

Hello Trees Resource Sheet



KS1 Y1 Science Diary Item

Planting Conkers



You don't have to use every Science Diary suggestion!
You don't have to do everything on this sheet! Bits in **bold** recommended.

OBJECTIVE: UNDERSTAND SEED NEEDS; PLANT CONKERS

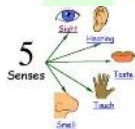


WHAT YOU NEED

1. **Conkers** 2) **bowl of water** 3) **Plant pots** 4) **Soil/compost**
2. **Wide pen or similar cylinder to make a dent in the soil.**
3. **Netting** (bag in which we buy citrus in a supermarket)
4. **Pencil or short stick to lift the net from the soil.**
5. **Windowsill for indoor pots, place outdoors for outdoor pots**
6. **Small plastic food bags - and a fridge!**



WORKING SCIENTIFICALLY



✓ **Experience and observe:**

Examine conkers: feel, smell, look; do they rattle when shaken? [not taste!]

Explain Horsechestnut trees grow from conkers. Conkers are seeds or 'fruit'.

- ✓ **plant structures** horsechestnut trees have a **trunk, bark, branches, leaves, seeds**, the seeds developed from **flowers**, the trees have **roots** that grow down into the ground.
 - ✓ drawing the parts of different plants including trees: could do
 - ✓ **observe changes over time:** pupils are observing the growth of a tree they have planted.
 - ✓ **names of common deciduous trees:** pupils know horsechestnut tree.
 - ✓ describing **how** they were able to identify and group trees: distinctive **leaf, fruit, bark**
 - ✓ how plants change over time: horsechestnut trees still have leaves but they will fall soon.
 - ✓ **keep records of how plants change over time** will record germination and growth
- ✓ **Curiosity and questioning** (all suggestions acceptable):
- What will the seed need in order to grow?** [soil, light, water, space]
 - When would be a good time of year to grow?** [Spring: warmer, more light/longer days]
 - Is the conker well protected from rain, cold, mammals, birds, insects?**
 - How can we tell whether some of the seed inside has been eaten, or damaged in some other way?** [air will have got inside so that the conker will float]
 - Could a seed sense when it is Spring?** [warmth and daylight hours not enough (late Autumn can be same as Spring), need to sense **duration of cold** (winter come and gone)]
- How could we test whether conker germination is triggered by 1) warmth 2) daylight hours or 3) warmth after a period of cold?** [Plant conkers in pots and keep some pots indoors in the warmth and some outdoors in the cold. See which conkers germinate when]

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✓ **Tests to answer questions:**

1. **Put conkers in water. Discard ones that float.**
2. **Plant some of the good ones in pots.**
3. **Put some pots outdoors with netting over them, some on a warm windowsill.**
4. **Sparingly water the conkers on the windowsill. Let rain water outdoor pots.**
5. **PREDICT WHICH CONKERS WILL GERMINATE WHEN. RECORD PREDICTIONS.**

✓ school locality: where in relation to the school did pupils find the conkers.

✓ **grow our own:** pupils are growing their own horsechestnut trees from conkers.

✓ notice patterns, **compare:** conkers are larger than other seeds we have observed.

✓ group and **classify:** classify conkers as dispersed - and stolen - by animals.



✓ Use secondary sources of information: watch a 3.25min video:

Search for 'Jeremy Inglis photography', 'videos', 'Grey Squirrel Eating a Conker'.

What can she hear? [birds, children, a dog] How can we tell he is aware of danger [stays stock still, pulse beats in neck, pants] Is she stealing or dispersing? [initial nibbling may or may not damage the conker] How deeply does he bury the conker? [keeps digging a long time] Why does he cover the conker with soil and a leaf? [to hide it from other birds/animals] Will she be able to find it later? [leaf will have blown away, more leaves fallen ...]

✓ ANIMALS ✓ identify and name mammals: [reinforce name 'squirrel' when watching video]

✓ identify a mammal omnivore [From the video we see that squirrels eats conkers. If we search 'what do squirrels eat', we learn that although they mainly eat fungi, seeds, nuts and fruits, they **do** also eat eggs, small insects, caterpillars, small animals and even young snakes. Therefore, squirrels are omnivores]

✓ names of the main body parts what can pupils say about the squirrel's head, neck, arms, elbows, legs, knees, face, ears, eyes, hair, mouth, teeth.

✓ **Develop scientific language:**



'Germinate' means 'begin to grow'.

Omnivore means 'eats meat and plants'

Sometimes we say 'fruit' instead of 'seed' e.g. 'conkers are the fruit of horsechestnut trees'.

Seeds contain 1) an embryo 2) a supply of nutrients for the embryo 3) a seed coat.

The 'embryo' is the part of the seed that can grow into a plant/tree.

✓ Communicate what they find: ✓ To different audiences and ✓ In different ways: as ever

✓ PLANTS ✓ Identify common trees and plants: conkers are horsechestnut seeds.

x EVERYDAY MATERIALS x Identify and name everyday materials

✓ Properties of everyday materials – woody seed coats are waterproof.

✓ SEASONAL CHANGES ✓ Spring is a good time for seeds to germinate because ✓ Day length longer/more light for growing leaves from Spring through Summer

PLENARY: # We have planted conkers in soil and will water them.

We have predicted when they will germinate

We hope they will grow into horsechestnut trees.