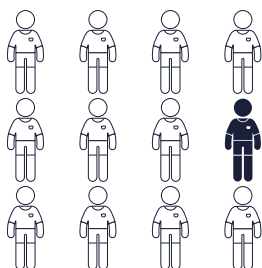


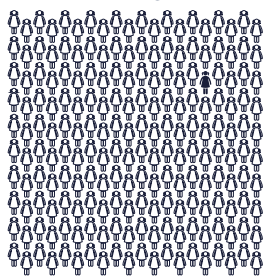


Colour blindness (colour vision deficiency, CVD) is one of the world's most common inherited conditions. Statistically it affects...

1 in 12 boys



1 in 200 girls



That's one child in every classroom!

Images: left, normal colour vision, right, colour blind simulation

#PrimaryColours

ADVICE SHEET FOR PRIMARY SCHOOL TEACHERS

WHAT IS COLOUR BLINDNESS?

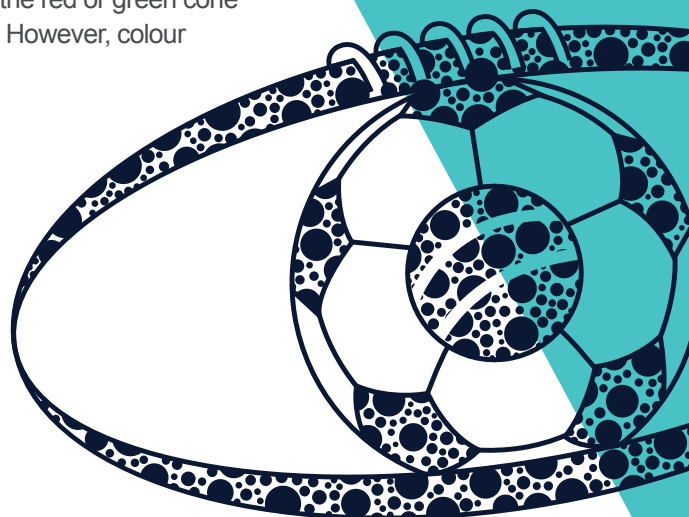
We see colour through three specific types of cone cells in our eyes; one type absorbs red light, the second green and the third blue. With inherited colour vision deficiency (CVD) one cone type doesn't function normally. Most cases of CVD arise from a defect in the red or green cone types, this condition is commonly known as "red/green colour blindness". However, colour blindness can affect many other colour combinations.



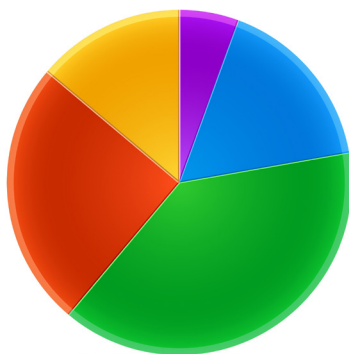
Normal colour vision



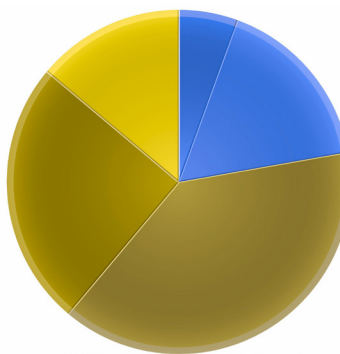
Severe green deficiency



Normal
colour vision



Severe green
deficiency



IMPACT OF CVD IN THE SCHOOL ENVIRONMENT

While children with normal colour vision automatically understand information presented in colour, learners with colour blindness are often unable to use colour to navigate information. For them, colour merely adds confusion so it can take them longer to make sense of teaching points made using colour. Sometimes they may simply miss the information altogether. Either way, the condition puts them at a distinct disadvantage in the classroom. By identifying and supporting pupils with CVD in your class, you are giving them the same chance to learn as every other pupil.

HOW TO SPOT A CHILD WITH CVD

Although colour blindness is recognised as a Special Educational Need and a disability, it remains undiagnosed in many cases as school entry eyesight tests no longer include mandatory CVD screening. Also, pupils with CVD are unlikely to say anything, either because they are unaware that they see things differently, or because they are reluctant to admit to any difficulty. So, it is often only a parent or teacher who can pick up on the signs that a child is colour blind.

Certain signs indicate possible colour blindness, for example if a pupil:

- Uses inappropriate colour choices in drawings or artwork, e.g. colouring a river in purple
- Needs more time, or looks for other clues, to process information that uses colour
- Often misunderstands instructions (is it because colour is involved?)
- Has difficulty seeing one colour written against another e.g. red against black, or green text on whiteboards
- Refuses or hesitates to participate in activities that involve colour processing e.g. sorting/science experiments
- Gives incorrect answers to relatively easy questions where key information is presented in colour-only e.g. in diagrams/graphs/pie charts etc

- Seems confused by maps and flags in History and Geography lessons
- Is confused about who is in their team or has trouble distinguishing equipment in PE*

EFFECTIVE STRATEGIES TO ENSURE YOUR TEACHING IS COLOUR BLIND FRIENDLY

There are several strategies you can use to make sure your classroom and teaching methods are as accessible as possible to colour blind pupils.

Environment

- Label the relevant colour name onto all drawing and writing equipment e.g. pencil crayons
- Audit worksheets, textbooks, websites and other resources/equipment for potential problems. You can photocopy worksheets into greyscale to see if the information works without colour. If the photocopy is suitable, give the greyscale version to colour blind students
- Be careful when using coloured pens for marking or on white boards – CVD pupils will need additional indicators
- Sit diagnosed pupils in good natural light wherever possible

Methods

- Avoid relying solely on colour to make teaching points – always use secondary indicators such as patterns, underlining, shading, bold or larger font
- Avoid using traffic light schemes/RAG coding without secondary indicators
- Make sure you don't use colour alone to assess a pupil's understanding
- Regularly ask diagnosed CVD learners (in private) if they are experiencing difficulties and encourage them to voice any concerns
- Research and use accessible Apps and software for pupils with CVD e.g. Chrome extension/iOS accessibility settings. Note these can assist but cannot resolve all issues

Further information and resources

Further information see www.colourblindawareness.org including a dedicated section for Teachers with factsheets, classroom resources and video links at www.colourblindawareness.org/teachers/resources. More information for *sports coaches and PE teachers can be found in the Sport and #PrimaryColours pages see www.colourblindawareness.org/primarycolours