## Dice Week - Additive Reasoning Y1/2

## For this week you will need:

- A six-sided dice or a spinner marked 1 to 6 .
- If you don't have any dice at home you can find dice on the internet at: https://www.random.org/dice/
- You can make an easy spinner. Trace a plate to make a spinner face, use a pencil \& a paper clip, place the pencil point inside the paper clip in the centre of the spinner and spin the paper clip.

- Pencil and paper


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## Day 1

- Throw the dice twice (or spin twice).
- Write down the two numbers and add them together.
- Throw the dice twice again. Write down the two numbers and add them together.
- Do this again...and again...and again.
- How many different answers can you get with two dice throws/spins?
- How can you find them all?


## Notes for adults working with groups of children.

- Have some objects (pebbles, shells, macaroni, building blocks etc.) available to help with finding the total if necessary. Where this is necessary, encourage the children to write down the first number then use the objects to count on to find the total.
- Use a number line or Numicon to help the children to keep track.


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## Day 2

- Throw a dice three times (or spin three times).
- Write down the three numbers and add them together; see if you can find an easy way to do this.
- Throw the dice three times again. Write down the three numbers and add them together.
- Do this again...and again... and again.
- What's the biggest number you can make with three throws?
- What's the smallest number you can make with three throws?


## Notes for adults working with groups of children

- Encourage the children to explain how they are deciding to add the three numbers together in order to make it as easy as possible; are they noticing things they know that help them add all three numbers, for example knowing $6+4=10$ so for 3,4 and 6 adding 6 and 4 then adding 3 might make it easier.
- Have some objects (pebbles, shells, macaroni, building blocks etc.) available to help with finding the total if necessary. Where this is necessary, encourage the children to write down the first number then use the objects to count on to find the total.
- Use a number line or Numicon to help the children to keep track.


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## Day 3

- Throw a dice (or spin the spinner).
- Write down the number.
- Throw the dice again. Write it down and add it to your first number.
- Keep doing this until you reach or go past 20.
- How many throws/spins did you take?
- What's the smallest number of throws/spins it takes to reach 20 ?
- What's the biggest number of throws/spins it takes to reach 20 ?
- How do you know?
- Choose your own number to aim for and start again.


## Notes for adults working with groups of children

- Have some objects (pebbles, shells, macaroni, building blocks etc.) available to help with finding the total if necessary. Where this is necessary, encourage the children to write down the first number then use the objects to count on to find the total.
- Use a number line to help the children to keep track.


## Dice Week - Additive Reasoning Y1/2

Day 4

- Write down 10.
- Throw a dice (or spin a spinner) and take the number away from 10.

Write down the number that's left.

- Throw the dice again and take this number away from 10. Write down the number that's left.
- Do this again...and again...and again.
- What numbers have you written down? Have you got all the numbers from 1 to 10 ? Why not?
- Start again and this time take away from 9. What do you notice?


## Notes for adults working with groups of children

- Have some objects (pebbles, shells, macaroni, building blocks etc.) available to help with finding the difference if necessary. Where this is necessary, encourage the children to make a set of ten and to arrange the objects like two dice fives so that they can see there are 10. When they take away see if they can recognise how many are left without counting. If not, encourage them to count backwards as they remove the smaller number. For example if they throw 3 count 9, 8, 7 as they take three things away.
- Use a number line to help the children to keep track.


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## Day 5

- Write down 20.
- Throw a dice (or spin a spinner) and take the number away from 20. Write down the number that's left.
- Throw the dice again and take this number away from 20. Write down what's left.
- Do this again...and again...and again.
- What numbers have you written down? Look at the numbers you wrote down yesterday. What do you notice?
- Choose your own number to subtract from and have another go.


## Notes for adults working with groups of children

- Have some objects (pebbles, shells, macaroni, building blocks etc.) available to help with finding the difference if necessary. Where this is necessary, encourage the children to make a set of twenty by arranging the objects in two Numicon ten pieces so that they can see there are 20.. When they take away see if they can recognise how many are left without counting. If not, encourage them to count backwards as they remove the smaller number. For example if they throw 3 count 19, 18, 17 as they take three things away.
- Use a number line to help the children to keep track.

