

 Notes for parents.**The purpose of the activity is to help your child to:**

- Describe the likelihood of an event occurring using everyday language like; “Maybe”, “Possibly”, “for certain”, “good chance”.
- Consider all the outcomes of an event to make decisions about likelihood.

**Here is what to do:**

Read through the activity page together. Hopefully your child has played *Snakes and Ladders* before. If not, play a game with them on the activity page. Any object, like a bottle top, can be used as a counter.

Put two “counters” on the board at 95 and 98 to simulate the game situation. Ask your child, “Who is most likely to win?”

Expect them to make a statement of position, such as:

*“You are more likely to win because you are closer to 100.”*

*“I am not very lucky so you will probably win.”*

*“You need two and I need five. The dice has each number once. I think our chances will be the same.”*

*“I go first so I have the best chance.”*

You could try out a few games with the counters in the 95 and 98 positions. Throw the dice only once and see who wins. The actual chances of either player winning, with one throw, are quite slim. Since there are six numbers on the dice the chance of getting the number they want, two or five, is only one in six (16.66%). However, trying the game a few times should result in some interesting conversation.

Try to build in the language of chance in your talk. Ask questions like:

*“So how often do you think you will roll a five?”*

*“Is that a good chance or a poor chance?”*

*“Do all the numbers on a dice have the same chance of coming up? Are some numbers more likely?”*



## ➤ Notes for parents cont... Activity next page.

The situation is actually more complex than it appears. Given that both players are most likely to need several rolls to win the calculation of chance is too demanding for children at this level. However, you could act out the game until someone does win. Discuss why the game takes longer than expected to finish.

### Points to note:

The game of *Snakes and Ladders* offers an excellent situation for talking about chance. There are two complementary ways to estimate or determine the chances of an outcome occurring. To estimate the probability of a specific outcome, like rolling five or rolling two with a standard dice, you could carry out an experiment. You would need to roll the dice a lot of times to get sufficient data to estimate the probability.

The theoretical way to determine probability is to find out all the possible outcomes. Since there are six different numbers on a standard dice, and only one of the numbers is two, the chance of getting two with one throw is one in six (one sixth). The same is true of the chance of getting five. Recording all the numbers on paper sometimes helps children to see all the possible outcomes.

Human beings of all ages are prone to subjective judgments when dealing with situations that involve chance. It is very normal for your child to think that the outcome of the Snakes and Ladders game is determined more by their luckiness or unluckiness than the actual odds. They may also think that some numbers on a dice, particularly six, are harder to get than others. If these ideas come up, discuss them but do not be dismayed if your child is hard to persuade.



# Activity | Who will win?

# Y2

Imagine you are playing a game of *Snakes and Ladders* with Mum or Dad.

You are on 95 and they are on 98.

It is your turn to throw the die.



Who is most likely to win, you or Mum or Dad?

