Outdoor Safety - Lesson Plans

Activity 2– Electrical Hazards Outside

Curriculum for Excellence Experiences and Outcomes

I am learning to assess and manage risk, to protect myself and others and to reduce the potential for harm when possible. **HWB 2-16a**.

1. Connecting the Learning - Remind the class about hazard warning signs they may have seen in other safety lessons (usually in triangles) and ask them for examples. Display the 'Danger of Death' sign on the interactive whiteboard (Go Safe website) and ask where the pupils may have seen it before. Is there anywhere in or near the school? Make a list of their answers. The common factor should be that all the hazards are electrical. These are extremely dangerous because if someone is electrocuted there is a high risk of death. Have a quick recap of electrical hazards in the home, e.g. overloaded plugs, electrical appliances in the bathroom etc. Explain that in this lesson the class are going to think about electrical hazards outdoors.

2. Sharing the Learning Outcomes -

- I can identify outdoor electrical hazards and know how to avoid them
- I can explain what to do in an emergency if someone has been electrocuted

3. Active Learning -

Pose the question - 'Why do birds not get electrocuted when they are sitting on power cables?' Electricity always wants to travel to the earth so the answer is - birds are not electrocuted because they are not touching the ground at the same time. Whereas, if someone was to touch an overhead power cable with a long stick they are making a 'bridge' for the electricity to reach the ground. It would go through them and stop their heart.

Ask the children to add their ideas to a class list of where they might see electrical dangers outside. Use the pictures online to check off against their list and add any they hadn't thought of. The main hazards are:

- Playing near electricity substations
- Roadworks or construction sites – might have electrical wires exposed
- Overhead power cables (can be over street, near pylons or over railways)
- Climbing pylons, electricity poles or trees near electricity cables
- Disused buildings – may have electrical wires exposed
- Damaged 'street furniture', like the bottom of streetlights, electricity junction boxes on pavements, etc.
- Electrical extension leads in the garden getting damaged or wet

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Use the 'Power Savers' game on the 'Power Wise' website to let the pupils try spotting electrical hazards in an online game.

http://www.powerwise.org.uk/ollieandsparky/index.html

Remind the class that because overhead electricity cables carry so much power they are particularly dangerous and that electricity can jump. So even if their fishing rod or stick etc. was not actually touching a power line but just close to it they could still be electrocuted.
(First Aid?)

4. Demonstrating Understanding - Use the Power People game on the link to the Power Wise website to let children (either on individual computers or as a class, on the interactive whiteboard) show they can distinguish between dangerous or not so dangerous situations with outdoor electricity. As they are playing against the clock it is worth playing several times, not only to see if they can get faster but also so they can read the information tabs.

With the class back together ask what they would do if they saw a friend about to approach an electrical hazard, like jumping into a substation to retrieve a ball.
(First Aid?)

5. Review and Recall - Repeat the Learning Outcomes and ask for examples of electrical hazards outside. Would they pass any on their normal route to school? Remind the class that electricity outdoors (as well as indoors) is almost always kept as safe as possible; in power lines high above, in cables deep in the ground, in well protected boxes in substations, behind high fences, etc. but this is for a very good reason – electricity can kill.