Transcript of video of Using Overlay Grids

http://topdrawer.aamt.edu.au/Fractions/Good-teaching/Equivalence/Grids-and-arrays/Overlay-grids

This template has some squares on it, divided into equal parts.

(Pointing towards different templates on a sheet of paper)

So here we can see one representing halves, thirds, quarters, fifths, sixths and there are some extra halves, thirds, and quarters.

(Explaining different templates and their fractions)

This can be photocopied onto a transparency.

(Putting transparency on to original sheet of paper)

And the transparency can be cut up into separate squares like these ones.

(Placing different cutouts of templates on the table)

And we can use these to create other fractions by overlaying these squares.

(Explaining the next process to be done with cutout square templates)

For example, if I wanted to make twelfths, I need to think about the factors for twelve. For example, I could use halves, the grid showing two equal parts and the grid showing six equal parts because I know two times six equals twelve.

(Pointing towards halves and sixths fraction cutouts)

And when I overlay the grids, I get twelve equal parts or twelfths.

(Making twelve equal parts out of two different fraction cutouts)

Now I can still see the halves there.

(Pointing towards halves on the cutout)

And I can see that one half is equivalent to six twelfths.

(Pointing towards fractions on the cutout)

And I can still see the sixths here and I can see that one sixth equals two twelfths and two sixths equal four twelfths, three sixths, six twelfths and so on.

(Pointing towards fraction distribution)

Now, another way to make twelfths knowing another fraction pair is three times four.

(Placing thirds fraction cutout beside quarters fraction cutout)

So I can take the grid for thirds and the grid for quarters.

(Placing quarters fraction cutout over thirds fraction cutout)

And overlay that to make a different grid for twelfths, twelve equals parts.

(Making twelve equal parts out of two different fraction templates)

And again I can still see where the thirds are so I can see that one third is equivalent to four twelfths and two thirds is equivalent to eight twelfths and so on.

(Pointing towards different fraction distributions)

Similarly, I've got the quarters still visible and I can say one quarter is equal to equivalent to three twelfths.

(Pointing towards quarter fractions)

And so I can use these grids to find equivalent fractions.

(Placing two new twelfths grids beside each other)

Now the important thing about using these grids is that you need to think about factors and multiples.

(Two new twelfths grids placed beside each other)

So it's encouraging multiplicative thinking and it's supporting the move towards being able to find common denominators for fractions when you need to add or subtract them.