

## Anticipating Students' Responses and Monitoring Their Work

Strategy	Who and What	Order
<p><b>Unit Rate</b> Find the number of leaves eaten by one caterpillar (2.5) and multiply by 12 or add the amount for one 12 times.</p>	<p><b>Janine's Group</b> – multiplied <math>12 \times 2.5</math> (sticks representing caterpillars) <b>Kyra's Group</b> – added 2.5 12 times (picture of leaves and caterpillars)</p>	
<p><b>Scale Factor</b> Find that the number of caterpillars (12) is 6 times the original amount (2), so the number of leaves (30) must be 6 times the original amount (5)</p>	<p><b>Jason's Group</b> – narrative description</p>	
<p><b>Scaling Up</b> Increasing the number of leaves and caterpillars by continuing to add 5 to the leaves and 2 to the caterpillars, until you reach the desired number of caterpillars</p>	<p><b>Jamal' Group</b> – table with leaves and caterpillars increasing in increments of 2 and 5 <b>Martin and Melissa</b> did sets of leaves and caterpillars</p>	
<p><b>Additive</b> Find that the number of caterpillars has increased by 10 (<math>2+10=12</math>), so the number of leaves must also increase by 10 (<math>5+10=15</math>)</p>	<p><b>Missy and Kate</b> – since caterpillars increased by 10, then leaves must also increase by 10</p>	
<p><b>Other</b> <b>Multiplied leaves and caterpillars</b></p>	<p><b>Martin</b> – drew a picture <b>Melissa</b> – created a table <b>Darnell and Marcus</b> – saw the problem as multiplicative, but did not understand the ratio. They saw the problem as 5 leaves per day per caterpillar. Did not see the 2 to 5 ratio in the problem. (incorrect answer)</p>	

Fig. 1.1 David Crane's completed chart for monitoring students' work on the Leaves and Caterpillars task