Teachers’ Guide

Be Bright, Be Seen!

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The Statistics

In 2010 7,929 child pedestrians were killed or injured in road accidents in the UK, of these 1,646 were killed or seriously injured - that’s over 4 for each day of the year.

2,829 child cyclists were also killed or injured on UK roads in 2010, of these 398 were killed or seriously injured - that’s just over 1 every day.

[Source: Department of Transport, children age 0-15 years]

With statistics like these making sure children are safe whether cycling or walking near roads is vitally important. One of the ways their safety can be improved is to make sure they are visible to motorists - and not just when it’s dark but during daylight too.

7,929
Child Pedestrians
Killed Or Injured
On UK Roads in 1 year!

Not just for winter & dark nights

Fluorescent materials are designed to improve visibility during bright daytime conditions – think how many runners, cyclists and horse riders you see wearing hi vis clothing on bright summer days. For the emergency services and many workers it is compulsory uniform all year round, to not wear it would be a breach of their health and safety policy. Yet some children may still be reluctant to wear hi vis clothing when they are out and about or not realise it’s importance.
Fluorescent vs reflective

Hi visibility garments are designed to be just that – highly visible against any background, if you’ve seen runners or cyclists wearing hi vis clothing when you’ve been driving your car you’ll know how much sooner you’re aware of them than if they were wearing ordinary or dark clothing. Hi vis garments are usually a combination of fluorescent and reflective materials.

**Fluorescent**

Fluorescent colours provide the greatest contrast against most backgrounds. The material will appear brighter than the same colored non-fluorescent material, especially under low natural light. However, it will only function where there is a source of natural sunlight. This is because it takes a portion of invisible ultraviolet light and through special pigments, sends it back to the viewer as more visible light. Fluorescent materials provide better visibility during the day and the effect is stronger when the light is poor such as in fog, cloud cover, dusk and dawn.

**Reflective**

A white or pale object eg a white bag will reflect light but the light is scattered in all directions, so a motorist will see some brightness but it is not as effective as a retro reflective material. Retro reflective materials are visible in the dark when they are near a light source eg car headlights because they return light in the direction of the light’s source. Seconds could make the difference between life and death and it’s estimated that retro reflective materials could help drivers to see people up to three seconds sooner at night - which could save their life.

Retro reflective materials are most effective under low-light level conditions, although they still reflect in daylight, there is little difference between the light reflected from the garment’s material and the surrounding environment, making them ineffective for bright daytime conditions. This is why you get a combination of fluorescent and retro reflective materials in hi vis clothing and gear.

**Different Reflective Materials**

There are different kinds of reflective materials. Glass bead tape is the silver grey reflective tape that is often found on hi vis jackets. This is popular as it is cheaper to make than the plastic vinyl material – called microprismatic retro reflective tape - which is made up of tiny prisms sealed inside. Although more expensive the microprismatic tape is longer lasting and is more popular on better quality, hi vis items.

Remember! To Be Bright and Be Seen use fluorescent materials for daytime and retro reflective for night time.
The Hi Vis Quiz

Test children’s knowledge (and your own) with the following questions:

QUESTIONS

1. What type of material should you wear/carry to help you be seen better at night or when it is dark?

2. What type of material will help you be seen in daylight?

3. What do you need for reflective material to work when it is dark?

4. When do fluorescent colours show up best?

5. Name jobs where hi vis clothing is worn?

6. What is special about the reflective materials that are used on hi vis clothing?

7. Will reflective material work in normal daylight?

ANSWERS

1. Retro reflective.

2. Fluorescent.

3. A source of light, such as car headlights or a torch.

4. During the day, especially when light is poor such as fog, cloud, dusk and dawn.

5. Police, Construction workers, Postal and Delivery Workers, Ambulance and Paramedics, School Crossing Patrol.

6. They reflect the light back to the light source rather than scattering it.

7. No.
Activities

School Display Idea
Get children to create a display about Being Bright and Being Seen and why you need fluorescent for day and reflective for night. Add photos of different people wearing high vis clothing, show which parts are fluorescent and which are reflective.

Class Discussion Ideas
Day / Night - it's good to be bright at night but it's also important to be seen during the day, especially if daylight is poor (rain, fog, dusk, early in the morning). Seasons / Weather - it's important to be seen all year as there can be dull days in the summer when the weather is poor. It's especially important in winter on the way home from school when the light is fading and it is getting dark.
Discuss what children could wear or carry to make sure they can be bright and be seen (think about bags, satchels, vests, arm bands etc).

Be Bright, Be Seen Day
Have a "Be Bright, Be Seen Day". Encourage children to come to school dressed in bright colours with extra rewards for fluorescent and reflective trims. You could make a small charge for each child who dresses up and the proceeds could go towards some hi vis or safety gear for the school.

Hi Vis Box Experiment
Reflectivity in Action

You will need:
- A box with a lid or a poster tube with one sealed end
- A mini torch
- Reflective material (this could be a hi vis jacket)

Demonstrating Night Brightness
Put the reflective material in the bottom of the box or tube, with the reflective side facing upwards. Lift the lid on the box slightly or put your head close to the tube (so no light gets in). Shine a torch into the box or tube and look inside.
This shows how reflective materials show up at night.
You could repeat the experiment with a school jumper in the bottom of the box to demonstrate the difference a driver would see.

Demonstrating the effectiveness of reflective materials in daylight
Now take the reflective material out and shine the torch on it in daylight. This is like the sun shining on it and it isn't as bright. This shows how reflective materials do not work properly in daylight. And why you need bright, fluorescent materials to be seen easily in daylight.

You could test more items which have reflective trims to see how effective they are and then discuss why they help children be safer if they are wearing or carrying something reflective at night.
Advice For Teachers & Parents

Guidance from the Department for Education for school uniform & home to school travel

A school should encourage children to walk and cycle to school and give consideration to this when determining the design and style of uniform. School uniforms are often quite dark, making it difficult for children to be seen by drivers especially during the winter months. The governing body should consider the benefits of including light colours and reflective materials (and recommend the wearing of high visibility items) as part of the school uniform policy to ensure that children are able to walk and cycle safely throughout the year.

Top Tips from ‘Tales of The Road’ website for Being Bright and Being Seen are:

1. Dress Brightly - When you go out on a dark day or nearly night, wear colourful or fluorescent clothing so the cars can see you coming.

2. Wear Reflective Gear - Make sure you wear reflective gear or accessories, so the cars can see you in their headlights.

3. Customise your backpack - Another way to be seen is by customising your backpack with cool reflective zip clips and stickers.

The Government website “Tales of The Road” deals with child road safety. There are numerous games for kids including Stop, Look and Listen as well as information on how to cross the road safely.
Useful Websites & Resources

www.talesoftheroad.direct.gov.uk
www.rospa.com
www.think.direct.gov.uk
www.roadsafetygb.org.uk
YourSchoolUniform.com was the pioneer in online uniform ordering and now supplies more than 1,000 primary and secondary schools.

If you are:
- A Convertor Academy re-branding
- Launching a new uniform
- A new Free School
- Being sponsored to become an Academy
- Changing supplier or service requirements

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