Ivy learning springboards

Hedera helix; Hedera hibernica and others

Science

Close observation: KS2

If possible, find several different species of ivy, and collect a very long stem from each. Snip it into pieces so each group of children can observe close up.

- Take a leaf from the bottom of the plant and a leaf from the top. Look carefully at the shapes. Are they the same? How many leaf shapes and colours can you find on one plant? What differences and similarities do you notice?
- How do different species of ivy differ (clue: look for leaf colour and texture, smell, size)
- Look closely at the live stalk. Can you see tiny roots? Ivy is a very vigorous plant; do you think it will grow if you plant it? (see propagation in water below) or simply place a stem with rootlets on, onto a pot of compost. Weigh down a section of the stem with a stone and water the pot daily. Watch what happens over the next week.
- These rootlets are also called 'adventitious' roots that help ivy to stick to walls.

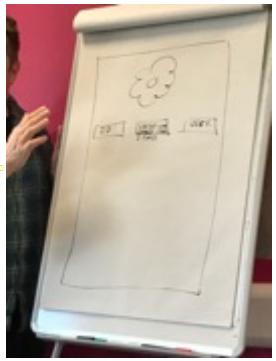
Ivy propagation from cuttings: KS2

Ivy is very easy to propagate in water. (or in the ground)

- Look for the new growth, with lighter coloured leaves, not old woody stems.
- Cut sections of stem with sharp scissors or knife; each section about 10-15cm long.
- Strip the leaves off the bottom of the cutting to leave 3 or 4 leaves at the top. Note that as you pull the bottom leavers off they are attached to the

Maths

Insect maths: KS2



6 and 8 times tables
Ivy can be used to make simple spiders (8legs) and beetles (6 legs.)
These can then also be used for insect maths.
3 x spiders = 24
2 x beetles = 12
Problem solving;
2 spiders plus 3 beetles = how many legs

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Literacy

Inspiration for stories: KS2

You might find these magical and practical uses are interesting to use as ideas to develop into stories about the past.

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stem at a ‘node’ which is where the hormones are concentrated. This this where the roots will grow from.

- Place the cutting in a clear sided jar with these nodes under water.
- Put your cuttings in a bright widow but not in full sun.
- Keep the water level topped up and you will start to see the roots grow in 3 weeks or so.
- They will be ready to transplant into a pot in around 5-6 weeks.

If you are interested in other methods of propagation then search on the internet for ‘layering’, where ivy is pegged down to the ground and roots into the soil adjacent to where it is living.

Forces – KS2

Look at older deciduous trees that are full of ivy that has grown up the trunk, and into the upper branches too. Why do you think that tree owners might be worried by this? Can you think why this mjght be dangerous in high winds in the Autumn or Winter when the tree has lost its leaves?
You could try an experment to see what happens.
Collect small thin bare brances to represent winter trees with no leaves, stuck half of the trees into a sand pit tray or tray of earth, (close to a power point)
For half of the ‘trees’ wrap lots of thick wool around their branches, then plant thse also into your sand tray..
Using a hair dryer or fan, on a high setting, try to blow your trees over. Which trees have a better chance of standing up in the wind?

KS2 Food chains

Did you know that ivy changes as it gets older? Juvenile (young) ivy is a flexible climbing plant that sends out long stems seeking vertical surfaces to climb up. When it grows up and is a tall mature shrub (around 10 years old), it stops scrambling and begins flowering and reproducing. This mature stage is called ‘arborescent’ (tree like’) Can you find these older ivy plant with greenish flowers in the autumn. It is probably buzzing with insect life! Insects need this late source of nectar in the autumn and winter. Butterflies, wasps and bees are important pollinating insects-without which

Did you know that Ivy was used as a Wart and Verruca charmer! There are accounts of children placing a couple of leaves in their socks over a two-week period that apparently seemed to work.
The larger trunks of Ivy, when stripped back to their bare wood, have the look of ivory. They used to be used for Pastry Rolling Pins because the pastry would not stick to it like other woods.
It was also used in flower arranging especially Christmas decorations.
In the 1940’s and earlier, the darkest green leaves were sometimes used at home to clean or restore the colour of clothing. By first steeping leaves in boiling rainwater and leaving for 12hrs, the liquid was ready to sponge down clothing with soiled marks. It worked a treat - apparently!
In ancient Greece, Hippocrates used Ivy to reduce swelling and as an anesthetic. Now herbalists use it to treat respiratory conditions, such as asthma, bronchitis, inflammation and arthritis.

Inspiration for Poetry: KS2

See Playful Springboards-Ivy.

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we would have fewer choices of food. To find out more search for pollination and find this website.
http://polli-nation.co.uk
Bee-keepers say it provides the last main source of nectar for Bees and Butterflies late September and October to top up their reserves before winter hibernation. Listen to the loud roar of bees on ivy on a late Autumn day.
As well as flowers and nectar, look out for very small insects on your ivy plants, (usually aphids whiteflies, and mealy bugs) and the creatures that eat them.
See resources for a sheet from the University of Sussex; Ivy-Autumn food for visiting insects

Art / Design technology

Weaving: KS2
See Playful Springboards-Ivy
Make spiders and beetles: KS2
See Playful Springboards-Ivy

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