



ACCESSIBILITY

Activity Pack

ACCESSIBILITY

We are increasingly surrounded by a digital world, whether that is shopping online, digital banking or listening to music. Technology is awesome, but only if you can use it.

Digital accessibility is important for everyone. For example, subtitles make a video accessible to people who are hard of hearing, but also to those people watching the video in a noisy environment or who may find following the audio difficult.

Therefore, when we design something (a product, digital content, device, service, vehicle, or environment) we must think about digital accessibility by considering any barriers that will make using it harder or may exclude people from using it. When texting was first created it was great and opened up a whole new world for some but excluded others.

Every time you speak to Alexa or pinch to zoom in on your phone, you're using technology developed for people with disabilities. Great design and simple technology can make a big difference for those with disabilities – and it can also help everyone else too.

It is really important that we always design things inclusively so that everyone can use them. Discriminating people by creating products that cannot be used easily is unfair and means your product is ultimately not a very good one!

Unless you've had to use digital accessibility features before, would you know where to find them or how to use them? Would you even know what good or bad accessibility design looks like? Take a look through our activity pack to see if you can learn a thing or two that could help you or someone you know in the future.

The next few pages give you a few things to think about when you next create digital content, for example a PowerPoint presentation or a web page. Use this information to help you complete the following activities.

We'd love to see pictures of you all getting involved with the activities. Show us your websites, recommendations and tell us the best thing you've learned about accessibility!

Email these to us at computerscience@bt.com stating your school and key stage.

Knowing where you are

What to check on a web page:

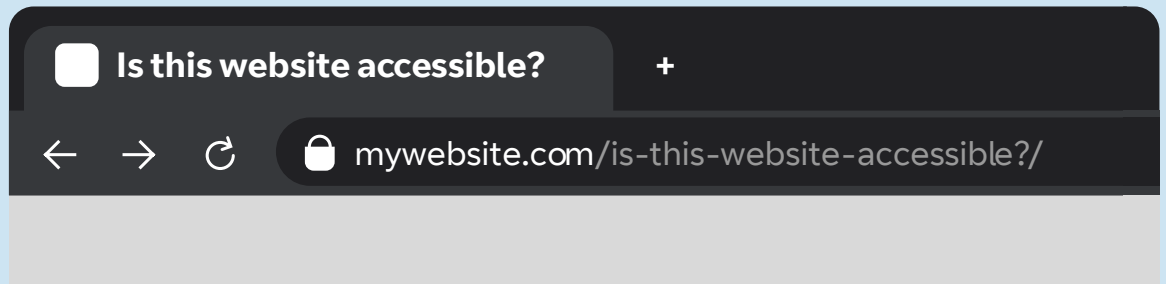
- Is there a Page Title?
- Does the Page Title describe the content of the web page in a way that is adequate, clear, and concise?

What is a Page Title and why is it important?

- Page Titles provide a short description of a web page and help blind people know where they are between different open tabs in their browser.
- They are the first thing screen readers will say when a blind user visits a web page.

How to check on a web page:

- The Page Title is found in the window title bar or in the browser's tabs where there are multiple web pages open.



Text size



What to check on a web page:

- Can you zoom in up to 200% and zoom out up to 25% on the text?
- Are the pages still usable after resizing the text?

Why is it important to be able to increase and decrease font size?

- People with visual impairments might need to enlarge or decrease the content on a web page to be able to read it.
- When web pages are not designed well, text, images and other content can overlap when zooming in or out.

How to check on a web page:

- In all web browsers, the ability to zoom in and zoom out can be found in the "View" menu.

You can also increase and decrease the font size by using keyboard shortcuts:

- On a Windows machine, click on 'Ctrl' and the '+' buttons to zoom in or the 'Ctrl' and '-' buttons to zoom out.
- On an Apple machine, click on 'Command' and the '+' buttons to zoom in or the 'Ctrl' and '-' buttons to zoom out.

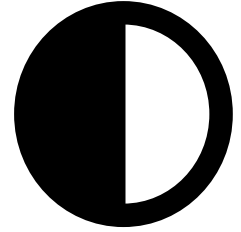
Colour contrast

What to check on a web page:

- Does the web page have sufficient colour contrast?

Why is colour contrast important?

- People with colour vision deficiency will find it hard to distinguish information when there is not enough contrast between the foreground and background colour. For example, text on a coloured background.



How to check on a web page:

- Use tools such as this [one](#) to check your web page.

The use of colour



What to check on a web page:

- Can you still read and understand all of the information on a web page if you remove all of the decorative colour?

Why is it important to ensure that information is not conveyed by colour alone?

- When colour alone is used to convey information, people with colour blindness will not be able to follow any instructions related to it.
- For example, information displayed in maps or chats will be inaccessible for people with colour blindness.

How to check on a web page:

- If you are using a Windows machine:
 - From the start menu, search for **Adjust Colour Filters**.
 - Toggle 'Turn on colour filters' so that they are on.
 - Ensure that the **Greyscale filter** is selected.
 - Turn on colour filters.
- If you are using an Apple machine:
 - Go to **Settings > Accessibility Preferences > Display**.
 - Select Grayscale from the filter options and tick on **Enable Colour Filters**.

No mouse?

What to check on a web page:

- Can you navigate around a web page, fill in a field on a questionnaire/ form or select links by using keyboard commands alone?

Why is it important to be able to use keyboard only?

- Blind users typically use a keyboard for moving around a web page.
- Some people have mobility issues which don't allow for fine muscle control with a mouse or trackpad.



How to check on a web page:

- Try navigating a web page by using the tab, space bar, arrows and enter keys.
 - Press the 'tab' key to navigate forward to the next option.
 - Press the 'tab' and 'Shift' keys together to navigate backwards to a previous option.
- Are links highlighted to indicate that they are active when you press the tab bar or arrows to select them?
- Can you clearly see where you are on the screen as you navigate using the tab key?
- Can you activate buttons and links by pressing the 'Enter' or 'Space bar' keys?
- Can you use drop-down lists/menus and radio buttons by using only the 'Space bar' and arrows keys?

Labelling images

Think carefully when adding images to your PowerPoint slides or web pages.

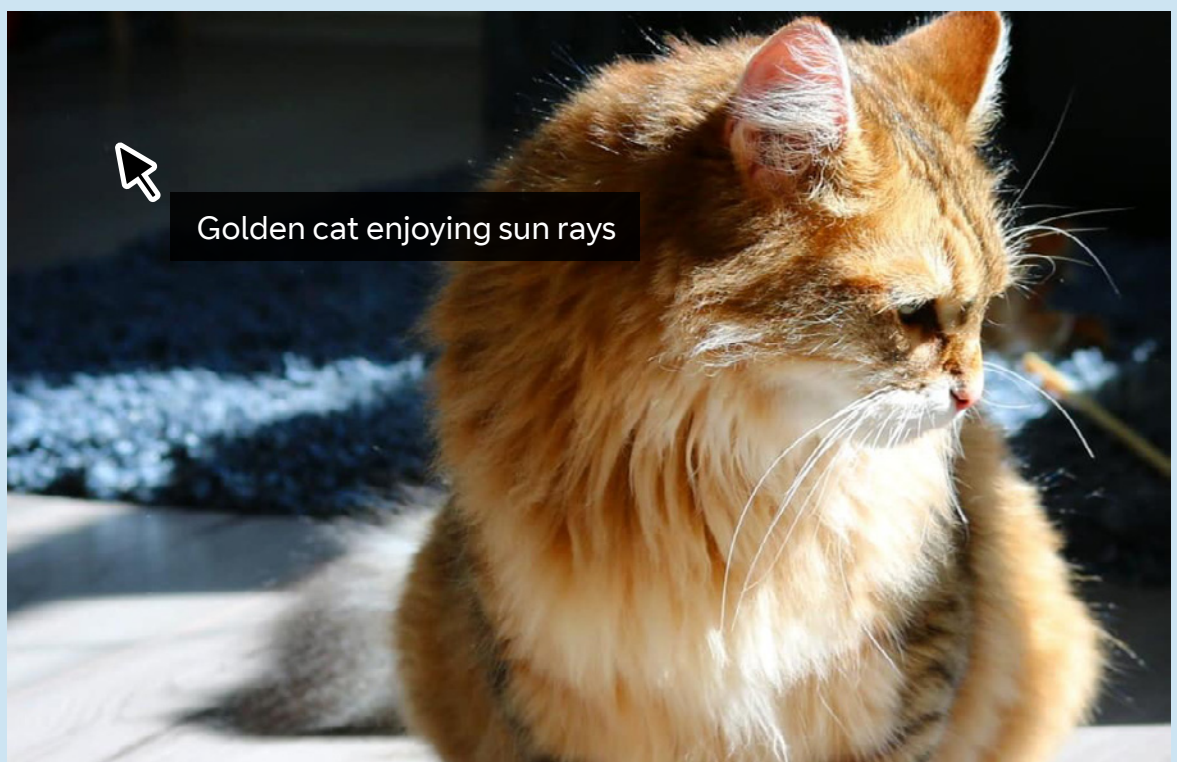
- Are they just decorative? If the images are removed, does the content of the web page still make sense?
- Or are they informative? Do the images represent information?
- There are lots of different types of images, check them all out [here](#).

What is Alt-text and why is it important?

Alt-text, Alt Attribute or Alternative Text, is text that adds information to an image for screen reader users. Alt-text is read aloud by screen readers and help people with visual impairments to understand information conveyed by pictures or graphics.

- For decorative images you may add a simple descriptor e.g. "An image of a black cat on a brown sofa."
- For informative images it is important that the alt-text provides the detail being conveyed in the image.

Try it for yourself. Hover your mouse over an image on a web page - does it display any alt-text?



ACCESSIBILITY

Accessibility is built into Windows Operating Systems and MacOS as well as your mobile phone. They include functionality such as screen readers, voice control, text-to-speech and captioning as well as the ability to connect with other assistive technologies. You can have text read aloud for you, give voice commands, connect to a hearing aid through Bluetooth, change the display to accommodate your needs and much more.

Take your time to explore these capabilities and discover which ones will help you use your computer or mobile more efficiently and enjoyably, regardless of any differences you may or may not have:

- **Windows**

Search for Accessibility or Ease of Access and check for further details and guidance at: [Microsoft Accessibility For Everyone](#).

- **Apple**

Go to System Preferences and select Accessibility and check for further details and guidance at: [Apple Accessibility - Make It Yours](#).

- **Android**

You can customise your Android device with accessibility settings and apps. Check here for further details and guidance: [Android Accessibility Overview](#).

Links

Teacher Links:

- KS2 Lesson Plan and Resources - Web Page Creation <<https://tinyurl.com/225sc48k>>
- KS3 Lesson Plan and Resources - Developing for the Web <<https://tinyurl.com/2evr9su9>>
- Free Inclusion and Diversity Magazine <<https://tinyurl.com/ynzd4rn5>>
- Culturally relevant Pedagogy <<https://tinyurl.com/38rz6k74>>

Find Out More:

- How to Write HTML <<https://tinyurl.com/374v6rkc>>
- Building Better Digital Lives <<https://tinyurl.com/muf5rn5k>>
- Simplifying Complexity: Handshake <<https://tinyurl.com/2yer8nhu>>

Have A Go:

- Sensory Classroom <<https://tinyurl.com/2s3n9jwa>>
- Contrast Calculator <<https://tinyurl.com/3b3thasn>>
- Project MakeAccessible <<https://tinyurl.com/4jxfty29>>

Activity 1 – Compare Good Vs. Bad Accessibility Design

Take a look at this [website](#) and go through the demo which will show you various web pages.

The ‘Before’ and ‘After’ demonstration shows an inaccessible website and an improved version of this same website.

The aim of this is to show you what bad accessibility design looks like to help you with the following activities.

Activity 2 – Creating Accessible Presentations

With all the accessibility knowledge you now have from reading the information provided above, how many issues can you spot in the presentation on pages AC8 - 9?

- Make a list of things that you have chosen to edit and a reason why.
- Can you add a new slide that is designed with accessibility in mind?

Some apps can help you identify accessibility issues. For example, on PowerPoint, go to: Review > Check Accessibility for some advice and tips.

Activity 3 – Create Your Own Accessible Website

Using Trinket, follow these step-by-step instructions Raspberry Pi courses to create your own website:

- Website 1.0: [Projects | Computer coding for kids and teens | Raspberry Pi.](#)
- Website 2.0: [Projects | Computer coding for kids and teens | Raspberry Pi.](#)
- Website 3.0: [Projects | Computer coding for kids and teens | Raspberry Pi.](#)

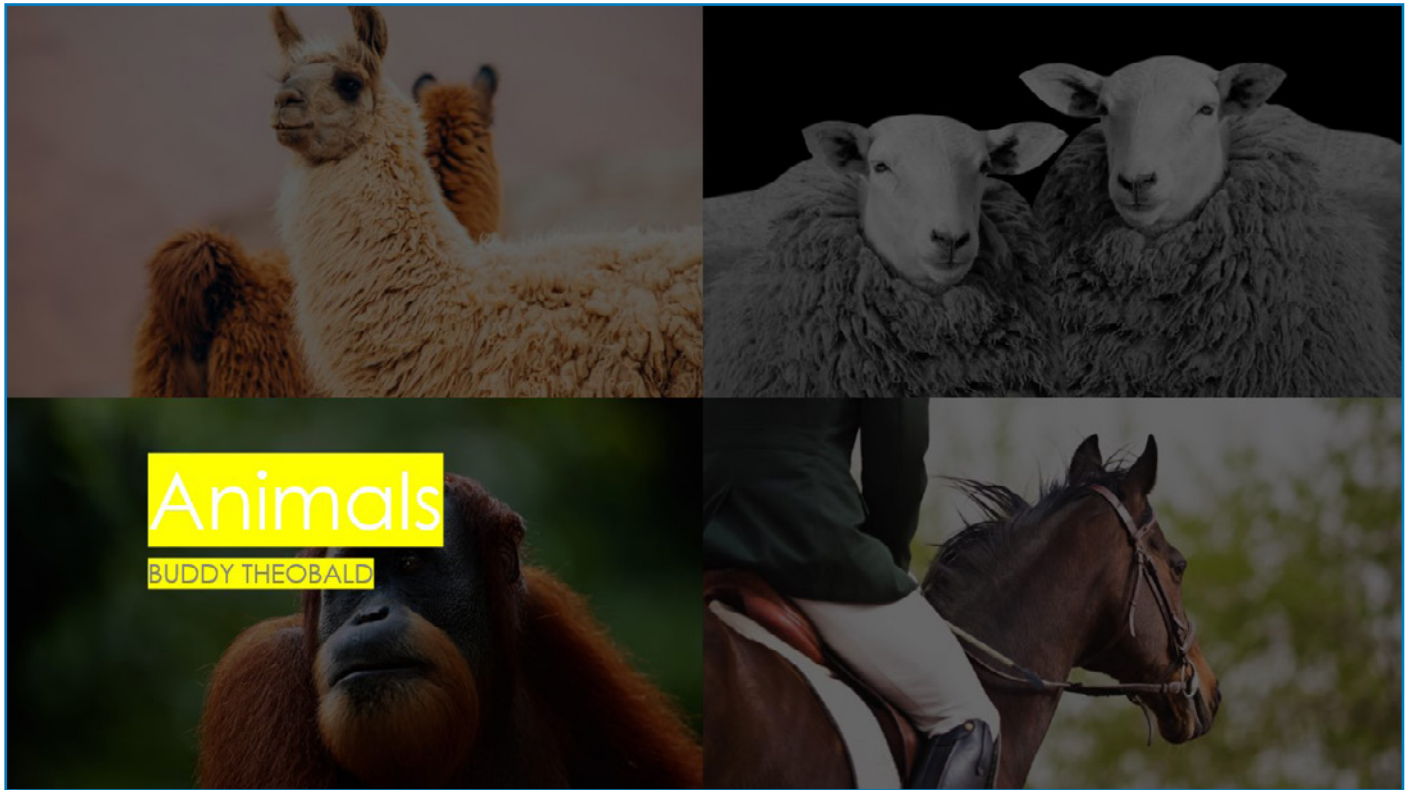
Activity 4 – Review Your School’s Website

Now that you’ve completed the activities, with your newfound accessibility wisdom, go to your school’s website and see how accessible it is.

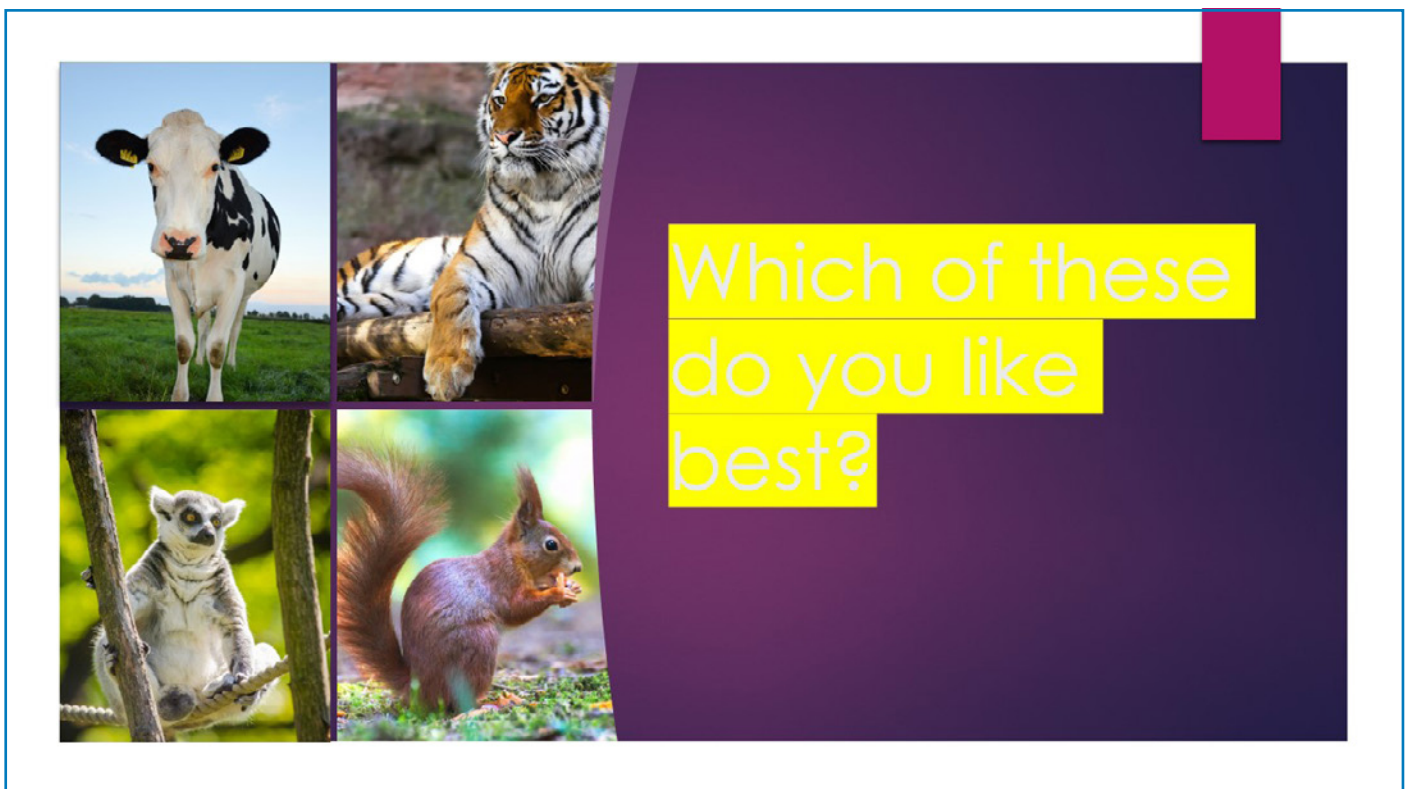
Switch on the accessibility functionality and in your pairs have a go at using the website with your eyes shut, ear defenders on, only using your non-dominant hand or maybe try using it wearing gloves.

Can you make any recommendations to the people who manage the website in order to make it more accessible for everyone?

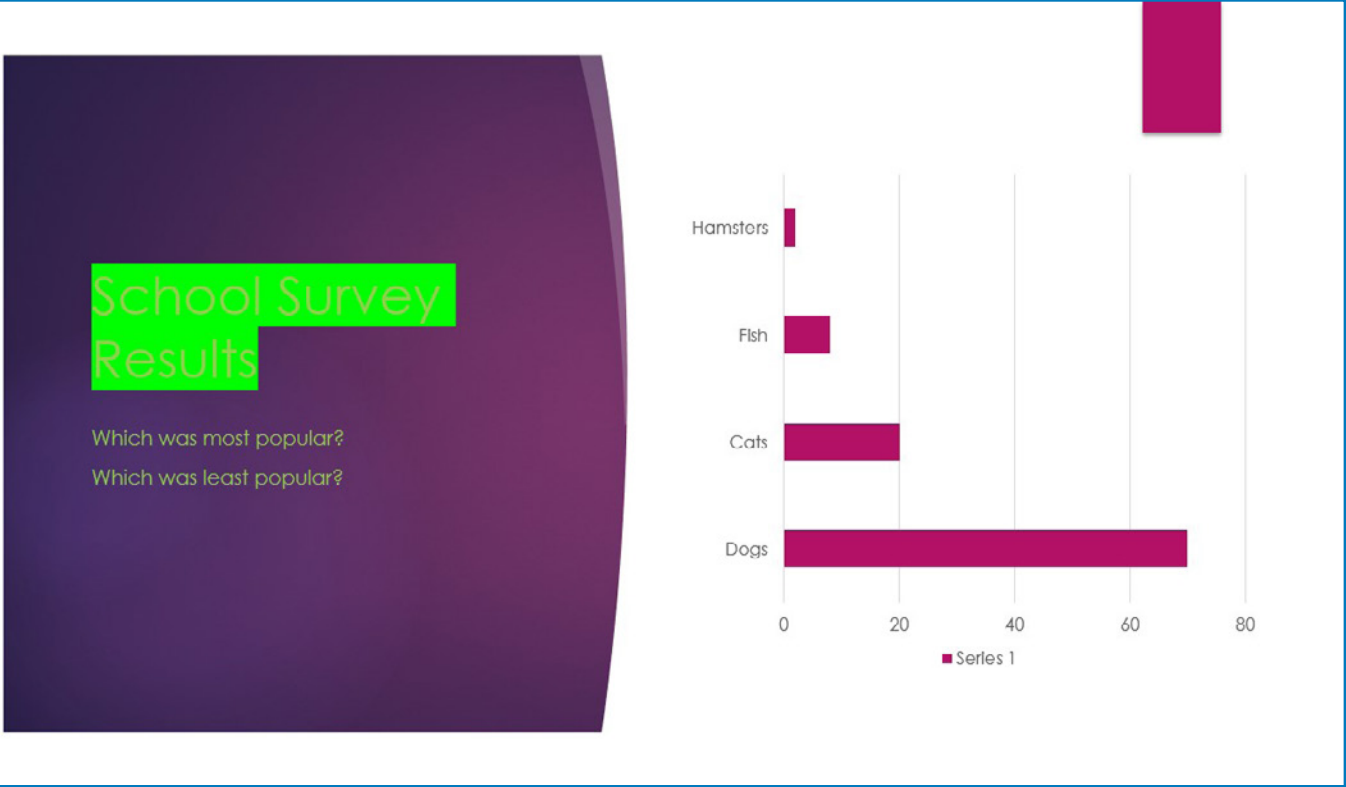
Slide 1



Slide 2



Slide 3



Slide 4

