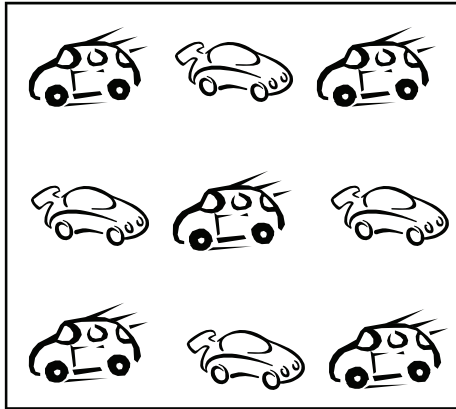


Beep Beep, Vroom Vroom!

Patterning & Algebra

- An understanding of patterns and functions



- Patterns can be found in nature, the arts and numbers

By three years many children:

- Notice and copy simple repeating patterns such as a line of blocks that are long, short, long, short, long, short.....
- Help children explore patterns and pattern rules using concrete materials

By six years many children:

- Notice and talk about patterns in arithmetic such as, adding 1 to any number results in the next “counting number”

You can help children to:

- Explore patterns and pattern rules in numbers

Beep Beep, Vroom Vroom shows children that patterns can be made and repeated.

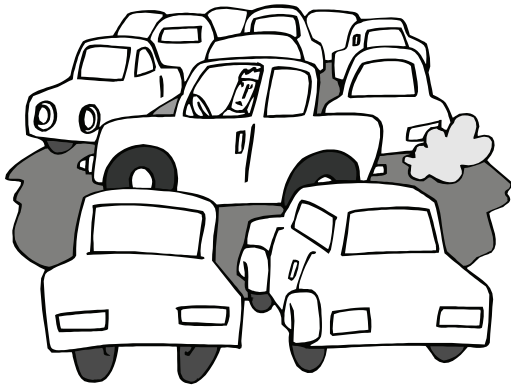


Storytime activities to use with *Beep Beep, Vroom Vroom*:

- Before you read the story tell children that this story is about a brother, a sister, cars and patterns. Ask children if they know what a pattern is. Point out a pattern and briefly describe why it is a pattern.
- Most illustrations in this book show four cars of each colour. With children, point to and count the number cars in each colour group on the pages. Use this activity to show children that even though the patterns change, the number of the cars in each colour group remains the same.
- A few different patterns of toy car line-ups are shown in the illustrations. Ask children which pattern they like the best.

More math suggestions for *Beep Beep, Vroom Vroom* are on pages 32 and 33.

At Home



Cars

Yellow cars and red cars, blue cars too
All start out, shiny and new.

Cars drive along the highway
At one place, they never stay.

Yellow cars, red cars, and those of blue
Make a lovely pattern, when they drive two
by two.



Cars, Cars, Cars

Draw a simple car on a piece of cereal box cardboard

Use this picture as a model if you want

Cut the car out

With your children, trace the car 12 times on white paper

Colour the cars; 3 different colours; 4
cars per colour

OR

Trace the car on 3 coloured papers;
four cars per colour

Cut these cars out

With your child, use these cars to
re-create the patterns in the book.

Make new patterns if you can!



Early math:

1. Is important to the development of logical thinking
2. Helps children to predict based on their observations

Five areas of mathematical concepts are called **strands** by the Ontario Ministry of Education.

1. Numbers and numeracy
2. Spatial awareness and geometry
3. Measurement
4. Patterning and algebra
5. Data management and probability



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- Early Literacy Specialists



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At Childcare

For Toddlers

- Create a sound pattern by clapping your hands and stomping your feet. Encourage your children to copy these patterns.
- Teach your children simple dances that include sequences of steps and movements.
- Point out the patterns of language in story books and songs, for example rhyme, rhythm, beat, syllables, word chunks.

For Preschoolers

- Ask children to point out and talk about the patterns in wallpaper sample books.
- Create repeated patterns using coloured blocks. Ask the children to “read” the pattern and to predict which coloured block should come next in the pattern. Increase difficulty by adding more attributes such as shape and size.
- Children need lots of experience recognizing, defining, creating and maintaining equality. Show your children how to use scales. Encourage talking about things being equal or not equal, more or less, balanced or unbalanced.



Great books that feature patterning:

Doggies, Sandra Boynton

One Hundred Hungry Ants, Elinor J. Princzes

So Many Circles, So Many Squares, Tana Hoban

Pattern Fish, Trudy Harris

Websites that are helpful:

www.pbs.org/teachers/math/

www.pbs.org/parents/earlymath

www.journal.naeyc.org/btj/20031/Algebra.pdf

www.edu.gov.on.ca/eng/literacynumeracy/parentGuideNum.pdf



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