Guidance & Activity Ideas
Five Frogs on a Log
YUS1224

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The essentials of early number are counting, subitizing, learning the meaning of numerals, composition, and ordering. All of these can be developed using Five Frogs on a Log. Inspired by the popular *Five Little Speckled Frogs* number song, the resource provides vital hands-on experience of number for young children.

Mathematical vocabulary to use with children is shown in **bold**.

The five frogs and the log are double-sided. One side has numbered frogs and lily pads so that children can learn numeral meaning and the order of the numbers **one** to **five**. The other side is unnumbered so that children can count and subitize '**how many**' frogs there are on the log, being able to place the frogs in any order, and also put them in groups. It is important that children learn both the order of the numbers (ordinality or sequence) and the meaning of the numbers (cardinality or 'how many-ness') as these form the essentials of number sense and provide a secure foundation for future mathematics.



Frogs numbered with spots / log numbered with numerals



Unnumbered frogs / unnumbered log

Finding 'how many' using the unnumbered frogs



'Get three frogs!'

Learning to count

Children can count the frogs as they place them on the log. Being able to place them anywhere on the log emphasizes to them that objects can be counted in any order. Asking them to **count** a specific number of frogs from the **full** log of frogs helps them to focus on the number required as they have to remember to stop counting when they get to the number they need.

Practicing subitizing

Subitizing (instantly recognizing how many without needing to count) is important for early number learning. Children can practice subitizing the number of frogs, recognizing '**how many**' when the frogs are lined up on the log but also in different arrangements off the log.



Different representations of 3

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Developing understanding of subtraction



'Two frogs on the log now.'

The *Five Little Speckled Frogs* song is about subtraction, showing how many are left when one is taken away. This provides lots of opportunities for counting and subitizing how many are left on the log each time. It also emphasizes the number **one** to children as they **take away** one each time.



'Zero frogs on the log.'

The number of frogs jumping in the pool can even be varied so that children experience subtracting **two** or **three**, as they become more experienced. The resource gives them physical experience of subtraction, helping them to conceptualize it as removing or **taking away**. It also provides important experience of **zero** when there are no frogs left on the log.

Learning the composition of numbers to 5

In the song, the frogs do not disappear but jump into the pool which provides opportunities for learning about the composition of five as a number (the numbers that five is made up of and can be partitioned into). The song can be paused to count or subitize the number of frogs in the pool as well as the number of frogs on the log (showing that five is made up of four and one, for example).

Arranging the frogs in different ways helps children to see the numbers that **five** is made up of, deepening their understanding of **five** as well as laying the foundations for later addition and subtraction understanding. Changing the number of frogs on the log and off it, and perhaps telling stories about them, provides hands-on experience of the number combinations for five (5 and 0, 4 and 1, 3 and 2).



'Three frogs on the log, two in the pool.'



'One frog on the log, four in the pool.'



'Zero frogs on the log, five in the pool.'

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By placing a pebble into the pool, children can play with placing the frogs in three groups (two in the pool and two on the log and one on rock, or three in the pool and one on the log and one on the rock). The children can explore the composition of smaller numbers too, such as **two** and **one** making **three**, or **one** and **one** and **one** making **three**. Adults can help children explore a range of combinations, joining in their creative story making with the frogs, as well as pointing out **more**, **less** and **same** as they compare the different groups of frogs.



*'Are there **more** frogs on the log or in the pool?'*



*'There is the **same** number of frogs on the rock and in the pool!'*

Learning numerals and number order using the numbered frogs

Developing understanding of numerals

It is important that children learn the meaning of the numerals (how many each numeral represents), not just to name each numeral. The frogs are numbered with spots and the lily pads have numerals so children can match the numeral to the number of spots, learning the meaning of the numerals (**how many**).



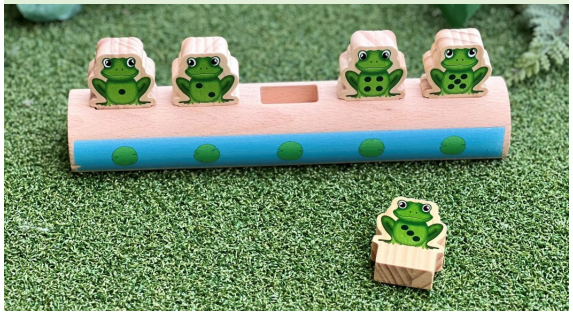
'This frog has four spots, where is the number 4?'

Learning the order of the numbers

The numbered lily pads help teach children about the number sequence to **five**, supporting them to work with number lines when they are older. Children enjoy playing missing number games and get a sense of satisfaction from putting mixed-up numbered frogs in the correct order. They can use the numbered side of the log for additional support or can use the unnumbered side of the log for additional challenge.



'Put the numbers in order.'





'Which number is missing?'



The dots on the frogs help children to see that each number is one more than the previous one – showing them the structure of the number system.

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Additional math learning opportunities



In front of the log, behind the log, next to the log

The Frogs on a Log resource can also be used for other math learning opportunities. Counting the number of frogs' eyes offers opportunities to count to ten and to **count in twos,** for example. A key learning opportunity is to support children's spatial development. Placing the frogs in different positions along the log provides opportunities to learn about positional language such as **next to** and **between,** as well as **on** the log or **in** the pool. This can be particularly valuable when using the numbered frogs as children can talk about two as '**next to** one', '**between** one and three', and '**nearer** to one than five', for example. If the log is placed in the **middle** of a homemade pool, then children can choose where the frog will jump into the pool – **behind, in front of** or **next to** the log.

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