

Setting up a problem solving challenge in your school grounds

Giving children a challenge to solve will give them the opportunity to practice a number of different skills, e.g. team work, independent research and mathematical problem solving.

Examples:

KS2 ideas

Where is the best place to build a pond or wildlife area in the school grounds? What animals do we want to attract? Why do we want to attract animals? What different habitats do we need?

The school wants to grow 50 carrots, what are the dimensions of the raised bed, what materials will you use (include quantities), where is the best place to build it, what time of year should the seeds be sowed and how will they be looked after?

Use the following information:

- Each carrot needs a 5cm circumference of space between them
 - Each carrot needs of depth of at least 20cm of soil to grow in
 - They need to be well watered and need sunlight to grown
 - They will need to harvested in July and take 12-16 weeks to grow
-

The reception class want to keep two rabbits and need a hutch and a run.

As a minimum a rabbit needs a hutch of 1.1 square metres and an exercise area of 3 square metres (http://www.therabbithouse.com/guide_size.asp). It hutch and run must meet all the needs of the animal, e.g. food and water.

Where could it go in the playground? Design what it would look like and what materials might be used.

KS1 ideas

A teddy bear has climbed up a tree in the playground and cannot get down, can you help?

Design your rescue device, what materials you need and how you will make sure it is safe on its way down.



A teddy bear is found in the playground and it is frozen - what can you do to help look after it? (Spray a teddy bear with water before putting it in the freezer)

Children find an egg in the playground (or an egg per group) - What animal left the egg there? What can you do to keep it safe until the animal returns to collect it? They might need to leave some clues so that it can be found.

Things to consider:

- Will there be a mathematical aspect? e.g. counting, calculations, estimating, shape recognition, measuring angles, area, measuring
- Will there be a literacy aspect?, e.g. persuasive writing, instruction or rule writing
- Will they need the internet/books for research? - encourage children to research an aspect of the activity, e.g. what plants to put into the raised bed or what animals would live in a pond.
- Will they need to use their previous knowledge? This could be linked to an aspect of the National Curriculum, e.g. habitats, growing plants, or care for living things.
- How will the children make sure that they are working as a team? Provide children with the opportunity to put their knowledge of how to work in a team into practice.
- How will they present their ideas? E.g. will they need to build a small scale model? What resources will they need?