Get Immersive with the

GADGETEERS

Activity Toolkit

2022

SUMMER READING CHALLENGE

Story Trails

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Table of Contents

Activities Table

Section	Activity	App/Resource	Equipment Needed
Finding Your Trail	**Picker Wheel** Come up with ten different ideas for a story, character or setting and use Picker Wheel to choose at random.	**Picker Wheel**	Device with internet connection (smartphone, tablet or computer) to access Picker Wheel website **No Tech Alternative** Paper and pens/pencils
	Storyboard Create a storyboard to visualise your story.		Paper and pens/pencils
	My Place Ask the group to share their favourite place in town, what's their favourite thing about it and to share a linked story.		
	ZBrushCoreMini Create a 3D object that can then be exported and used in other apps to create an AR experience.	**ZBrushCoreMini**	Computer running 64-bit editions of Windows 7 or newer, or Mac OSX: 10.11 of above. **No Tech Alternative** Crafting materials (eg. cardboard, glue, paper, plasticine)

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Telling Your Story	Create An Avatar Use Scaniverse to create a 3D scan of a person that you can then place through AR view.	Scaniverse	An iPhone or iPad running iOS or iPadOS 14.0 or later, with a A12 Bionic chip or later (eg. iPhone 12 Pro, iPhone 13 Pro, Apple iPad Pro).
	Story Postcards Take a photo of your AR Avatar and then print on a postcard. Then write your story on the postcard to share with others.	Scaniverse	An iPhone or iPad running iOS or iPadOS 14.0 or later, with a A12 Bionic chip or later (eg. iPhone 12 Pro, iPhone 13 Pro, Apple iPad Pro) (to run Scaniverse). Pens and Paper
	Create a Dancing Avatar Animate the avatar you previously scanned and created using Scaniverse.	Mixamo	A device with internet access to use Mixamo (web-based app). You'll need to create an account to use Mixamo.
	Create Your AR Experience Create an AR experience using the avatar you scanned and animated, or 3D objects you created in ZBrushCoreMini (or use pre-made assets). Add other elements like animation and sound to expand your story.	Adobe Aero	An iPhone or iPad running iOS or iPadOS 13.1 or later OR a computer running Windows 10 or macOS 10.13.

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Expanding the World	**Create a Diorama** Create a model of the setting for your story to share with others.		Crafting materials eg. plasticine, lego, recycling materials like cardboard, plastic bottles
	Sensory Storytelling Bring a story to life by using all five senses.		Materials needed vary depending on the story that you're trying to tell
	Promenade Performance Tell a story with a performance moving around your library, school or community space.		Props and costumes to help you tell the story
	Making Music Create music or a soundscape to help tell your story and immerse your audience in the environment you've created.	**Keezy** **Garageband**	**For Keezy** An iPhone, iPod Touch or iPod running iOS/iPadOS 8.0 or later. **For Garageband** An iPhone, iPod Touch or iPod running iOS/iPadOS 15.0 or later, OR a Mac running macOS11.5 or later.

Introduction

StoryTrails is a unique, immersive storytelling experience. It aims to allow local people to experience their town in a completely new way through immersive technology, including augmented and virtual reality. People will be able to use this new technology to travel back in time, experiencing untold histories from their local community.

The Summer Reading Challenge is an annual reading engagement programme delivered by The Reading Agency. It aims to tackle the summer reading 'dip' by encouraging children aged 4 - 11 to read for pleasure over the summer holidays by setting a reading target, reading their books and receiving rewards and incentives along the way. The theme for this year's Challenge is 'Gadgeteers'. Developed in collaboration with the Science Museum Group, the Challenge will show children that science is all around us every day and inspire them to unleash their curiosity and creativity!

This pack brings together StoryTrails and the Summer Reading Challenge, providing activities to help children and young people explore the themes of innovation, technology and immersive storytelling. So, what do we mean when we say 'immersive storytelling'?

Immersive Storytelling

Immersive Storytelling is using immersive technologies, like augmented and virtual reality, to tell a story.

Augmented reality (AR) is where digital objects are made to appear in the physical world, usually via a mobile phone screen, or large interactive screen. StoryTrails will be using AR to **bring archive, people, places and objects from the past into the real world**, allowing audiences to experience history within their local environment in new and exciting ways.

Virtual reality (VR) is the use of computer technology to create a simulated or completely imagined environment which a user is completely engaged with. StoryTrails has commissioned 9 creative companies to **create VR experiences** which reimagine and reinterpret national media archives.

By using these technologies, storytellers can create an experience for users that opens up worlds that they may not otherwise experience.

How to Use This Pack

This pack is full of resources and activities to help you celebrate science and innovation through your own activities this summer. The activities in this pack are broken down into four different sections: Finding Your Trail, Telling Your Story, Expanding the World and Sharing Your Story.

In each section, you will find resources and apps, followed by suggested activities for each, as well as some activities requiring no technology.

You will also find suggested session plans to help you use the activities to create a truly immersive experience in your library, classroom or community, as well as suggestions for books using Augmented Reality. There is also more information about the StoryTrails App and how to use it to try out the Spatial maps created for the project - even if you don't live in a StoryTrails location!

What You Might Need

Each resource and activity within this pack has a list of equipment you will require and the minimum system requirements you will need to run any software. This is a list of the most common equipment you will need to run the activities:

- A smartphone or tablet (Most of the apps in the Gadgeteers Activity Toolkit require a device running iOS or iPadOS 14.0 or later, but you will find apps throughout that run on older operating systems and Android devices)
- Paper and Pens/Pencils
- Scrap material, such as cardboard boxes, recycled material and old newspapers
- A VR Headset (optional)
- A copy of *The Atlas of Great Journeys* by Philip Steele, illustrated by Christian Gralingen (optional)

StoryTrails is a digital, storytelling project, but we understand that some groups will not have the same level of digital access as others. Throughout the Gadgeteers Activity Toolkit, we have included activities that don't require technology so that all children can dive into the themes of immersive storytelling, innovation and creativity shared by StoryTrails and the Summer Reading Challenge's Gadgeteers.

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Finding Your Trail

The first step to storytelling is working out what story you want to tell. In this section, you'll find resources, apps and activities to help children come up with story ideas - both fictional and non-fictional - that they may want to tell through immersive storytelling.

Picker Wheel

Website	https://pickerwheel.com/
Price	Free
Description	Picker Wheel is a fast and easy random picker. Put in your options, spin the wheel and get a result. This app is a great way to choose from multiple options, like which character to use for a story.
Activity	As a group or on your own, come up with ten different ideas for the story you're going to be telling. Add each option into the wheel, and then spin the wheel to select which idea you're going to be using for your story! Repeat this for your story setting and the characters that will appear.
No Tech Alternative	If you have limited access to a device, you can instead write your ideas down on scrap pieces of paper and put them, folded up, into a bowl. Pull one out at random to find out which story, setting and character you'll be using!

Idea: Struggling to come up with ideas for characters? Why not use the **Summer Reading Challenge characters or narrative** as inspiration!

You can also look at your favourite stories for inspiration for your own character.

Storyboard

Once you have an idea for your story, setting and characters, it's time to expand on the idea. For each key stage of your story, draw an image (or take a photo!). This will help you when creating the different elements that you'll use to tell your story.

My Place

Use what the group love about their local area and their stories as inspiration for a story. Ask the children:

- What is their favourite place in their town
- What's their favourite thing about it?
- To share their favourite story that is linked to that place.

ZBrushCoreMini

Website	https://zbrushcore.com/mini/index.php
Platform/ Requirements	Minimum System Requirements • 64-bit editions of Windows 7 or newer • Mac OSX: 10.11 or above • CPU: Core2duo with SSE2 technology or better • RAM: 4GB (6GB+ strongly recommended) • HDD: 8GB of hard drive space for the scratch disk • Pen table: Mouse or Wacom compatible (Carbon API) pen tablet • Monitor: 1280x1024 monitor resolution with millions of colours. Most card manufactured 2008 or newer. Must support OpenGL 3.3 or higher.
Price	Free to use - Sign up required
Description	ZBrushCoreMini is designed for new artists of all ages, with a streamlined interface that lets anyone jump straight in and start sculpting immediately. Using ZBrushCoreMini, you can sculpt a sphere or stone block into different shapes using digital sculpting brushes. These 3D models can then be exported into other programmes to use as part of an AR experience, or printed using a 3D printer.
Activity	ZBrushCoreMini is a simple way to create a 3D virtual object. This could be a character, an important object for the story or a part of the set. When starting a new project, you can choose between a sphere mesh or a rectangular mesh to start your shape. On the left-hand side of the screen, you will find different tools you can use to reshape the original mesh. Select one and click on the shape to edit it's appearance. You can also change the colour and texture of the shape. You can turn the shape by right-clicking and dragging the shape. When you've finished, you can export as an .obj file to import into other applications by clicking the icon at the top of the screen that says 'Export for 3D Printing'.

Take It Further	Use Abode Aero to add your object into an AR experience – you'll find details about how to do this in the next section.
No Tech Alternative	Instead of creating a virtual object, create a real one! Use materials that you have available to make a model of your character or other important objects that will help you tell your story. (You could later use an app like Scaniverse to scan your real-life objects and app them to a virtual experience).

Other Story Idea Sources

- Use your library's archive to dive into local history stories and share the stories with the group. Use this as inspiration for your story.

- Invite a local history expert to talk to the group and share local stories and choose one to tell.

- Using a voice recorder app on a smartphone or tablet (or other recording equipment if available), children could interview others about their own stories. (You could use the 'My Place' activity as a prompt for questions to ask interviewees).

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Telling Your Story

Once you've decided on the story you want to tell through immersive storytelling, it's time to start putting the experience together. The resources and activities in this section will help you create an immersive experience for those that are going to enjoy your story.

With a table or smartphone, you can scan 3D objects or people to create a digital version of them. Below, we share apps and ideas to create a dancing avatar and start to develop a story using immersive technology.

If you have limited access to a smartphone or tablet, or the one you have can't run the apps below, then you can get the children to develop an avatar on paper through drawing, painting or collage – or they could create a 3D avatar sculpture using plasticine or Lego. You can then make the avatar move through stop motion, an animated filmmaking technique where you take multiple photos of your objects, moving them slightly between each image, and piece them together to create an animation (using a filmmaking programme or an app like **Stop Motion Studio**). Or you could cut out the paper avatar and turn them into a puppet by attaching string.

Scaniverse

Website	https://scaniverse.com/
Platform/ Requirements	**iOS** Requires iOS or iPadOS 14.0 or later, and a device with the A12 Bionic chip or later. The device must also have LiDAR for scanning objects (eg. iPhone 12 Pro, iPhone 13 Pro, Apple iPad Pro).
Price	Free
Description	Scaniverse lets you capture, edit and share 3D content directly from your phone. Using LiDAR, it builds 3D models with high fidelity and stunning detail. Scaniverse can be used to scan both objects and people. For more information about using Scaniverse to scan 3D objects, check out **this guide** by IsoDesign.

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Activity	**Create an Avatar** An avatar is a digital representation of a user, their character or their persona. In this activity, you'll be taking a 3D scan of a person, to then turn into an avatar! To ensure you get a good scan, remove any objects around the person that you want to scan, and make sure the scanning area is well lit with minimum shadows. The person to be scanned should be stood in a T-pose stance, with their arms stretched out and legs apart. They will need to stand as still as possible as any movement will reduce the quality of the scan. (If you're not going to be animating your avatar, it may be more comfortable to scan your person sitting down). The person scanning should stand in front of them, holding the device. After pressing 'scan', red areas will appear around the scanning target. The person scanning should slowly move around the person being scanned, removing any red areas. When all the red areas have disappeared, the scan is complete. Press 'scan' again to stop scanning and begin editing. Click 'Edit' to crop the 3D scan you just took. Resize the white rectangle on each view (left, right and top view) to match the model's dimensions. **Take It Further:** If you're telling a fictional story, you could create a costume for one of your characters to wear when you're scanning yourself. Or be inspired by Gadgeteer James and create an AR fashion show!
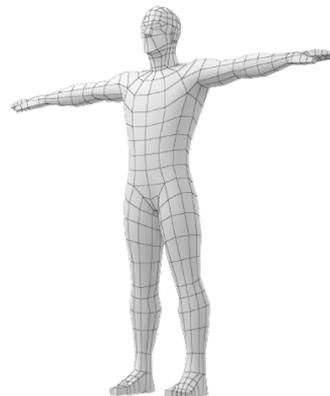
Next Steps	**Story Postcards** Once you've scanned your person, you can use Scaniverse to place your virtual objects in the real-world using AR View. Find a place to put your avatar that tells a story – like by their favourite object or book – and take a photo in the app. Print the image you've created and stick it onto a postcard. On the back of the card, ask the children to write a story about the object or person that's been scanned. Use these Story Postcards to create a display in your library that everyone can enjoy. **Create a Dancing Avatar** Keep reading to find out how you can use applications like Mixamo to animate the Avatar you've just scanned.

Mixamo

Website	https://www.mixamo.com
Platform/ Requirements	Web-based app
Price	Free
Description	Mixamo is an easy-to-use app that you can use to animate 3D characters. It comes with a library of ready to use characters and animations that you can then use in film, games, interactive experiences and illustration.

Activity	**Animate Your Avatar** Once you have scanned a person to create an avatar using Scaniverse, you can use Mixamo to add animations. First, head to the **website** and create an account. Then click 'Upload Character'. Drag and drop the .obj file (that, for example, you exported from Scaniverse). Then auto-rig your character by placing the markers on the different body parts as instructed. Select an animation from the Mixamo library and then review your animated character. When you're happy, click on 'Download' to get your .fbx file.
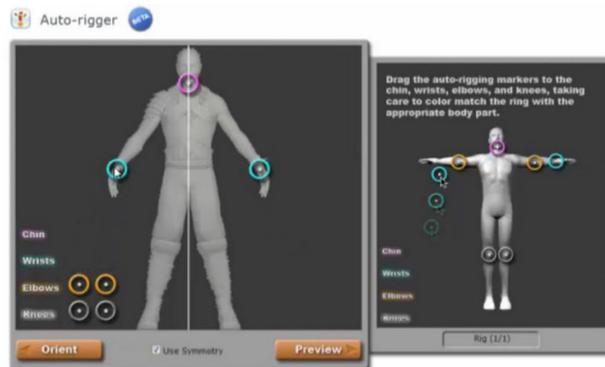
Adobe Aero

Website	https://www.adobe.com/uk/products/aero.html
Platform/ Requirements	iOS – Requires iOS or iPadOS 13.1 or later. Desktop (Beta) **Windows** • Win 10 64-bit 1903 (Windows 10 64-bit May 2019 Update, build 10.0.18362) • Intel 7th Gen or newer CPU – or AMD equivalent **Mac** • macOS 10.13 (High Sierra) and above • Intel 6th Gen or newer CPU Aero is not available for Android devices, but there is a separate **Aero Player App** so you can still view Aero experiences on your Android device.
Price	Free
Description	**Adobe Aero** is an intuitive way to build, view and share immersive AR experiences.

Activity	**Create Your Experience with Your Avatar** Once you have created an avatar in Scaniverse and animated it in Mixamo, you can use it to create an AR experience using Adobe Aero. You'll need to start by transferring the .fbx file from Mixamo to the device you will be using for Aero (eg. through Dropbox, Google Drive or iCloud). Press the blue '+' to create a new scene. Scan a surface and then tap to create a surface anchor. Then click the blue '+' again to start adding assets. Move your device until you've decided where to place the asset, then tap. You can add additional actions such as playing a sound, animation or linking to a website by clicking on the object. When you're finished, you can share what you've created by clicking the icon in the top right and then 'Share Link'. You can also create a QR code for people to scan with their smartphones. They will need the Adobe Aero app (or Aero Player App for Android) on their device to view the experience. For more about sharing what you've created, see the 'Sharing the Story' section. *(NB: Aero also has a built-in tutorial and assets that you can use to get familiar with the app and create an AR environment to explore if you're not able to create your own 3D elements).*
Take It Further	As well as visual objects, you can add sounds and narration to you experience to help tell the story and make it more immersive. You can use apps like Keezy or Garageband (in the next section) to create music to add to your AR environment, or you could record yourself talking using a voice recorder on your smartphone or tablet. For example, you could record an introduction to your character and their likes, dislikes and favourite book, or whenever you tap on an object it could tell you about it's history. To add audio, first tap on an object, then select 'Behaviours'. Press '+ trigger', and then choose between: • Start – The audio will start when the experience is first opened. • Tap – The audio will start when the object is tapped by the viewer. • Proximity – The audio will start when the viewer is a defined • distance from the object. Then select 'Play Audio' as your action, and select the audio from your files that you want to add.

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Alternative App	If you don't have a device that will run Adobe Aero, or want others to be able to view what you've created without needing to download another app, Blippbuilder is a web based app that can be used to create AR experiences.

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Expanding the World

In this section, you'll find activities to take your immersive storytelling to the next level, by incorporating even more elements to immerse the people experiencing your story in the world you've created.

Create a Diorama

Create a physical, 3D model of the setting of your story so that visitors can see it for themselves and imagine what it would be like to be there. There are lots of materials you could use to do this depending on what you have available, including plasticine, Lego and recycled materials like cardboard boxes and plastic bottles.

Take It Further: If you created physical avatars for your characters, you could use these and your diorama to act out a story and film it, or create a stop motion video. If you've created a digital avatar using Scaniverse, you could use AR view to see what they look like in the setting you've created.

Make your diorama even more immersive by creating it inside a cardboard box that audiences can then put their heads inside for a 360-degree experience! Experiment with cutting holes to add different light effects, think about how you could incorporate sound and smells and think about how audiences will use it - will you hang the boxes from the ceiling for audiences to pop their head up into or will you add handles so they can pick them up and hold them?

Sensory Storytelling

Creating a sensory story is a fantastic, accessible way of immersive storytelling, using little to no technology. A sensory story uses all five senses (Sight, smell, taste, touch and hearing) to help tell the story.

Start by choosing the story that you want to tell. Work through the story and identify the key moments. Next, think of a sensory experience that you could connect with each of those moments. For example, if you were telling the story of Goldilocks and the Three Bears, you could use:

- Sight – A photograph of a bear, or a drawing of Goldilocks.
  Three teddy bears, one big, one medium and one small.
- Smell – Porridge oats
- Taste – Some porridge or something in its place, like oatcakes or flapjack (being aware of any allergies or food intolerances in the group).
- Touch – Some fake fur, a heat pad and a cool pad (for too hot and too cold), pillows
- Sound – Sounds of the forest, patting legs to make the sound of Goldilocks running away at the end, making the noise of Goldilocks snoring in bed

As you tell the story, pass the items around the group at the key moments. Be careful

not to move on too quickly, so everyone in the group gets the chance to enjoy the sensory experience.

Take It Further: You could also dress up as the characters in the story and act out parts to engage the audience in the story.

Promenade Performance

Turn your theatre, school or community space into a theatre and tell your story in the style of promenade theatre, where the audience move from place to place during the performance. Dress up as the characters from your story and act out scenes at locations around your space, with the audience moving from one point to the next to get the next parts of the story. This could also incorporate any digital immersive storytelling elements you've created. If you have limited access to technology, you could instead focus on creating props and music for each
part of the story to help immerse the audience in the story.

Keezy Classic

Website	https://apps.apple.com/us/app/keezy-classic/id605855595
Platform/ Requirements	**iOS** Requires iOS or iPadOS 8.0 or later. Runs on iPhone, iPad and iPod Touch. **Mac** Requires macOS 11.0 or later and a Mac with Apple M1 chip.
Price	Free
Description	Keezy is a musical instrument for toddlers, professional musicians, and everyone in between! You get 8 coloured tiles. You can record a sound into each one. After recording, tap the tile to play it back, or press & hold to loop. Once you've got it down, record a jam to share with your friends.

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Activity	Open the Keezy app, then click the black circle and the green '+' to start a fresh board. You'll see eight rectangles with microphone logos on them. Tap a box to start recording a sound, and then tap again to stop recording. Now when you tap the box, it will play that sound. Press and hold to play the sound on repeat. To delete a sound, press the black circle and then the red 'x'. Then click the 'x' in the box to delete it's recording. Once all the boxes are full, you can begin to create your soundscape by playing the sounds. Experiment until you're happy, then click the black circle again, before clicking the orange button at the bottom. This will begin recording. Click the circle button in the centre to stop recording. You can then share the recording by clicking the blue 'Share' button and saving to files on your device.

GarageBand

Website	https://www.apple.com/uk/mac/garageband/
Platform/ Requirements	**iOS** Requires iOS or iPadOS 15.0 or later. Runs on iPhone, iPad and iPod Touch. **Mac** Requires macOS 11.5 or later.
Price	Free
Description	GarageBand is the easiest way to create a great-sounding song on your Mac, iPhone or iPad. You can use sounds from the Sound Library or import your own.

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Activity	**Mac** Open the app and create a new Project. Choose your track type – we recommend 'Audio – Record using a microphone or line input – or drag and drop audio files'. You can then drag and drop your audio files (either recordings that you have made or sounds you have downloaded from somewhere like **BBC Sound Effects**) and edit them until you're happy with the result. **iOS** Open the app on your device and then select 'Audio Recorder'. Then click the icon in the top left corner to view the audio tracks and timeline. You can record sounds directly into the app by clicking the red record button at the top of the screen, or import sounds from the files on your device by clicking the 'loop' button in the top right corner.
Alternative Resource	If you don't have a Mac or iOS device, you can edit and create your soundscape on a Windows or Linux PC using **Audacity**.

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Sharing the Story

Once you're created your story you'll going to want to be able to share it with others so that they can enjoy it too! This section has some information about ways you can do this within your library, school or community space.

Physical Exhibition

If you've created any physical items (eg. story postcards, models of objects or dioramas) and you have space in your location, you could create a physical exhibition that's open to visitors to share your stories. You could create cards that explain the story connected to the objects, or add QR codes (see below) for visitors to scan and find out more.

You could also add a speaker playing any music or soundscapes that were created to add to the atmosphere.

QR Code Trail

QR Codes are square barcodes which, when scanned using the camera on a smartphone, open a link to a website. The content for each part of the trail will need to be hosted on the internet somewhere – for example, on Youtube or on the library website – so it can be accessed once the code is scanned. You can use a website like **www.qr-code-generator.com** to create the QR codes you will need to share. (If you've created an AR project using Adobe Aero or Blippbuilder, they will provide a QR code for you to share when you publish your project. When scanned, this will open the experience on the users' device. For Adobe Aero projects, they'll need the app to view).

If you have multiple elements to your story, you can create a trail of QR codes around your space. (If they need to be enjoyed in a particular order, don't forget to number them or provide a map so that people can follow the route!) At each point, the person joining the experience will scan the code, follow the link, and the image, video or AR experience will open.

It may be useful to also provide instructions on how to use the codes for those who may be less familiar.

Social Media and Websites

If your library, school or community group has a social media page or website, you can also use this to share the stories you have created. You could create a photo album with pictures of what you've created, or share a link to an AR project made in Aero AR so people can try it out for themselves at home.

The Reading Agency and Summer Reading Challenge teams would love to help

you share your creations far and wide, so be sure to tag us in anything you post on social media (**@readingagency**) and use the hashtags **#SummerOfStories** and **#Gadgeteers**.

Remember, when sharing anything publicly you'll need to follow your organisation's online safety and media consent guidelines.

StoryTrails App

As part of the StoryTrails project, we have created a mobile AR app that will lead participants around the various story points in their local area to experience history where it actually happened. At the 15 libraries across the country on the StoryTrails route, participants will be able to enter through a 'story portal' to begin the AR StoryTrails experience. These AR trails will be available until 2023, so if you are in the area you will be able to experience these trails for yourself!

For those not in a StoryTrails area, you will still be able to use the app or website to experience trails from across the country for yourself. These stories may inspire you to create your own in your area!

Instructions on how to download and use the app to access the AR trails and the spatial map will be shared in June.

1-2 July	**Omagh**
7-8 July	**Dundee**
12-13 July	**Dumfries**
16-17 July	**Blackpool**
22-23 July	**Bradford**
27-28 July	**Sheffield**
30-31 July	**Lincoln**
6-7 August	**Wolverhampton**
10-11 August	**Swansea**
13-14 August	**Newport**
20-21 August	**Bristol**
27-28 August	**Swindon**
3-4 September	**Slough**
10-11 September	**Lambeth**
17-18 September	**Lewisham**

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The Atlas of Great Journeys

About the Book
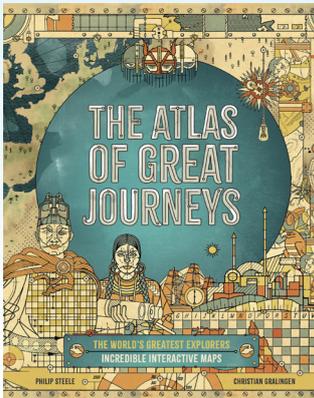
The Atlas of Great Journeys allows readers to follow in the footsteps of the most daring adventurers as they set out to explore the unknown. Fascinating original map illustrations show the world's greatest journeys, and lavishly illustrated fact pages tell the stories of each expedition – what dangers they faced, how long they travelled, and much more.

As well as amazing illustrated maps and stories, this book has a unique Augmented Reality component that magically brings these journeys to life. Use your tablet or phone on each map spread to trace the routes they took and read about every stage of their journeys.

The book is available at library suppliers **Peters** and **Gardners**, as well as all well-known bookshops.

How to Use

Before beginning reading, you will need to download the free 'The Atlas of Great Journeys' app, available for both Android and iOS Devices (full information on compatibility can be found in the '**About Section**').

Using the app, you will be able to view the map pages in the book to see the routes of three historic journeys, visualise the weather conditions those journeys were made in and have a closer look at the explorers' vehicles.

Session Plans

We have created two session plans to help you with your planning and inspire further thought. The second plan is designed for libraries, schools or other settings who may not have access to as much technology as other settings, but still want to explore the themes of the Summer Reading Challenge and StoryTrails with their children and young people.

Plan One - Create an AR Experience to Explore

During this session, the children or young people will:

- Devise a story to tell using immersive storytelling
- Create virtual 3D models of their characters
- Create a soundscape to help tell the story
- Use Adobe Aero to combine all the elements in an AR environment

Equipment Needed

- An iPad or iPhone running iOS or iPadOS 14.0 or later, with a A12 Bionic chip or later. (eg. iPhone 12 Pro, iPhone 13 Pro, Apple iPad Pro).
- Costumes for dressing up as your characters

Activity One – Devise a Story

As a group or individually, children will come up with a story that they want to tell through immersive storytelling. For ideas of activities to help with this part, look at the **Finding Your Trail** section of this activity pack.

Activity Two – Create 3D Models

Time to play dress up! For each of the characters in your story, pick an outfit. Then use **Scaniverse** to scan each other and create 3D Avatars to use in your AR project. You can use **Mixamo** to add animations to these before adding them to Adobe Aero later.

If you're short on time, or you don't have access to a device that will run Scaniverse, you could skip this step and instead use the ready-made assets in Adobe Aero to tell your story. Use these as prompts when devising the story in the previous activity.

Activity Three – Add Sounds to Tell The Story

Using the **Voice Recorder App** on your device, record a short audio clip for each character – this could be a sound, or them reading a section of the story. When you put the project together, this will be played when someone taps on the character.

Activity Four - Create AR Environment

Using **Adobe Aero**, we're now going to bring all the elements you've created together. Before you begin, you'll need to transfer all the files to the device you're using to create the AR project.

Press the blue '+' to create a new scene. Scan a surface and then tap to create a surface anchor. Then click the blue '+' again to start adding assets. Move your device until you've decided where to place the asset, then tap.

You can add additional actions such as playing a sound, animation or linking to a website by clicking on the object.

When you're finished, you can share what you've created by clicking the icon in the top right and then 'Share Link'. You can also create a QR code for people to scan with their smartphones. They will need the Adobe Aero app (or Aero Player App for Android) on their device to view the experience.

Plan Two – Create a Physical StoryTrail
Equipment Needed

- Paper and Pens/Pencils
- Crafting materials like cardboard, fabric, paint, glue, plastic bottles etc.

Activity One – Devise a Story

As a group or individually, children will come up with a story that they want to tell through immersive storytelling. For ideas of activities to help with this part, look at the **Finding Your Trail** section of this activity pack.

Activity Two – Create an Object

From the story you have devised, identify an object that could help tell the story. Using crafting materials, create this object to then display somewhere in the library. Once the object is created, ask them to create a 'plaque' that will tell the story associated with the object.

Work with the children to find spaces in your library, school or community space to display each of the objects.

Take It Further: Think about the five senses and how you could use these to enhance the story. For example, is there a particular smell that could add to the story? Try to incorporate this into the object to make the story more immersive.

Activity Three – Draw a Map

To help visitors enjoy the story in the right order, draw a map of the location and label where each object is in the space. If there's a particular order they need to follow the story in, don't forget to add numbers!

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Additional Guidance/Information

Gadgeteers – Summer Reading Challenge 2022

This year's Challenge is called 'Gadgeteers' and will celebrate the key role of the imagination in both reading and the sciences. Developed in collaboration with the Science Museum Group, the 2022 Summer Reading Challenge will show children that science is all around us every day and inspire them to unleash their curiosity and creativity!

Our Challenge will be set in a fictional summer holiday club where our young innovators, or 'Gadgeteers', will come together to use creative thinking and teamwork to plan the best ever party for the town's celebratory summer fair. Challenge participants will meet six fun characters and help them come up with cool inventions for the summer party. They will be introduced to many aspects of science engagement, including food, fashion, music, and sport – something for everyone to enjoy!

The Summer Reading Challenge is delivered by The Reading Agency in partnership with public libraries and funded by Arts Council England. The Challenge encourages children aged 4 to 11 to enjoy the benefits of reading for pleasure over the summer holidays by setting themselves a reading target, reading their books, and receiving rewards and incentives along the way. Through this, it provides lots of fun and helps to prevent the summer reading 'dip'. Each year the Challenge motivates over 700,000 children to keep reading to build their skills and confidence. In 2022, the Challenge will launch online and in libraries in Scotland and Northern Ireland on the 25th of June. The Challenge will launch in libraries in England and Wales on the 9th of July.
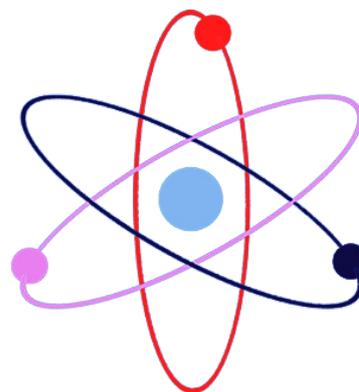
The Reading Agency

The Reading Agency is a national charity that tackles life's big challenges through the proven power of reading. We work closely with partners to develop and deliver programmes for people of all ages and backgrounds; our vision is for a world where everyone is reading their way to a better life. We help 1.9 million people benefit from reading every year, through our programmes, our tireless campaigning, our excellent networks and our power to influence, challenge and make change happen. The Reading Agency is funded by Arts Council England.

Website | **Twitter** | **Facebook** | **Instagram** | **Resources**

The Reading Agency has run **Chatterbooks**, the UK's largest network of children's reading groups, since 2001. Reading for pleasure has more impact on children's success than education or social class; Chatterbooks groups, which are run in libraries and schools, help children develop a lifelong reading habit. Chatterbooks is a flexible model that can be used with children from 4 to 12, for all different abilities and in targeted or mixed groups.

The Reading Agency's **Teachers' Reading Challenge** is an opportunity for school and library staff to expand their knowledge of children's books and develop their understanding of reading for pleasure pedagogy. Run by The Reading Agency in partnership with the Open University, the Challenge invites participants to join a supportive and inspired community of educators and readers, set their own reading goal, share reviews, access resources, and submit an example of practice. The Challenge, which had over 2,700 people take part last year, is open to all education and school and public library staff, as well as trainee teachers. The 2022 Teachers' Reading Challenge launches across the UK on the 25th June 2022. People can sign up to take part and receive newsletter updates full of reading resources and updates on the **website**.

For any questions or for more information about the Summer Reading Challenge, get in touch at **SummerReadingChallenge@ReadingAgency.org.uk**. For any other questions, please contact us at **Comms@ReadingAgency.org.uk**.

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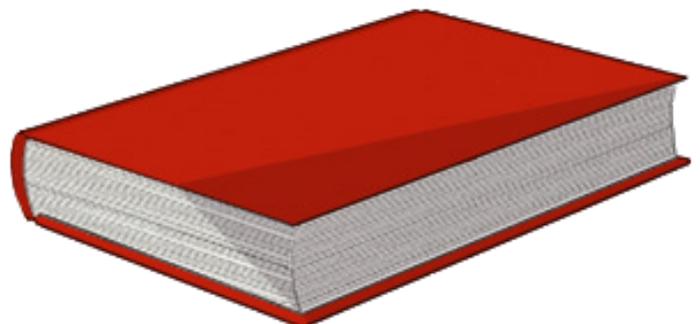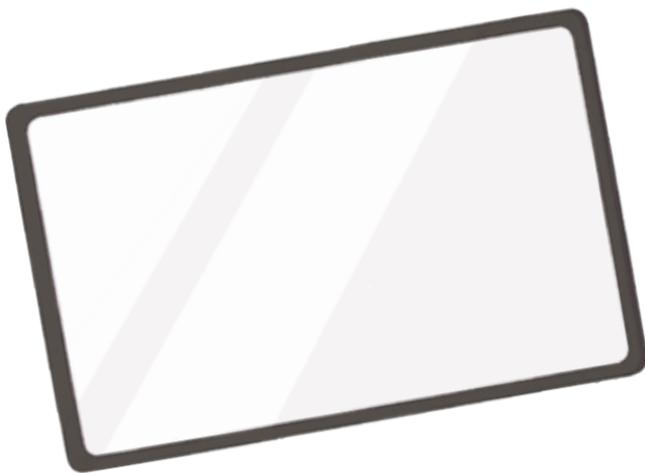
StoryTrails

StoryTrails takes place from July to September 2022 in Blackpool, Bradford, Bristol, Dumfries, Dundee, Lincoln, London (Lambeth and Lewisham), Newport, Omagh, Sheffield, Slough, Swansea, Swindon and Wolverhampton. It will culminate with a brand new film for the BBC and the BFI by David Olusoga: exploring our history, considering our lives today and starting new conversations about where we might go next.

StoryTrails is led by StoryFutures Academy, which is run by Royal Holloway, University of London and the National Film & Television School (NFTS) and is delivered in partnership with the British Film Institute (BFI), David Olusoga, Uplands Television, ISO Design and Nexus Studios using cutting-edge technology from Niantic, makers of Pokémon GO. It will be brought to life in The Reading Agency's national network of libraries by event-making specialists Produce UK.

Website | Download the Comms Toolkit

Dates	Location
1-2 July	Omagh
7-8 July	Dundee
12-13 July	Dumfries
16-17 July	Blackpool
22-23 July	Bradford
27-28 July	Sheffield
30-31 July	Lincoln
6-7 August	Wolverhampton
10-11 August	Swansea
13-14 August	Newport
20-21 August	Bristol
27-28 August	Swindon
3-4 September	Slough
10-11 September	Lambeth
17-18 September	Lewisham

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UNBOXED: Creativity in the UK

UNBOXED: Creativity in the UK is a once-in-a-lifetime celebration of creativity, taking place across England, Northern Ireland, Scotland, Wales and online from March to October 2022. UNBOXED is lifting the lid on 10 awe-inspiring new ideas, shaped across science, technology, engineering, the arts and mathematics by brilliant minds working in unexpected collaborations. Unmissable events and unforgettable experiences are coming to places and spaces right across the UK: from coastal towns and city centres to breathtaking areas of natural beauty.

Everyone in the UK can enjoy UNBOXED, in person, on TV, on radio and online – entirely for free. And there are countless ways for people to get involved in every part of the UNBOXED programme: diving into UK-wide learning programmes, taking part in workshops and special events, even playing a central role in bringing some of these astonishing projects to life.

UNBOXED: Creativity in the UK is the biggest and most ambitious creative programme ever presented on these shores. It's funded and supported by the four governments of the UK, and is co-commissioned with Belfast City Council, EventScotland and Creative Wales. Join millions for this landmark exploration of how creativity – our creativity – has the power to change the world.

Website

StoryFutures Academy

StoryFutures Academy is the UK's National Centre for Immersive Storytelling, run by Royal Holloway, University of London and the National Film and Television School (NFTS). Funded by the Arts and Humanities Research Council as part of UK Research and Innovation's industrial strategy challenge fund, the Academy is based at StoryFutures R&D Cluster develops cutting-edge creative training and research programmes, to ensure the UK creative workforce is the most skilled in the world in the use of VR, AR and MR for immersive storytelling.

Alumni of StoryFutures Academy labs have so far included Oscar and BAFTA winning Director Asif Kapadia, Oscar winning VFX Supervisor Paul Franklin, Turner Prize winning conceptual artist Gillian Wearing OBE, and Channel 4 Documentaries Commissioning Editor Fozia Khan.

Over £500,000 has been invested in UK immersive production, across co-productions with BBC3, and Production Booster and Kickstart development funding. The award-winning VR Documentary Common Ground was the first-ever funded co-production, premiering at the Tribeca Film Festival in early 2019. Violence, an artistic collaboration between film director Shola Amoo (The Last Tree) and producer Eleanor Whitley (Marshmallow Laser Feast), had its world premiere at the Tribeca Film Festival, as part of the Cannes XR Virtual at the Marché du film de Cannes, held online and in virtual reality, in June 2020.

Website

The Atlas of Great Journeys by Philip Steele, illustrated by Christian Gralingen (Welbeck, 2021)

The Atlas of Great Journeys allows readers to follow in the footsteps of the most daring adventurers as they set out to explore the unknown. Fascinating original map illustrations show the world's greatest journeys, and lavishly illustrated fact pages tell the stories of each expedition – what dangers they faced, how long they travelled, and much more.

As well as amazing illustrated maps and stories, this book has a unique Augmented Reality component that magically brings these journeys to life. Use your tablet or phone on each map spread to trace the routes they took and read about every stage of their journeys.

The free app is available for compatible iPhones or iPads running iOS 11.3 and above, iPhone SE and above, and iPad 5th Gen and above, or compatible Android devices running Android 7.0 and above and supporting Google's ARCore v1.7 or higher.

Author: Philip Steele

Philip Steele is an acclaimed children's author who has written many books, including 'The Incas and Macchu Picchu' and 'I Wonder Why The Pyramids Were Built'.

Illustrator: Christian Gralingen

Christian Gralingen works as an Art Director and Illustrator in Berlin. He has a diploma in Communication Design from the University Duisburg-Essen (Folkwang). His client list includes design agencies, publishing houses, magazines, academic institutions and foundations.

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Digital Safety Guidelines

This pack includes links to external websites and apps. Whilst these have been reviewed during the creation of this pack, The Reading Agency and StoryTrails have no control over the contents of any linked website or app and are not responsible for these websites, their content or their availability. We encourage you to review these resources, in line with your organisations' own guidance, before using them in your work with children.

When working with children and young people, it's ensure they know how to use the internet safely. As a guideline, here are the rules for using the Summer Reading Challenge website, which you can use to create your own for your project or group:

1. **Stay safe** – don't include any personal information in your messages. This includes your name, email address, street address and phone number.
2. **Don't include the personal details of anyone else in your messages**, including parents, guardians, teachers or group leaders.
3. **Don't post rude, racist, offensive, violent or vulgar messages** to the site.
4. **Treat everyone with respect** – even if someone has a different view to your own, don't let it get personal.
5. **Don't glamorise illegal or dangerous activities** – it's OK to talk about what happens in a book, but don't encourage others to follow it's example.
6. **Don't write anything mean about anyone**, including other users, parents, guardians, teachers, social workers, group leaders and famous people.
7. **Don't write everything in CAPS or emoji** – it isn't easy for everyone to read.
8. **Don't post entire messages in text speak** – it's OK to shorten some words but not everyone understands text speak or finds it quick to read.
9. **Don't post links to other websites** – there's no way of controlling what these sites contain.
10. **Don't break copyright rules.** This means you shouldn't post text from someone else's books.

Be sure to also follow your organisations' own safeguarding, online safety and media consent guidelines when creating and sharing content online.

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Glossary

Augmented Reality (AR)
Augmented Reality (AR) refers to technology that superimposes a computer-generated image on a user's view of the real world, thus providing a composite view.

Avatar
An icon or figure representing a person in a digital space, like a video game or internet forum.

Geocaching
An activity where users search for an item, or a container containing items, hidden at a particular location using coordinates posted on the internet.

Immersive Technology
Technologies that are used to create experience by merging the physical world with a digital or simulated environment.

Immersion
The sensation of feeling present in a digital environment.

Mixed Reality (MR or MX)
The process of anchoring virtual objects to the real world and enabled users to interact with them.

QR Code
A Quick Response (QR) Code is a type of barcode which contains data, like a website link. Some smartphone cameras can now be used as QR Code scanner, and will open the link contained in the code in your chosen web browser when scanned.

Virtual Reality (VR)
Virtual Reality (VR) is where the user is engaged within an entirely digitally created world. It is the use of computer technology to create a simulated or completely imagined environment.

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