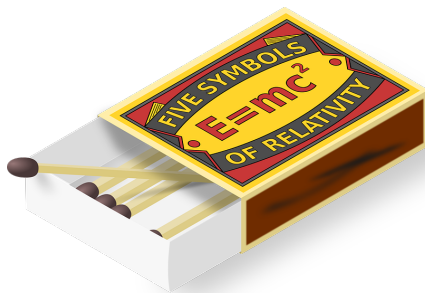


<p><b>Fill the box</b></p>	<p><b>Skills practised:</b></p>
<p><i>Children fill a matchbox with items and count them accurately.</i></p>	<ul style="list-style-type: none"> <li>• Counting accurately to at least 40</li> <li>• Estimating up to at least 40</li> </ul>
<p><b>Conjecture:</b> <i>It is possible to fit 40 things in a matchbox.</i></p>	
<p><b>What to do:</b>  <i>Children work individually or in pairs.</i></p> <p><i>Children working on this challenge will need a small matchbox and access to small items, e.g. rice grains, used matches, paper clips, Lego™ 2-brick pieces, sunflower seeds, blades of grass as well as some items which are too big to fit 20, 30 or even 40 of them into the matchbox, e.g. pennies, dried chickpeas, acorns, leaves, 6-brick Lego™ pieces, conkers, marbles.</i></p> <ol style="list-style-type: none"> <li>1. Explain that the first challenge is to find 20 IDENTICAL things to fit in a matchbox. Ask children to look at the items available and discuss which they think will be possible.</li> <li>2. Children choose an item and carefully count out 20, then see if they will fit in the matchbox. Can they fit any more in?</li> <li>3. Children choose a different item and try to fit 30, then 40 in the box.</li> </ol> <p>Which item do they think they will need most of to fill the matchbox? And the least?  After initial experience, can children make a sensible estimate of how many of an item will fill the box?  <b>CHALLENGE:</b> Can children fill their box with 20 DIFFERENT things? 30 different things?</p>	
<p><b>Aims:</b></p> <ul style="list-style-type: none"> <li>– To make and test predictions</li> <li>– To make estimates based on experience</li> </ul>	<p><b>Minimum number of calculations expected</b></p> <p>N/A</p>

## Fill the box



1. Find 20 IDENTICAL things to fit in a matchbox.  
Look at the things on the table.  
Which do you think will fill the box?
2. Choose one item and carefully count out 20.  
Do they fit in the matchbox?  
Can you fit any more in?
3. Choose a different item.  
Can you fit 30 in the box?  
Can you fit 40 in the box?
4. Which item do you think you will need most of to fill the matchbox?  
And the least?
5. Can you estimate how many of each item will fit in the box?

### Challenge

Can you fill the box with 20 DIFFERENT things? 30 DIFFERENT things?