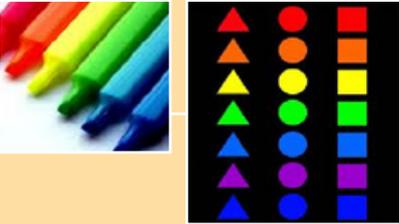




# INVESTIGATING WHICH COLOURS SHOW UP BEST ON DIFFERENT BACKGROUNDS



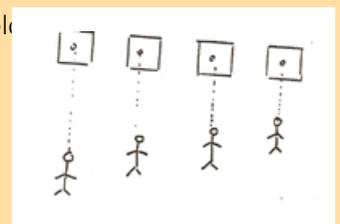
<b>Equipment:</b>	Black paper, white paper, different coloured crayons, method of measuring ( <i>standard or non-standard</i> )	
<b>Suggested Class Level:</b>	Younger classes	
<b>Preparation:</b>	This activity might be easier to carry out in the school hall ( <i>or outside the weather permits</i> ) because of the distances involved. This depends to some extent on the size of the coloured blob, so a test beforehand is recommended.	
<b>Background information:</b>	<p>The science of colour and its visibility on different coloured backgrounds is quite complicated. It can depend on a number of things, e.g. the type of paper, whether you use marker pens or crayons, etc.</p> <p>For this activity it is suggested that crayons are used, and that it is emphasised to the children that their conclusions might be different for the same colours from a different source. So if they were making a poster they should try out some colours on sample paper first (<i>good scientific training!</i>).</p> <p>Explanations are complicated and it is best for children just to become aware that background colour can be important.</p>	
<b>Trigger questions:</b>	<p>What is the colour of the paper that you usually write on?          What is the colour of the pencil (<i>the inside, the 'lead' – actually graphite</i>) that you usually write with?          Is it easy to read it?          If you wrote on black paper do you think it would be as easy to read?          What do you think would be a good colour to use on black paper?</p> <p>LET'S INVESTIGATE WHICH COLOURS SHOW UP BEST:  <b>1.</b> ON A WHITE BACKGROUND  <b>2.</b> ON A BLACK BACKGROUND.</p>	
<b>Content:</b>	<p><b>SCIENCE:</b> Energy: Light – colour          Living Things: Plants and Animals - camouflage</p> <p><b>MATHS:</b> Number: Comparing and Ordering          Measures: Length (<i>non-standard probably the most suitable</i>)          Data: Representing</p>	



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<b>Skills:</b>	Predicting, questioning, experimenting, observing, measuring, recording and communicating, analysing.
<b>Cross-curricular Links:</b>	Art SPHE: Safety – Be Seen!
<b>Activity:</b>	<p><i>(This activity may be best done as a whole class activity, unless teacher has some assistance)</i></p> <p>The children are given four different coloured crayons – red, green, blue, yellow – and some white paper.</p> <p>Ask them “Which of these colours do you think would stand out best on white paper; which second, third and which fourth?”</p> <p>They are then asked if they can work out a way to investigate this, using a fair test:</p> <p>“What will we keep the same?” <i>(Colour of paper, size of word or blob, person who is looking – important because eyesight can vary among children)</i></p> <p>“What will we change?” <i>(Colour of crayon)</i></p> <p>What will we measure?” <i>(Furthest distance the word or blob can be seen).</i></p> <p>A suggested way could be:</p> <p>Each group of children to be given two A4 sheets of white paper, which they cut in two. On each of these 4 half-sheets they make a coloured blob, or a coloured word that they know, of the same size – one red, one green, one blue, one yellow.</p> <p>They then test each one in turn to see how far away they can see the blob.</p> <p>Discuss with the children various ways to measure the distances.</p> <p>They then measure the distances, and record them.</p> <p>They then put them in order, i.e. Number 1 = the longest distance, i.e. it showed up best. Etc.</p> <p>They can make bar charts from their results.</p> <p>OPTIONAL:</p> <p>They could repeat this using black paper.</p> <p>Do they get the same results with black paper and white paper?</p>
<b>Safety:</b>	





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## Follow-up activity:

1. Make or observe posters and discuss which pictures or words stand out the most and why (*colour, texture, background...*)?
2. Older children can experiment with different coloured fonts and backgrounds on computers.
3. Ask the children “What colours would be best to wear at night-time?”  
“What colours are usually used for warning signs?”

