty hundred number square really helps with this. Ask your child to colour half the squares. Explain to them that they have coloured  $\frac{1}{2}$ , but they have also coloured  $\frac{50}{100}$ . We write this in decimal form as 0.5. Encourage them to colour  $\frac{1}{4}$  and explain that this is  $\frac{25}{100}$  or 0.25. You can then go onto explain to them that 25% is the same as one quarter, 50% is the same as one half and 75% is the same as three quarters.

- In Year 5, children need to order a set of fractions that had different denominators. For example:

$$\frac{1}{3} \qquad \frac{2}{4} \qquad \frac{5}{6} \qquad \frac{2}{3} \qquad \frac{1}{12}$$

One way of doing this would be to change all the denominators so that they were the same. This would mean multiplying the numerator and the denominator by the same number.

You could change all the denominators to 12, so the first fraction would be multiplied by 4 to make  $\frac{4}{12}$ .

The second fraction would be multiplied by 3 to make  $\frac{6}{12}$ .

The third fraction would be multiplied by 2 to make  $\frac{10}{12}$ .

The fourth fraction would be multiplied by 4 to make  $\frac{8}{12}$ .

The last fraction would stay the same.

This would mean you could compare and order the five fractions

- In Year 5, children learn to recognise the percent symbol (%) and understand that per cent relates to 'number of parts per hundred'. They need to write percentages as a fraction with denominator 100 and also as a decimal. For example: they might be shown 20% and asked to write this as  $\frac{20}{100}$  and 0.2.
- A great activity, and something we really do use fractions for as adults, is working out recipe ingredients for a certain amount of people. So, for example, when cooking a meal for 4, using a recipe for 12, ask your child to help you work out one third of all the ingredients.
- Look at the number of cars on your street or in a car park and count how many of each colour and then get your child to record the total of each colour as a fraction, decimal and percentage of the total number of cars. The same can be done with colour of doors on your street or the colours of in a packet of Smarties, (I would have suggested a healthier option such as carrots, but I am sure that you can work out the flaw in that.)

## Science

**Forces** - A force is a push or a pull. Forces can make object moves or stop, speed them up or slow them down. Forces also make objects change direction or shape.

### Friction - Make a Hovercraft

Hovercrafts are really interesting as they move on top of a layer of air. The layer of air reduces friction allowing the hovercraft to move quickly over both land and sea. We've been learning about friction recently, which is quite a difficult topic to grasp, but a hovercraft is a useful demonstration.

You will need:

- A CD you don't need.
- Superglue – adult supervision required
- A pop up lid from a drinks bottle
- Balloon

Method

- Take the lid off the drinks bottle. Discard the plastic cover cap and ensure the push down mechanism is down.
- Put superglue around the bottom rim of the lid and stick to the centre of the CD over the hole. Make sure there are no holes for air to escape through.
- Blow up a balloon, don't let out the air. We used a hair clip to hold it in place.
- Place the balloon over the pop up.
- Lift the pop up part and let go off the balloon.

Your Hovercraft should shoot across the surface as the air is forced out the bottom.

### Density – 6 Layer tower

Carefully pour the following liquids, in the following order into a tall container.

- Honey
- 100% Maple Syrup
- Whole Milk

- Washing-Up Liquid
- Water
- Vegetable Oil

By pouring slowly they will each form their own layer. Ask your child why this is the case.

Now gently drop in some small household objects such as the following.

- Metal Bolt
- Popcorn Kernel
- Dice
- Cherry Tomato
- Plastic Beads
- Soda Cap
- Ping-Pong Ball

Each should come to rest at different sections of the tower. Can your child explain what this tells us about the density of each object?

#### Air Resistance – Design a sail

- Design a range of sails made from a variety of materials.
- Attach them to a wheel toy.
- Use a hairdryer to see which sail works the most effectively.
- If possible set up a race.

## Space

- Top Trumps - Create your own space themed top trumps cards.
- Off to Mars - You are going on to Mars and can only take 10 things with you. What will you take? Either write or draw them in your suitcase.
- Moon Diary - Keep a sky at night journal for a whole week. Write about everything you can see in the sky. You could draw a picture of the moon every night. Does it change over the course of the week?
- Craters & Meteorites - Spread newspaper onto the floor, put the tray on the newspaper and put some flour onto the tray, until it is about 5 or 6 centimetres deep. Make the flour as smooth as possible without packing it down. Hold the sieve over the flour and put some drinking chocolate into it and shake it until you get a thin brown layer on the flour. Make different sized balls from plasticine (these are the 'meteorites').

1) Drop one ball and measure the diameter of the crater. Now drop the same ball from different heights; each time carefully remove the ball and measure the size of the crater. How do different heights change the size of the crater?

2) Drop different sized balls from the same height onto the flour. How do different balls change the size of the crater?

3) Does it make a difference if you measure to the furthest splash of flour from the impact? (Tip: the easiest way of measuring the diameter of the ball is to put a ruler on either side of the ball and use another ruler to measure the distance between them).

4) Form conclusions about how to make craters of different sizes. Safety Some flour may fly up when the balls are dropped from a height. The children should stay at a safe distance so the flour does not get into their eyes.

5) Extra Activities

- Use 'meteorites' of different weight and note if there is any difference in the craters.
- Throw the 'meteorites' (gently!) at different angles onto the flour and notice if the craters are any different shape.

- Throw the 'meteorites' at different speeds to see if that makes any difference to the size of the crater.
  - What happens if we change the shape of the meteorite (easy if it is made of plasticine)?
  - What happens if the meteorite disintegrates on impact?
  - Try mudballs instead of hard balls.
  - What happens if the surface is wet?
  - Try dropping the meteorite onto dry, moist and wet surfaces.
- Find the following objects (or similar sized) and see if you can work out as to which planet each item represents.
    - 1 watermelon
    - 1 large grapefruit
    - 1 large apple
    - 1 orange (slightly smaller than apple)
    - 2 cherry tomatoes
    - 1 blueberry
    - 1 large peppercorn