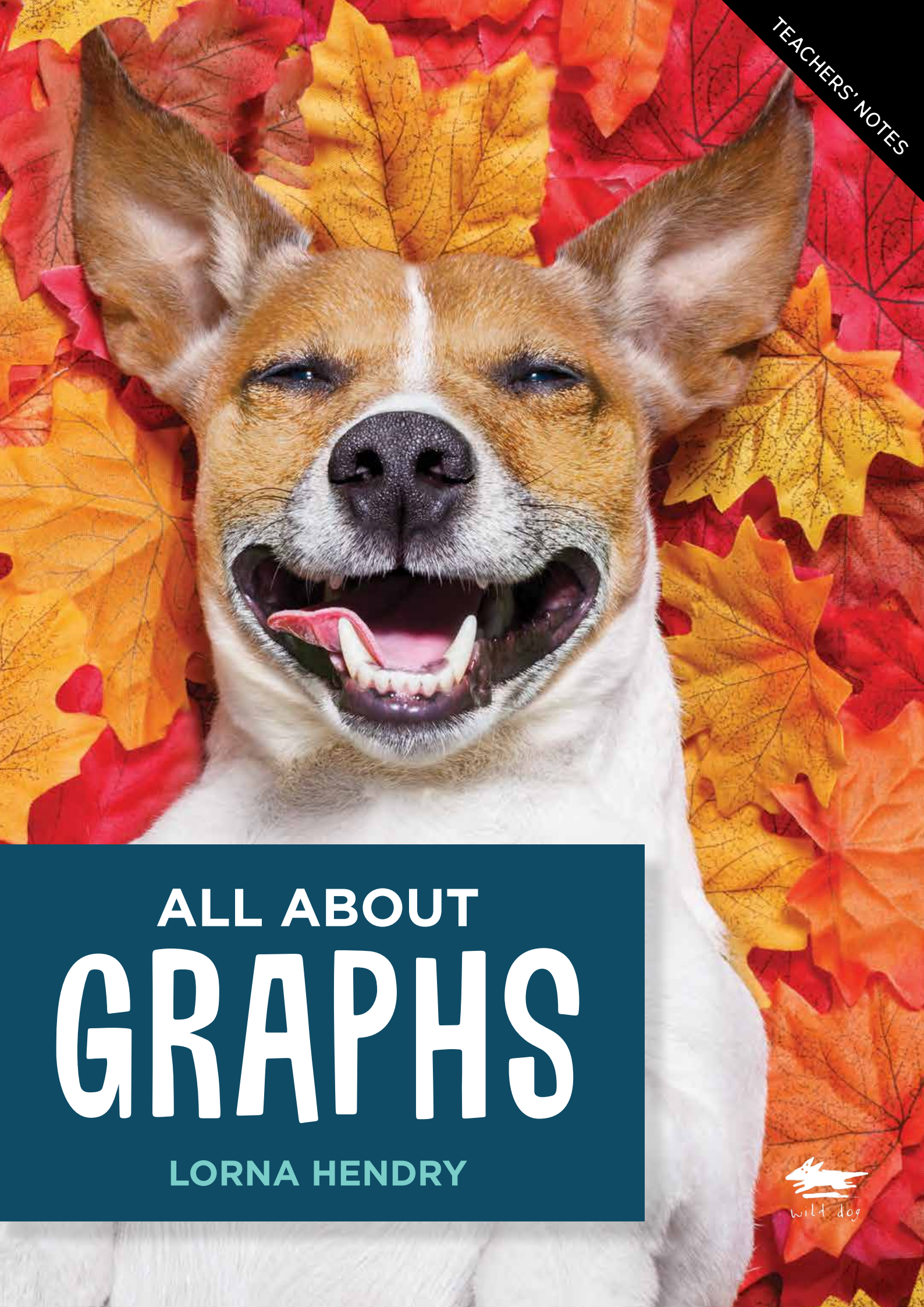


TEACHERS' NOTES

ALL ABOUT GRAPHS

LORNA HENDRY

wild dog

ALL ABOUT GRAPHS

Synopsis
Graphs are a key component of maths. They can help us make sense of potentially complicated information, and have practical applications in our everyday lives. Join Arlo the dog and his canine friends as they learn *All About Graphs*!

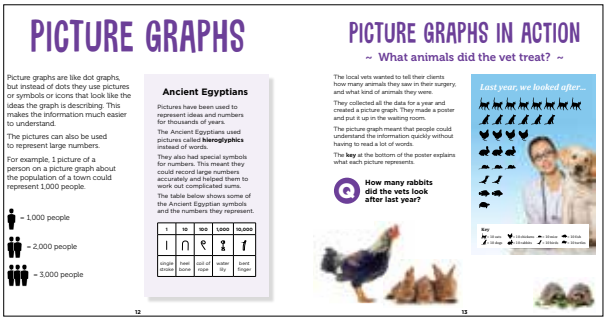
Writing style
Maths Mutts: All About Graphs has been designed with the needs of early readers and math-phobics in mind. The text is clear and concise, and on most pages combines primary text with smaller-sized captions and inset boxes. Special care is also taken to reduce a potentially complex subject to its barest essence. The information conveyed by the text has a natural and understandable flow, and the variously-sized images relate directly to the text, so readers have multiple entry points to engaging with the information. There are also numerous questions and try-it-yourself sections immediately after each key concept is discussed, giving the reader ample opportunity to practice and reflect on what they have just read.

Photographic style
The *Maths Mutts* series uses an artful layout that alternates clean white pages with full-colour spreads. It also makes use of colour photographs, diagrams, graphs and vector illustrations, along with a series of cute puppies to further draw in reluctant readers. All images have been carefully chosen according to a specific colour palette, while also having the advantage of being static, giving the reader the opportunity to explore the image and look at the subject matter and its features in detail. The photographs are strongly composed and clearly printed with bright strong colours to increase the appeal to visual readers. Readers can explore how images are used to convey messages.

Specifications

Author	Lorna Hendry
ISBN	9781742035765
Format	260mm x 250mm
Extent	32pp + cover
Binding	Paperback
Reading level	5+
Interest level	5+
Category	Junior Non-Fiction

Example spreads taken from the book



ALL ABOUT GRAPHS

Study notes: Themes

- Maths
- Graphs
- Survey questions
- Data
- Dot plots
- Picture graphs
- Column graphs
- Pie charts
- Line graphs
- Side-by-side graphs
- Stacked column graphs
- The language and labels of graphs

Curriculum link: Literacy

Before reading All About Graphs:

- Brainstorm what students know about graphs.
- Can they think of any examples of graphs?
- Do they ever use graphs in their day-to-day lives?

While reading All About Graphs:

- Ask the students to take turns reading a paragraph aloud to the rest of the class. Where appropriate, ask the students what they think certain words may mean.

After reading All About Graphs:

- Ask the students to reflect on the words they would use to describe graphs and the words that were used in the book. Ask them to draw up a list of words that can be used to describe graphs.

Curriculum Theme: Critical and Creative Thinking

After reading All About Graphs, ask the students the following questions:

- What are graphs?
- What do they do? Do they all do the same thing?
- Why are they important and/or useful?
- Give some examples of different types of graphs.
- What are the key elements or information needed to make them?
- What are some possible uses of graphs in the real world?

Curriculum link: ICT Capability
After reading All About Graphs:

ACTIVITY:

- Organise the class into small groups. Ask each group to come up with a survey question (or questions). All groups then share their results with the class. (Bonus points for creative answers.)
- Assign each group a different type of graph found in the book. Ask each group to settle on their favourite survey question, then each group takes turns collecting data for their survey question from the rest of the class. Once all the data has been collected, each group has to translate their data into their chosen graph. All groups then present their graphs to the rest of the class.
- Ask each group to consider their graph i.e. what are its strengths and weaknesses? What type of question or information might it be best suited to? Did it show information clearly and quickly? Does their graph influence how they would come up with a survey question? Each group then shares their findings with the rest of the class.

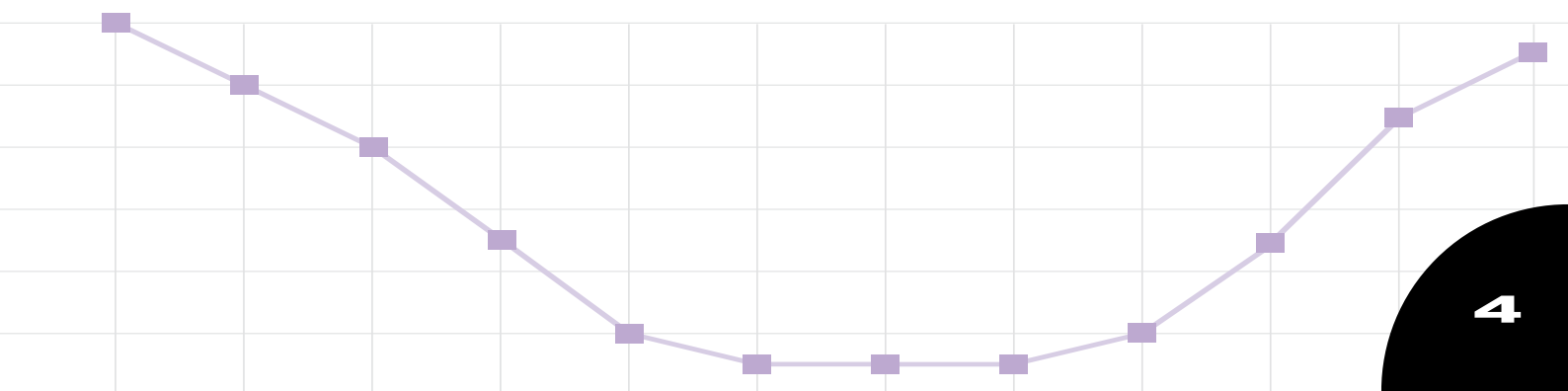
ACTIVITY:

- Ask each group to come up with ideas for survey questions they can either 1) ask their family at home or 2) easily collect data on their own. If 1), place extra emphasis on questions that can have a variety of answers and can generate data over a longer period of time. For example, what does each family member do for fun after dinner i.e. read a book, watch TV, listen to music, play video games, exercise, etc. If 2), it could be the colour or make of cars that pass their house, how long they go out and play after school, etc. Ask them to collect data for one week, and then turn their data into a graph of their choosing. Each student then presents their findings to the rest of the class.

Curriculum Theme: Personal and Social Capability
After reading All About Graphs:

ACTIVITY:

- Organise the class into two groups. In one group, ask the students to work as a team to construct a word finder puzzle. Ask each student to suggest an appropriate word about graphs using words they have learned from the book (e.g. column, data, tally etc.). Once completed, print copies for the other group to complete.



Curriculum Theme: Personal and Social Capability (continued)
After reading All About Graphs:

ACTIVITY:

- In the second group, students should work as a team to create a trivia bingo game. Ask them to suggest facts they found surprising or interesting and combine them into a game for the whole class.

Find out more *NB: the age range for these links varies, and some are about maths in general*

- https://www.brainpop.com/
- https://www.mathgames.com/graphing
  https://ed.ted.com/lessons?student_level=1&category=mathematics
- http://www.kidsmathgamesonline.com/numbers/mathdata.html
- https://nces.ed.gov/nceskids/graphing/classic/
- https://www.mathsisfun.com/data/graphs-index.html
- https://www.splashmath.com/math-vocabulary/geometry/graph
- https://www.youtube.com/user/mathantics
- https://www.youtube.com/user/Vihart
- https://www.youtube.com/user/Vsauce
- https://www.youtube.com/user/minutephysics/videos
- https://www.youtube.com/user/videomathtutor
- https://www.youtube.com/user/crashcoursekids
- https://www.youtube.com/channel/UCoxcjq-8xIDTYp3uz647V5A

Marketing and promotion
All About Graphs is the first title in an engaging new series that takes a look at key mathematical concepts, and how they can be easily and enjoyably applied to our everyday lives. Planned titles include *Angles*, *Time*, *Chance*, *Dimensions* and *Money*, among others.

Previous titles

Planned titles

wild dog

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