Picking Pocket Money

You need ★ a dice marked with $1, $2, $4, $5, $7, and $10   ★ classmates

$1	$2	$4	$5	$7	$10

At the start of the year, Shelley's parents offer her two options for her weekly pocket money. Once she has made up her mind, she must stick with the option she chooses for the next 12 months.

You can have $5 every week for a year …

Or each week you can roll the money dice and take whatever comes up.

Shelley has a think:

$5 for 52 weeks. That's … um … 10 × 26 …

Hey, what if I threw $10 every week? Wow!

Activity

1. Discuss with a classmate which is the better option for Shelley. Why do you think so?
2. With your classmate, try this experiment:

> Roll the money dice 52 times, once for each week of the year. Record the results in a table like the one below. At the end of each month, work out whether the dice has given a better return than a fixed $5 per week deal.

	Week 1	Week 2	Week 3	Week 4	Week 5	Total
Jan						
Feb						
Mar						
Apr						
May						
June						
July						
Aug						
Sep						
Oct						
Nov						
Dec						

3. Based on your experiment, what advice would you give Shelley? How sure are you that your advice is good?
4. Compare your advice with that of other groups who have tried the same experiment. What do you find?
5. Pool your data with that of the other groups who have done this experiment. What do you find? What advice would you now give to Shelley?

Focus   Exploring probability with the help of a simulation