

## 4. Cross curricular suggestions

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Some suggestions for linking the story to other curriculum areas.

### SURVEY ON COLOUR CHOICE

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Companies carry out surveys (market research) with members of the public, to find out preferences for the order of coloured pencils in a transparent packet. Details are given in the book 'Making Pencils' (see page 16).

Children carry out their own surveys to find out preferences for colour arrangements. The colours of pencils could be limited to 3- 4 to reduce the number of possible colour combinations, or children could simply choose 6 colour combinations they like, and gather data on these.

Children design their own questionnaire, or one can be given to them to complete with others. Pages 37-39 can be photocopied for this purpose. Page 37 shows all the combinations of a red, orange and yellow crayon. Page 39 allows children to choose 6 combinations of colours. Children colour the pencils appropriately before completing the survey. They can produce a class bar chart to show the popularity of the different colour combinations.

Alternatively, data can be gathered to enter into a database. The information is then sorted and computer-produced lists, bar charts, etc. obtained. Each child gathers information from two people - themselves, and a brother, sister, or child in another class. For this data collection, modify pages 37 and 39 to suit the format of the database.

For example:

- Replace the sentence 'Tick the order you like best' with 'Write your name under the order you like best.'
- Add a box to the back of the sheet for each person to complete:

name_____	name_____
circle your age:	circle your age:
5   6   7   8	5   6   7   8
9   10   11   12	9   10   11   12
13   14   15   16	13   14   15   16
boy <input type="checkbox"/>	boy <input type="checkbox"/>
girl <input type="checkbox"/>	girl <input type="checkbox"/>

## HISTORY ACTIVITIES

As the majority of the book is set in the past, you can discuss the historical features with the children. Suggestions for questions to form the basis of discussion are listed below:

- What clues are in the pictures which tell us that the boy lived in the past?
- How has Jack's bedroom changed since his grandfather was a little boy?
- How has the area outside Jack's house changed since his grandfather lived there?
- Will a pencil factory be quiet, like the pencil workshop described in the story? Why? What sounds do you think you would hear?
- This is a story. How could you find out whether Michael Foreman has written about Jack's grandfather's time as it really was?

Children compare two pictures and list similarities and differences. Interesting pictures are (1) the bedroom opposite the workshop compared with the bedroom with spacecraft models and (2) the house and surroundings in grandfather's time compared with Jack's time.

(1) the bedrooms

Differences		Similarities
old	new	both
picture of ship	model rocket	globe
picture of soldier	model jet aircraft	paper
bottle of ink		pencil
bedroom chest		

(2) the house and surroundings

Differences		Similarities
old	new	both
horse & carriage	pleasure boat	bridge
old style of car	car park	house
old style of bus	blocks of flats	bridge lights
	modern style of car (taxi)	
	modern style of bus	

To answer other questions above, children can carry out a range of activities, such as:

- Talk to elderly people (relations, friends of the school) about life when they were young, asking questions accompanied by pictures from the storybook, and asking additional questions about home life, the war, etc.
- Talk to people (relations, friends of school) who work in factories about noise levels and working conditions
- Use the book 'Making Pencils' to look at pictures of modern pencil making factories
- Look at stationery/art suppliers' catalogues to compare with the things in the old art shop
- Compare photographs and pictures in history books with those in the storybook, and find out in what period the book is based.

## GEOGRAPHY ACTIVITIES

- Compare the two pictures in the story which show Jack's house in both his own and his grandfather's time.
- Discuss the way in which the buildings have grown up around the house, and for what purpose the buildings might be used. Draw their attention to the multi storey car park and the other buildings - which are probably offices and people's homes in high-rise flats.
- Locate countries on a globe or a world map, showing all the countries which supply ingredients for making pencils. For example, the Cumberland Pencil Factory obtains its ingredients from the following countries (all listed in the book Making Pencils):

Country...	Supplies...
California, USA	wood (slats)
Great Britain & Germany	clay & pigments
Iraq & Iran	gum (glue)
Brazil, The Czech Republic & Japan	wax

Graphite for writing pencils comes from Sri Lanka, China and Korea.

Once the countries have been located, discuss how and why each ingredient is transported to Cumbria, e.g. by road, ship, train, etc. Pictures can be drawn by the children, showing the load in transit, or can simply be cut from magazines. (The ingredients are actually transported from overseas by boat and overland by road.)

Display a sample of each ingredient, or the equivalent available in school, around a large world map on a wall. Use coloured wool to connect the ingredients to each relevant country. Pictures of the mode of transport can be displayed below each ingredient, e.g. ships for the wood, trains or lorries for the clay, etc.

## ART ACTIVITIES

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An activity in which children experiment with different types of **pencil leads** has already been described on page 20. Although described as a science activity, this can be further developed as an art activity. Children create patterns using the different thick and thin, soft and hard lines. They also try shading with different types of pencil, shading overlapping shapes to produce a range of blacks and greys.

**Colour** is an important element of Michael Foreman's book. Discuss this using some of the following questions:

- What colours are used most /least in the book?
- What colours does Michael Foreman use to show night time? Why doesn't he use black?
- How does he show the sunrise? Why?
- How are trees in the background different to those at the front?
- Which things are brightly coloured (yellow, red)? Why do you think this is?
- Is any white paper left unpainted? How would this change the picture?

As a result of discussing these questions, children can do one or more of the following painting activities:

- Experiment in mixing watery shades of one colour, such as blue, green or brown
- Paint a background using only two thinly mixed colours, say blue and green, and (when dry) add grandfather's house and the bridge to the background, starting with pencil, and then painting in with the same colours as shown in the book
- Paint a forest on blue sugar paper by painting small blue background trees, allowing these to dry, then painting green-leaved foreground trees
- Paint a sunrise, using yellows, oranges and reds (leaving no white paper)

The pictures children have made of the house and bridge can have 'overlays' made to show the modern buildings. Children use coloured pencils to reproduce the multi storey car park and office blocks. These are cut out and stuck on some of the children's drawings, to display beside others.

## OTHER CURRICULUM IDEAS

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As mentioned, you must decide on the number of curriculum areas and activities which children will do, avoiding tenuous links and considering the priority subjects for the term or topic.

Teachers have suggested a number of activities which may be incorporated into a topic based on the book, and these are listed below:

- Animals' habitats
- Animals which live in a forest
- Day time & night time animals
- Types of trees
- Nest building and the materials used
- Day and night, sun and moon
- Light and dark, shadows, sources of light
- The wind and its effect on paper (can you make a piece of paper fly?) and the sails of a ship, kites
- Methods for picking up something from a narrow crack
- Making boats
- Natural and synthetic materials
- Range of materials which 'make marks', e.g. stones, chalk, etc.
- Waterproofing
- Writing the paper's story
- Designing and making a pencil holder
- Designing and making 'pencil people'.

## VISIT A FACTORY

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The manufacture of many products is based on the principles described above for making pencils, i.e. using recipes and monitoring the quality of products. It may be possible for children to observe manufacturing processes first hand by visiting a local factory. The product should be something familiar to the children, e.g. ice-cream, crisps or biscuits. Contact the manufacturer to find out if they conduct tours, and to ask about regulations for school visits, and the number and age-range of children they are willing to invite.