



STEM
LEARNING

Teaching Primary Science Outdoors

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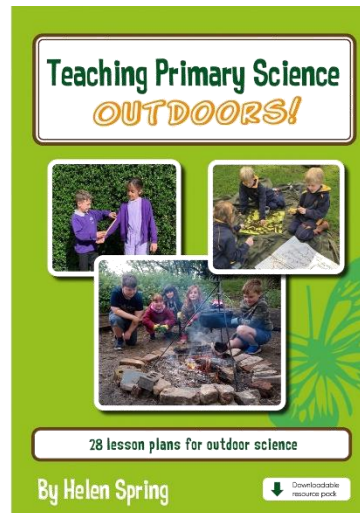
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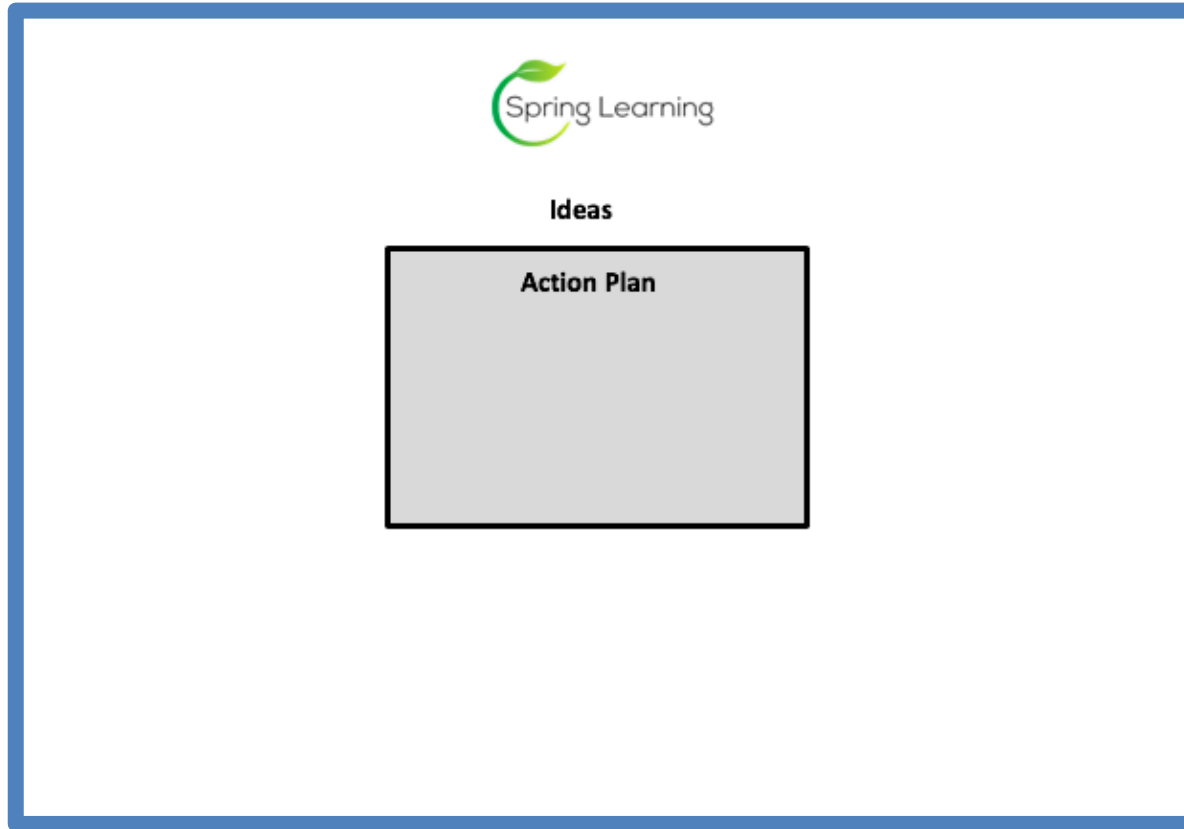


Intended Learning Outcomes

By the end of the session you will be able to:

- Explore the theory behind outdoor learning
- Discover curriculum-linked science lesson ideas that can be taught outdoors
- Explore assessment in the outdoor setting
- Plan meaningful outdoor learning for your pupils

Action Planning



What is Outdoor Learning?

Learning Outside the Classroom (LOtC) is the use of places other than the classroom for teaching and learning. It is about getting children and young people out and about, providing them with challenging, exciting and different experiences to help them learn.



Council for Learning Outside the Classroom

Outdoor learning is that which takes place beyond the four walls of the traditional classroom environment.

Association for Science Education (ASE)



Why go outside anyway?



Outdoor Learning at your school

- What is going well?
- What challenges do you face?
- What questions do you have?

5 Characteristics of Effective Outdoor Learning

1. one that supports children in making the transitions from within the classroom to beyond it
2. one where there is both regular and frequent use of the outdoor setting.
3. fully prepares children for working in the outdoors by addressing the basic psychological and physiological needs of the children before leaving the classroom
4. the teachers manage the transition back to the classroom as consciously as they manage the move to the outdoor setting
5. a shift to weaker framing

HOATH, L. (2015).

Materials



The plastic tunnel is water proof so the pixie will be dry

The rocks are heavy so the pixie house doesn't blow away

This is a slope to make it easier for the pixies to go into the house

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Definitely outdoors....



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Could be outdoors....



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Planning to teach science outdoors

Plants – Year 3

Pupils should be taught to:

- identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers
- explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant
- investigate the way in which water is transported within plants
- explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal

Planning to teach science outdoors



Children in reception will be learning to:

Examples of how to support this:

Describe what they see, hear and feel whilst outside.

Encourage focused observation of the natural world.

Listen to children describing and commenting on things they have seen whilst outside, including plants and animals.

Encourage positive interaction with the outside world, offering children a chance to take supported risks, appropriate to themselves and the environment within which they are in.

Name and describe some plants and animals children are likely to see, encouraging children to recognise familiar plants and animals whilst outside.

Recognise some environments that are different from the one in which they live.

Teach children about a range of contrasting environments within both their local and national region.

Model the vocabulary needed to name specific features of the world, both natural and made by people.

Share non-fiction texts that offer an insight into contrasting environments.

Listen to how children communicate their understanding of their own environment and contrasting environments through conversation and in play.

Planning for Outdoor Learning

- Take a copy of the curriculum
- Highlight the obvious opportunities for outdoor learning in your year group (eg – identifying trees)
- In a different colour, highlight the less obvious opportunities for outdoor learning
- Choose one objective and plan how you will teach it outdoors. What barriers need to be overcome in your context?



Evolution and inheritance



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Forces



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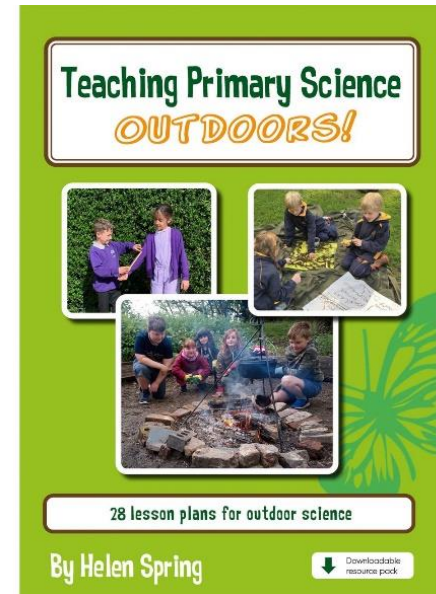
Resources to support outdoor learning and science



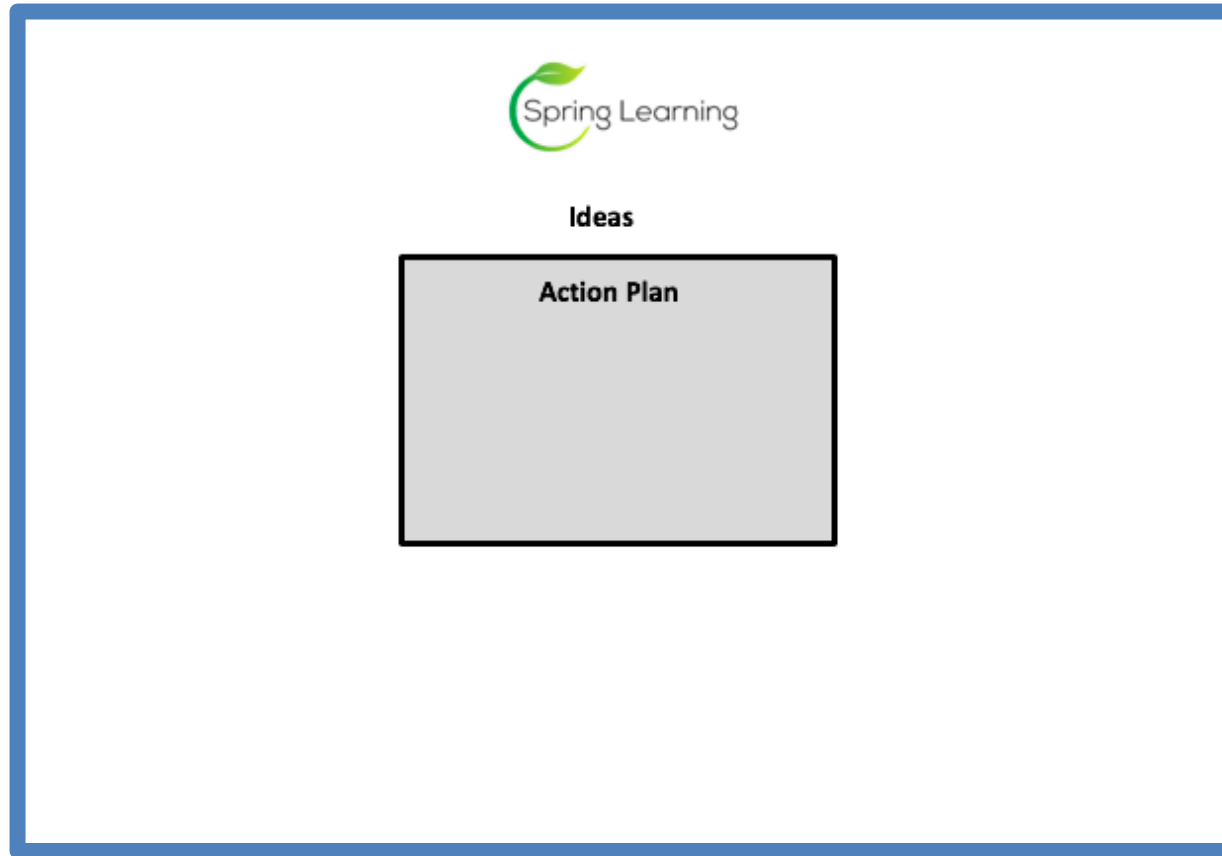
Learning
through
Landscapes



PLAN
Planning for assessment



Action planning



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