

Computing Planning Overview

Year 3 QR Codes

The Computing Curriculum in KS1 and KS2 can be split into 3 areas:

- Computer Science
- Information Technology
- Digital Literacy/Online Safety

<p>Resources:</p> <p>Device to read a QR code</p>	<p>Information Technology: Task – QR Codes</p> <p>Unit Overview: Explore what QR codes are and how they are created to present information to a user. Children will record sound files and create QR codes to allow others to access and listen to the sound file.</p> <p>National Curriculum Subject Content: Information Technology</p> <ul style="list-style-type: none"> ✓ select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information <p>Note: All websites within this unit must be checked in good time by the teacher to make sure none of them are blocked for pupil access. Do not try when logged in as a member of staff. Use an account that has pupil restrictions when checking. If any sites are blocked, you can request your technical support to add the websites to an allow filter list for the unit to be delivered. Remember if you wish to block access following the unit, inform technical support.</p>		
	<p>Information Technology</p>	<p>Tasks</p>	<p>Pupil Outcomes</p>
<p>1</p>	<p>select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including</p>	<p>Skill: Create QR codes using a QR code generator. Understand how the QR code links to the location of where the information is stored.</p> <p>Teacher pre-lesson preparation - Prepare devices to read QR codes. If using iPad, then you must have updated to iOS 11 or above to use the camera app to scan a QR code. If you are using an operating system below iOS 11 then you will need to download a QR Code Scanner from the App Store. If using Chromebooks, then there is a QR scanner built-in to the Chrome OS camera. If using a laptop with built-in web camera then use the website https://webqr.com/ to scan the QR codes using the laptop web camera.</p> <ul style="list-style-type: none"> ✓ Explain to the children what a QR code is. A QR Code is an abbreviation for Quick Response Code. The image consists of black and white square dots in a unique configuration. It is a special kind of barcode that is machine-readable by a camera or smartphone that usually directs the user to a website. ✓ Ask the children if they have seen a QR code anywhere and have scanned it to see what it is linked to? 	<p>I know what a QR code is</p> <p>I can recognise a QR code</p> <p>I know that a QR code stores data that is machine readable that directs a user to the information</p>

collecting, analysing, evaluating and presenting data and information

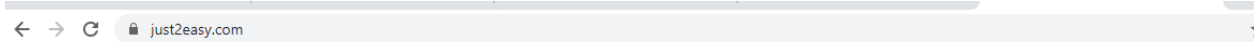
They originated in Japan at the Toyota factory in 1994 to track the manufacturing of car parts. Since then they have taken off everywhere. You can see them in magazines, adverts, on products, in a library...



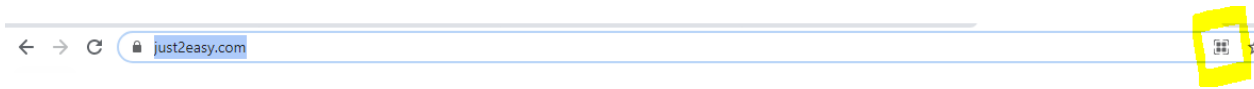
- ✓ Watch the video https://youtu.be/zZXCt1Ud_zE that reviews what a QR code is
- ✓ Select some children to come to the front of the classroom to demonstrate how to use an iPad or other device with a QR reader installed to scan a QR code using the camera app or QR reader app to find out what information it will direct them to. Use the lesson resource 'QR Codes' below the planning. **Before** the children scan the QR code, read where the QR code is from and ask them to predict what information it might send back to us. **N.B.** make sure the children are careful to point the camera at only **one** QR Code.
- ✓ QR codes can also be designed to incorporate logos and designed into shape outlines and be colourful. Look at the 'QR Code Design Examples' resource below the planning. Each QR code is scannable – try them out!

I know how to create a QR code online

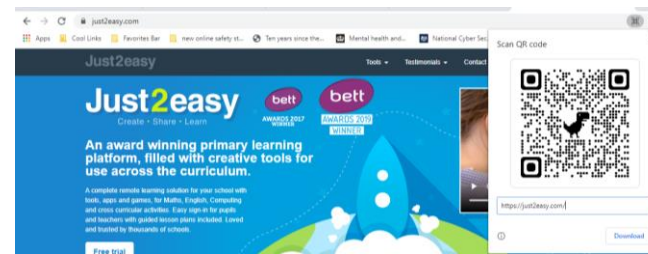
- ✓ Google has a feature within Chrome that allows users to generate QR codes when using a desktop or laptop. Locate the website you want to generate a QR Code for:



Click once on the address bar to select the web address and an additional icon will appear next to the bookmark 'star' icon:



The new icon is the QR Code generator. Click the QR Code generator icon and then select download to save the QR Code for this webpage to your computer:



- ✓ There are other QR Code generators online which you can use to create your own QR codes. Demonstrate how to do this by using <https://www.qrstuff.com/> This QR generator will allow you to select various options to create your QR code.

Section 1 is **data type** – this means what type of data you want the QR code to link to. Select 'website URL'

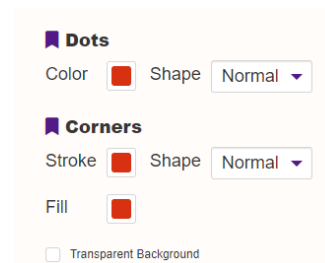
Section 2 is **content** – (this menu changes depending on what data type you select) in here now type <https://www.bbc.co.uk/cbbc/shows> On the right hand side of the page you may notice that the QR code changed. Now you can download your QR code.



Once downloaded, open your QR code and scan it to test if it works. It should take you to the CBBC Shows page.

Scroll further down the QR code generator page and have a look at the options for **style**.

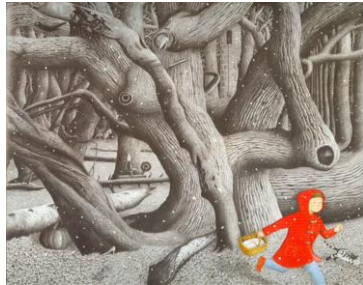
You can change the colour



As this is a free account being used on qrstuff.com please note that all QR codes created have a scan limit of 50 times per month.

		<p>And if you were a subscriber, you would also be able to add a logo into the QR Code. At the bottom of the page there is the option to create a visual QR code. This will take you to another website where you can select an image and create a QR code with an image within it.</p> <ul style="list-style-type: none"> ✓ If using a mobile device, then there are also apps available for download that we can use to create and scan QR Codes. ✓ Ask the children if they can think of any uses for QR Codes in the Classroom? Would they be helpful for us to use? <p>Link to websites when they need to research the internet; link to examples of their electronic work in J2e and the QR code displayed on a classroom display, share work with parents using a QR Code....</p>	
2	<p>select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data</p>	<p>Skill: Scan QR Codes to access information easily. Understand that each QR code is unique and can only link to one location/information source.</p> <p>Teacher pre lesson preparation – set up the QR Code Scavenger Hunt around the school. Resources for the hunt are provided below the planning.</p> <p>Instructions: The Scavenger hunt is based on children's stories. Each QR Code links to the story OR a message that tells them 'Opps! This story was not in the picture'</p> <p>The children are given a picture from the book 'Into the Forest' by Anthony Browne. It is a story inspired by Little Red Riding Hood (the book can be listened to at https://www.youtube.com/watch?v=qjgugbdwvMY)</p> <p>The picture that the children are given has a number of clues that link to other traditional fairy tales. There are four fairy tales and 7 clues.</p>	<p>I can scan a QR code and access the information that it links to</p>

and information



The children need to look at the picture and see if they can identify from the clues, which four stories they relate to. When they have discovered answers to two of the stories they need to write them down and then go off on a hunt to find the QR Code for the story that they would like to hear first. The children should find both QR Codes and scan them. There are 6 QR Codes required for this scavenger hunt, 4 of the QR Codes link to the stories from the clues in the picture and 2 of the QR Codes link to a file that tells them to try again as they have not identified the correct story <https://www.j2e.com/fortprimary/Link2ICT+Scheme/incorrect+story/>

There are two sets of QR Codes – **decide which set you wish to use.**

- The black and white QR Codes link to YouTube videos to see and hear the animated tale. Sleeping Beauty and Rumpelstiltskin stories last 12 min 30 secs each. Cinderella lasts 6 mins 30 secs and Puss in Boots lasts 7 mins 20 secs.
- The black and white QR codes on a red background link to websites where the children can read a simple version of each story. Links to the 4 web pages are:
Rumpelstiltskin <https://www.dltk-teach.com/fairy-tales/rumpelstiltskin/1.htm>
Cinderella <https://www.dltk-teach.com/fairy-tales/cinderella/1.htm>
Sleeping Beauty <https://www.dltk-teach.com/rhymes/sleeping-beauty/1.htm>
Puss in Boots <https://www.dltk-teach.com/fairy-tales/puss-n-boots/1.htm>

Print a set of QR Codes and place each QR Code in a different location in the classroom or outside if weather permits. You can provide the children with a map to show where a QR Code can be found but do not tell them the names of the stories they link to as this is part of the activity for them to identify the stories from the clues then go off and find the correct QR Code for the story.

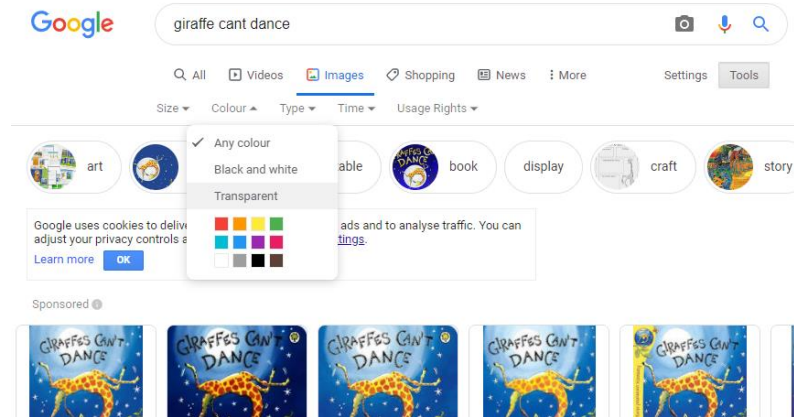
When the children have found their story QR Code they should scan it to access the story. They repeat this until they have accessed 2 stories.

Skill: Record an audio file and create a QR code to share its location with others.

Teacher pre lesson preparation – Save a copy of the example bookmark review for Harry Potter and the Philosopher's Stone
<https://www.j2e.com/fortprimary/Link2ICT+Scheme/Harry+Potter+Bookmark+Review/> The children will need to have written their book review script ready for use during the fourth lesson.

The children will design and create a bookmark that includes a QR code that is linked to a recording of the child reading their book review using J2e5. Show the children the example bookmark review for Harry Potter and the Philosopher's Stone.

- ✓ Demonstrate to the children how to search for images on the internet that are associated with their chosen book. Where possible they should try to find transparent images.



- ✓ Show them how to save the image to their computer and then upload the images to their J2e 'My Files'

Children decide which book they will do their review on and find and save images in Google to use. Upload these images to J2e My Files. Once the children have a selection of images uploaded to J2e 'My Files' you can move on to creating the bookmark in J2e5.

select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information

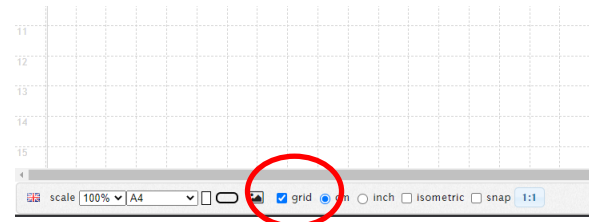
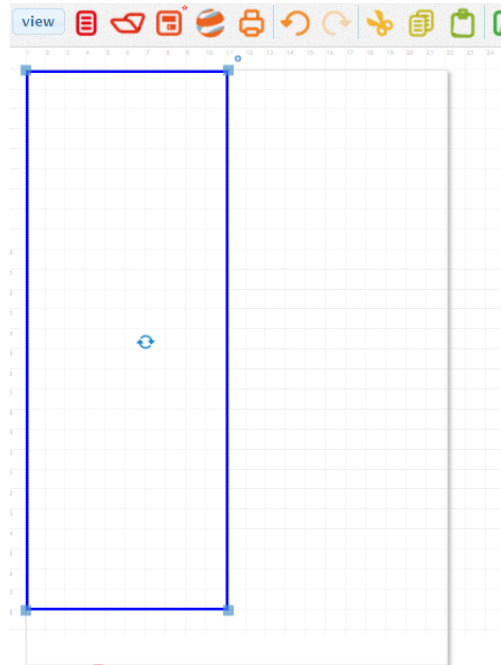
3 and 4

I can search for appropriate images using Google

I can save an image from Google

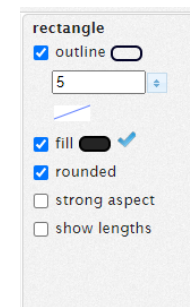
I can upload an image to J2e

✓ Scaffold each part of the creation of the bookmark with the children:
Create a new file in J2e5 and show and tell the children how to add a grid on to the page



Then change the scale of the page to 50% and draw out a rectangle using the shape tool so that the shape fills half of the width of the page and the length of the page.

When the rectangle is selected show how to change the format and style.



Then adjust the scale back to 100% and tell the children to save their work.



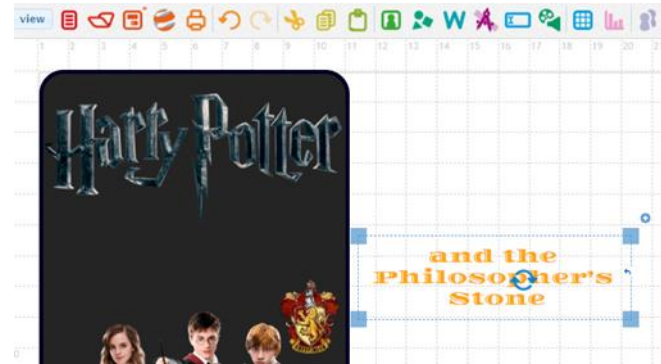
Allow children time to add a rectangle for their bookmark and change the style and format.

Demonstrate how to add images to the page N.B. make sure that the children understand that they are adding their bookmark design inside the rectangle outline. The bottom third of the bookmark needs to be kept free of images so that the QR code can be added.

I can add text boxes, shapes and images to a J2e5 file

I can use layers in J2e5

If the children wish to add their own text to the bookmark they will need to create the text on the half of the page that does not have the shape outline then drag the text box on to the position of the bookmark.



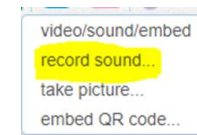
Allow children time to create the elements of the bookmark in J2e5.
Remind the children to regularly save the changes they have made.

Once the bookmark has been designed and all the images and text boxes have been added, the children need to be shown how to record a sound and link this to a QR code. **N.B.** there is a maximum of **10 minutes** recording time allowed for each recording made. Demonstrate:

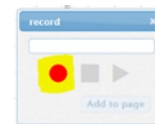
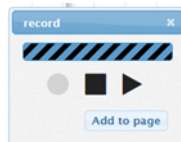
Click on the 'add video/ sound/ embed' icon



and select 'record sound'



When you are ready to start recording, select the red circle recording will start immediately.



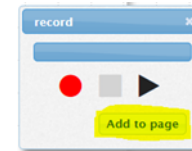
and the

I can record sound in J2e5

If the children make a mistake with the recording, they can click on the black square to stop the recording and press the red circle to start recording over the top of the previous

recording. N.B. remind the children to press the black square when they have finished speaking to stop the recording!!

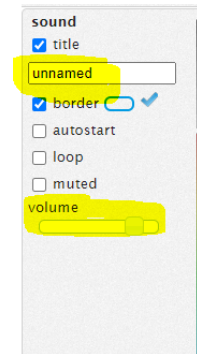
Once the children have a recording that they wish to use, click 'Add to page' and click on the second half of the J2e5 page to place the sound file.



Allow time for the children to record themselves reading their book review and add it to their J2e5 page.



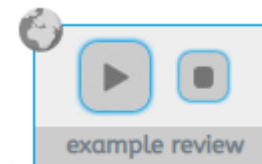
Click on the sound file to open the sound menu on the right-hand side of the screen. This will allow you to change the file name and adjust the volume if required



Tell the children to rename their sound file to something that will help them to remember what it is.

Once the file name has been changed tell the children to delete the sound file from the J2e5 page. N.B. the sound file has been saved in 'My Files' and it is from here where we will create the QR code and make the sound file public.

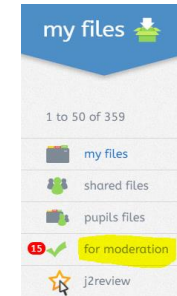
(instructions for this are further in the planning) N.B. when a child makes a file public in J2e, the file will go into the teachers 'for moderation' files area. The child's file will have a grey world symbol to show that the file is waiting to be accepted by the teacher before it can be made public.



I can rename a sound file in J2e5

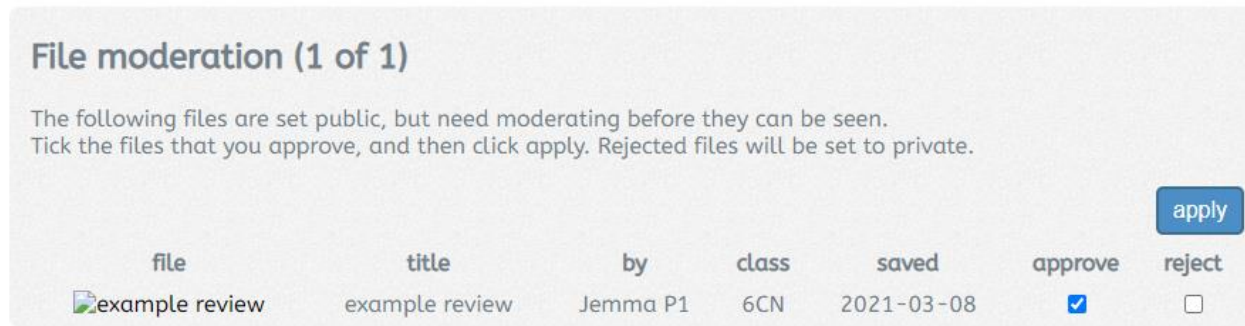
I can create a QR code that links to my sound recording in J2e

When the teacher logs on to J2e and selects the 'My Files' tile they will see 'for moderation' and a notification to say how many files are waiting to be moderated.



I can add a QR code to my J2e5 file

Open the 'for moderation' area and add a tick in the approve and click on 'apply'

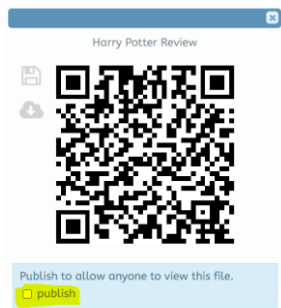
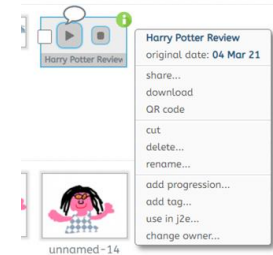


The file will now disappear from the 'for moderation area' and will now be public.

If you do not approve the file, then the file will not be made public and when the QR code is scanned it will prompt the user to log in to J2e. They will still get an error permission message as the file will also not have been shared with the user who is logging in to J2e5.

How to make a sound file public

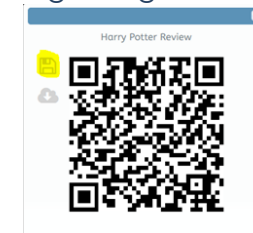
From the J2e Launch page open 'My Files', select the sound file you want to create a QR code to and click on the 'green circle with the white 'i' icon on the top right of the file. From the drop-down menu click 'QR code'



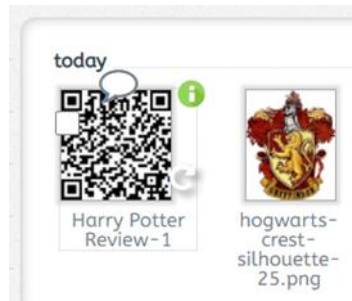
Put a tick in the 'publish' box. This will allow anyone who scans the QR code to listen to their sound file without needing to log in to J2e.

Once you put a tick in the publish box, the blue section will disappear. Then click on the save icon.

This will add the QR code as an image to the My Files area.



Allow time for the children to make their sound file public. N.B. you will need to approve them in the moderation area as noted above.



Open the J2e5 bookmark file and show how to add the image of the QR code to the bookmark and include a text box explaining what the QR code will do. Show how to remove the grid from the J2e5 file.

Allow children time to add the image of the QR code to the bookmark, remove the grid and save their work.

The bookmarks can be printed and put on display around the school or put in the school library for people to scan with a QR reader to listen to the children's book reviews.



Skill: Create QR codes that link to different media e.g. websites, audio files, notes to provide easily accessible information.

Create a class display of QR Codes linked to audio files of the children reading stories. The stories could be their favourite or could be linked to an author the class are looking at.

Headphones and built-in microphones might be useful to use during this lesson.

Content for the display may include information about the author as well as images of their books. Useful sites:

<https://www.michaelmorpurgo.com/>

I can create a QR code that links to my sound recording in J2e

I can add a QR code to my J2e5 file and print it

5

Use technology purposefully to create, organise, store, manipulate and retrieve digital content.

https://kids.kiddle.co/Ted_Hughes <https://www.lovereadng4kids.co.uk/author/1024/Ted-Hughes.html>
[https://kids.kiddle.co/J. K. Rowling](https://kids.kiddle.co/J._K._Rowling)
<https://www.worldofdavidwalliams.com/>

The children need to choose a section of a story to read aloud. They need to practice reading. Remember that there is a limit of **10 minutes** per recording in J2e5.

All the children can be given the same introduction to use at the beginning of their recording:

My name is _____ and I am going to read some of _____
(author's name) book _____ (book title)

Once the children have finished their recording, they need to save it, rename it, and create a QR Code that links to it. They should make the file public and the teacher will need to approve the file from the 'for moderation' area before the QR code will work when someone scans it. The QR Code needs to be saved and then added to a J2e5 page. The children need to add a text box with their name in and then print the QR Code from J2e5 as names do not print out on the QR Code image.



Sharon C

Resource for lesson 1 – QR Codes

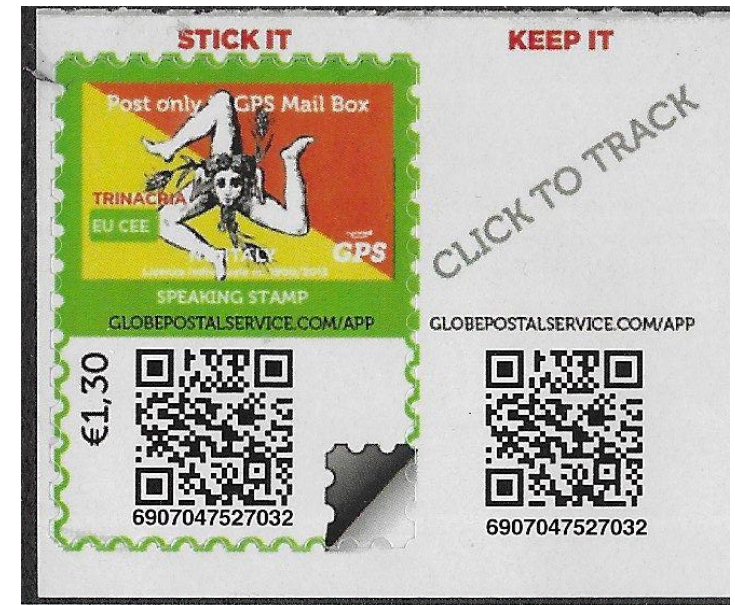
QR Code 1 from a bottle of Diet Coke



QR Code 2 from a bottle of Tea Time juice



QR Code 4 from a stamp



QR Code 3 from a Barbers Shop window



Resource for Lesson 1 QR Code Design Examples



Resource for lesson 2 – Scavenger Hunt – Into the Forest Image – Print this for the children to look at to identify the clues and stories.



Resource for lesson 2 – Scavenger Hunt – Into the Forest Image and Fairy Tale Answers



Stories and clues:

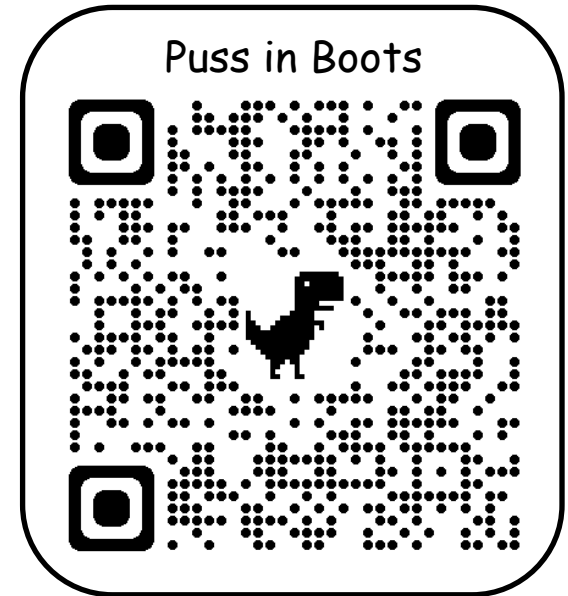
Sleeping Beauty – Tower and prince on a horse

Cinderella – Pumpkin and glass slipper

Puss in Boots - cat

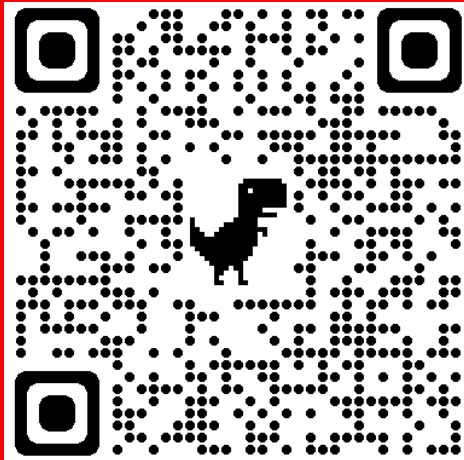
Rumpelstiltskin – Troll and spinning wheel

Resource for lesson 2 – Scavenger Hunt – QR Codes for Fairy Tale YouTube Story Responses

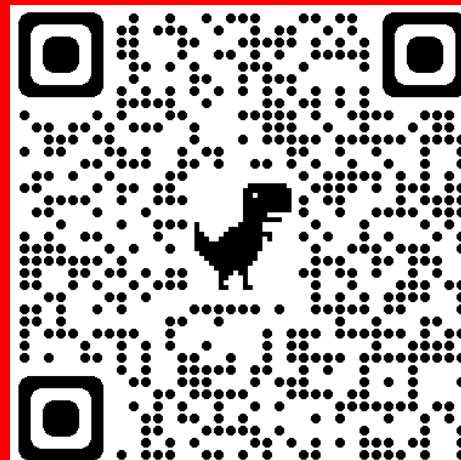


Resource for lesson 2 – Scavenger Hunt – QR Codes for Fairy Tale Read Along Story Responses

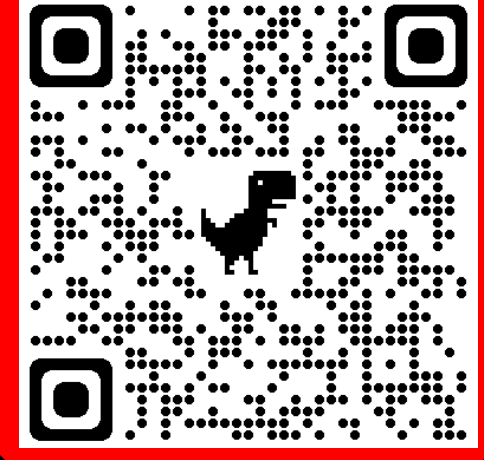
Sleeping Beauty



Cinderella



Puss in Boots



Snow White



Beauty and the Beast



Rumpelstiltskin

