

# Let your imagination fly!



## Resource guide

The aim of Little Inventors resources is to allow children to express the far reaches of their imaginations. To inspire children to think up and draw original, ingenious, funny, fantastical or perfectly practical invention ideas - there are no limits! We believe that by giving children the chance to explore ideas freely, they can gain confidence in their own creativity and problem-solving abilities and develop their curiosity about the world around them.

Little Inventors is delighted to be working with Alexandra Palace to invite children to take part in the *Let your imagination fly!* challenge.

Children will be able to draw and submit their own inventions to appear on a dedicated Little Inventors online gallery, where they will be reviewed by the Little Inventors team. Their idea might be chosen as team favourite, or even made into a real object that will be exhibited and celebrated at Alexandra Palace in November 2019 for World Inventors Day!

Familiarise yourself with the resources available before using them:

Start by downloading the challenge pack.

### **Ally Pally Challenge presentation**

Use this presentation on a whiteboard or computer to support you while delivering the workshop.

### **Printed materials**

- Activity sheet: The Great Hall
- Activity sheet: Alexandra Park
- Activity sheet: London Skyline
- Invention sheet: Draw your invention

*For teachers/ workshop leaders:*

Curriculum links

### **Tools or materials needed during the session**

Make sure you have plenty of black pens and colouring pens available.

# Using the resources

This guide suggests how you might want to use the Little Inventors resources to run a structured workshop over a single or double lesson. Customisable and extended activities are also provided to enable all children to make the most of the resources.

## **Get started!: The spirit of Alexandra Palace (15 mins)**

Explain that in this challenge, children will learn about Alexandra Palace and its history. They will learn about the spirit of invention that characterises the palace through the ages and in the present, and its tradition of innovation through entertainment. They will start to think about invention ideas that could enhance the landmark.

Open the *Let your imagination fly* presentation and go through the slides with your class:

- Slide 2 introduces key moments in the history of Alexandra Palace.
- Slide 3 showcases the innovators of the past.
- Slide 4 focuses on the spirit of innovation of Alexandra Palace.
- Slide 5 introduces Little Inventors.
- Slide 6 is a video to explain the challenge and show some of the activities happening at Alexandra Palace.
- Slide 7 shows the different features of the building.
- Slide 8 introduces and supports the Great Hall activity.
- Slide 9 introduces and supports the Alexandra Park activity.
- Slide 10 introduces and supports the London Skyline activity.
- Slide 11 shows the invention sheet to work from.
- Slide 12 offers a chance to reflect on the work.
- Slide 13 gives guidance on how to upload the invention to the website.

Have a class discussion on inventions and entertainment, for example:

- What is an invention?
- Can you name some well known inventions?
- What about ordinary objects? Why were they invented?
- What do people like to do to have fun or when they go out?
- Inventions are a way to bring new things to life - can you think about new ways to have fun?
- Can you think about how you can make the most of a very large space?

# Activities

We recommend choosing one of the following activities, which will encourage the children to start to think about inventing by engaging with different spaces and locations. You can also complete more of the activities depending on the time you have available. All of the starter activities encourage drawing freely, but the main drawing activity should be on the invention sheet itself.

## Activity sheet: The Great Hall

Choose this activity if you wish to give children an opportunity to think about volume and capacity. Start by giving them a Great Hall activity sheet.

Use slides 7 and 8 to support the activity. Start by showing them all the different features of Alexandra Place to give them a sense of how big a building it is - it covers over 30,000 square metres, which is almost as big as 7 Tower Bridges put together!

Then move to slide 8. Explain that one of the main features of Alexandra Palace is the Great Hall - and why it's a remarkable indoors space. Being 117 metres long, 55 metres wide and 27 metres high, it amounts to a staggering 173,745 cubic metres! This is roughly equivalent to:

- 30,000 Asian elephants (the whole Asian elephant population worldwide is about 32,000!)
- 1,555 double-decker buses
- 62.5 hot-air balloons
- 37.5 Big Bens!

Once you have talked about the volume and capacity of the Great Hall, ask children to think about what would be a great way to use this space, then get them to draw it! It could be one big thing (like a giant indoor swimming pool) or an installation (indoors rollercoaster) - but it should also be something fun for people to do in that space. They can doodle on the page to develop their ideas - before moving to the invention sheet to capture their chosen invention idea!

**Differentiation:** Encourage children to think of and draw large everyday objects or things to scale (buses or large animals like giraffes for example).

**Extension activity:** You could ask children to research and calculate the volume of other landmarks and how they could give them a different purpose (for example, what could they do with the Gherkin or St Paul's Cathedral).

## Activity sheet: Alexandra Park

Choose this activity to engage children to think about large-scale spaces and the outdoors.

Use slide 9 to support the activity and give the children an Alexandra Park activity sheet.

Explain that Alexandra Palace is on top of a hill in the middle of a large open space, Alexandra Park, which offers a lot of outdoors activities.

You could then talk about the importance of outdoor spaces in urban environments, different geographic landscapes (of Alexandra Palace, their own community, different cities) but also about the sort of activities people do outdoors and then to stretch to things that people could do but that don't exist yet (imagine a sledge track on grass, or a giant slide from the BBC Tower). Ask them to think of the features of the Park and the Palace and how they could make the most of them in an unusual and fun way. They can doodle on the page to develop their ideas - before moving to the invention sheet to capture their chosen invention idea!

**Differentiation:** Children could draw familiar activities on the sheet to help them develop their thinking (such as skaters, a pond, a playground, etc), or talk about their own experience of having fun in a park.

**Extension activity:** Get children to research different geographic landscapes and how they might create new fun activities (for example, the Sahara desert, the Grand Canyon or icebergs in the Arctic!)

## Activity sheet: London Skyline

Use this activity to encourage children to reflect on key landmarks of the London skyline as their starting point for inspiration.

Give children a London Skyline activity sheet.

Use slide 10 to support the activity and start by explaining that Alexandra Palace has a unique position on a hill overlooking London - meaning it presents fantastic panoramic views of London. You could choose to concentrate on specific buildings, ask children what they know about them and give them facts, for example:

The Shard is the tallest building in Europe at 309.6 metres high. It is made of 95% recycled materials and it looks like a shard of glass, hence its name.

The Gherkin is over three times the height of Niagara Falls - its real name is 30 St Mary Axe but its organic shape gave it its nickname.

The Cheese Grater - the planning officer said he could imagine his wife using it to grate parmesan, and the name stuck!

Ask children to use the buildings shapes, history or just their funny names to think about a London sky filled with flying, floating and circling inventions and get them to draw freely on the activity sheet to develop their idea - before moving to the invention sheet to capture their invention idea!

**Differentiation:** Ask children to add their own building to the London skyline, give it an interesting name and think about what happens there.

**Extension activity:** Children can also research surprising or fun facts about other favourite London buildings St Paul's Cathedral, the Shakespeare Globe or in Canary Wharf.

# Drawing sheet: My invention!

Once children have had a chance to develop their ideas a little through discussion and their chosen activity, give them an invention sheet to draw and explain their invention. Make it clear that this is the opportunity for them to create their very own invention that will be uploaded to the Little Inventors website for all to see!

Make sure that children put their name and age on the worksheet.

First, ask them to draw using a black pen as an outline, and add colours to their invention to bring it to life. Ask them to label parts on their drawing to explain how it works.

Secondly, ask children to name and explain their invention - what does it do? Who is it for? What made them think of it?

Children can draw more than one invention if they have time - use separate sheets.

**Differentiation:** Children make a video or audio recording to explain how they got their idea in their own words.

**Extension activities:** After the children have drawn their invention idea, ask them to develop a story about someone using it. This could be done as a creative home task or within the session if time allows.

## Round-up: (5-15 mins)

Ask children to reflect on their inventions and discuss them with a partner as noted on the slide. Gather all the student invention drawings in a gallery around the classroom/ work-space.

Get children to discuss their favourite ideas — what do they like and why? Encourage positive feedback throughout.

- What do they think of their invention?
- What are its strengths and weaknesses?
- Who would enjoy using their invention?
- What makes it particularly fun or entertaining?

## Submitting invention ideas

Creating an invention drawing is great, but it's even better to see it be made real!

To be entered in the challenge Let your imagination fly!, the invention ideas must be submitted on the [allypally.littleinventors.org](http://allypally.littleinventors.org) website. It only takes a couple of minutes!

Make sure you scan or take a clear unobscured picture of the invention idea so it's not rejected. Alternatively you could ask the children to upload them, checking first that the quality of the images for a chance to be selected and their ideas made!

Good luck!!!