



Dare to Invent



Teacher Guide: KS1 & 2

The aim of Little Inventors is to allow children to express the far reaches of their imagination. We want to inspire them to think up and draw original, ingenious, funny, fantastical, or perfectly practical invention ideas. There are no limits!

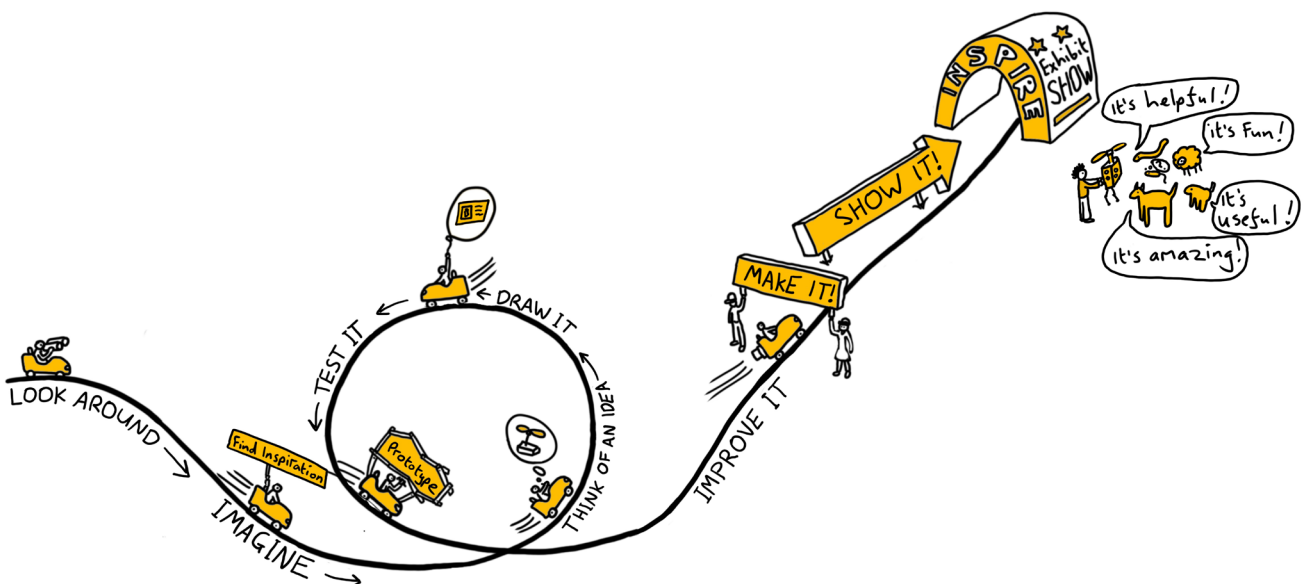
We're partnering with **Artsmark** to challenge children up and down the country to **Dare to Invent!**

Enjoy using these activities to support children to express themselves and come up with some great invention ideas in the process.

Invention is for all!

These activities are designed to be supportive and to be used flexibly to meet the needs of your cohort and the time you have available. Use as many or as few of the activities as you like!

All of the resources and worksheets you'll need to help you and your pupils Dare to Invent are accessible through the website artsmark.littleinventors.org.



KS1 and KS2 activities

Introduction to inventing

- Use the intro slides with your group to discover what invention is and to get excited about their Dare to Invent challenge!
- Discuss which skills are essential for being creative and making inventions.

Next it's time to create some **Inventor goggles** to remind us about the importance of seeing the world in different ways to find potential invention ideas.

Inventor goggles

- Use the **Inventor goggles** template - children can choose a template that suits their style and decorate it with their method of choice.
- Ask the children to share their work and talk about the choices that they made.



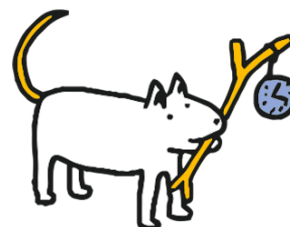
Adapt:

- Use sensory lighting, sound or tactile resources to explore the idea of viewing and experiencing the world in ways that are out of the ordinary.
- You do not need to use the templates. Pupils could work on a large-scale version of the goggles as a group to create a class display.
- Goggles may not be the most accessible emblem of invention in all settings. You and your pupils can choose a different emblem, from a large heart to a toolkit where invention skills are drawn.


Extend:

Pupils can begin to think of the types of skills that are useful to inventors like listening skills, imagination and observation skills.

Now it's time to start sharpening those invention skills!



Problem detection comic

- Open the **Problem detection comic** worksheet.
 - Inventors are looking, listening, and always learning.
 - They wait for a great problem to come around.
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- Have a look at the **Problem detection comic** together.
 - How many different solutions can the children generate to solve these problems? How else could someone reach the top shelf of a bookcase? Are there other ways of keeping the dog dry in the rain? The children can draw or discuss their potential solutions.

Adapt:

- Talk through solutions to the comics as a group or use drama to role-play the problems and possible solutions to the problem comics.
- Use junk materials to create invention solutions.

Extend:

Following the development of an idea can pupils swap ideas with someone else and try and make improvements?

With invention skills at the ready it's time to go on the hunt for some inspiration!

Problem treasure hunt

- Open up the **My problem treasure hunt** worksheet.
- In small groups invite pupils to (safely) go on a treasure hunt around the school looking for problems that need fixing! You could link to equipment, playtime experiences, lunchtime or aspects of classroom learning that could be improved.
- Silly ideas are very welcome! Children can complete the **My problem treasure hunt** worksheet while they are on their tour or afterwards.

Adapt:

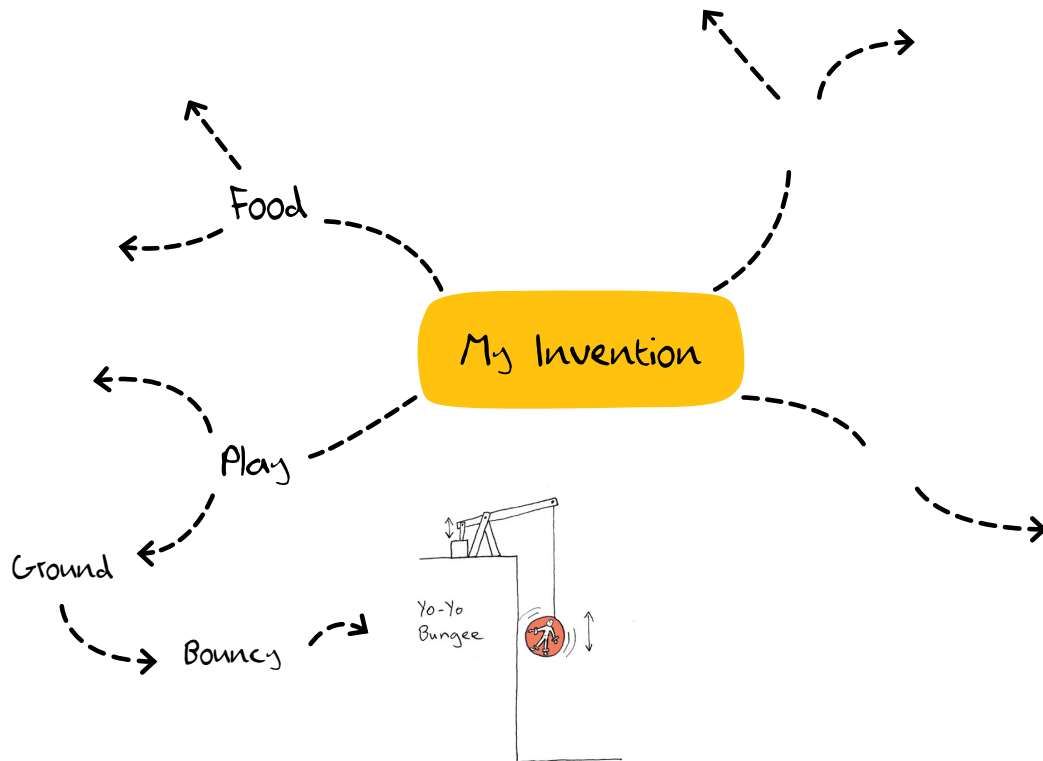
- You could explore one room only or take photos of different areas of school life to prompt ideas.
- Ask for a volunteer to record a "day in the life" video where they work with family, a friend or teacher to highlight some great problems that could benefit from new inventions!
- You do not have to use the worksheet and can work as a group instead. Children can record thoughts using digital audio or video, through drawing or other materials.

Extend:

Once they've completed their **My problem treasure hunt** worksheet, they can begin to think of which problems could make the most fun inventions!

Mind map

- This activity allows pupils to dig deeper into the problems they'd like to explore in detail.
- Use the **Mind map** worksheet. Pupils can work on this individually or as a small group.
- In the centre box pupils write a word that describes or connects to the problem they would like to focus on.
- In the next box they should write a word associated with the first word, and so on. For example: Play > ground > bouncy (an invention could be creating part of the playground that has a bouncy texture!)



Adapt:

The whole class could shout out word associations or make visual associations to get some wild creative ideas for inventions flowing!

Extend:

If they run out of steam, encourage children to swap ideas with each other - can they improve the ideas? Make some positive changes to make the invention even more fun?

After all of that practise, your pupils should be ready to get started on their final invention ideas.

Drawing sheet and Round up

- It's time to review all of the problems and themes that have been uncovered so far. Is there one problem pupils would like to focus on for their final invention challenge?
- It's great when you are able to see a range of inventions all focussed on solving one problem. You may need to have a class vote to decide the best option. If there are several strong ideas, you can create a shortlist or allow pupils to all focus on themes of their own choosing.
- Pupils can use the **Drawing sheet** for their final invention idea and dare to be as inventive as possible! Children should use colours and add lots of labels so everyone can understand their ideas.
- Once pupils have completed their invention drawing, discuss the different inventions as a group.
- What's their favourite – what do they like and why?
- How will they approach problems in the future?

Adapt:

- Pool your class's range of skills and work on a final invention idea all together for a big creative display.
- Children could make a video or audio recording individually or as a group to share their ideas in their own words or through performance.

Extend:

Children can create adverts for their invention by designing leaflets or making a video.

Showcase

How will pupils share their work?

- A mini exhibition at your school would be FANTASTIC! You can download templates and printables for an exhibition from littleinventors.org and invite the whole school community to look at the fabulous creativity that has been going on!
- Perhaps you could exchange ideas with another school in your area, post your inventions on social media using **#DaytoCreate** or even invite your local newspaper along to see what you're up to!

