

## Keeping warm

A science activity that discovers the insulative properties of different materials whilst at the same time explaining the science of gardening and what healthy plants need. Spring time welcomes new growth, but for our seeds and young plants to grow healthy the soil must be at the right temperature. By covering the soil we gain two things, suppression of weeds and warming the soil. By approaching this activity as a scientific investigation several areas of the curriculum are covered along with the soil!



### Curriculum Links:

#### Science: Materials, states of matter

##### KS1

- Distinguish between an object and the material from which it is made
- Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock
- Describe the simple physical properties of a variety of everyday materials
- Compare and group together a variety of everyday materials on the basis of their simple physical properties
- Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses

##### KS2

- Identify the part played by evaporation and condensation in the water cycle and associate the rate of evaporation with temperature
- Give reasons, based on evidence from comparative and fair tests, for the particular uses of everyday materials, including metals, wood and plastic

#### Seasonal changes: KS1

- Observe changes across the 4 seasons
- Observe and describe weather associated with the seasons and how day length varies

#### Plants

##### KS1

- Find out and describe how plants need water, light and a suitable temperature to grow and stay healthy

##### KS2

- 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

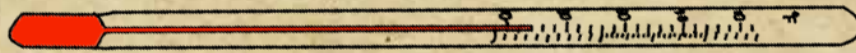
**Grow to school is a not for profit community interest company that partners with primary schools to take the curriculum outdoors helping children develop the skills for lifelong learning.**

**For more information about outdoor learning in schools call 07710 084388 or email [grow@growtoschool.co.uk](mailto:grow@growtoschool.co.uk)**

## Soil Activity Sheet 4 - Keeping Warm

You will need: Soil thermometer, mulching materials: cardboard, black plastic and clear plastic, patch of bare soil, kebab sticks, pens and paper

1. Take the temperature of the soil and note it down with the weather conditions and time of day on your paper.
2. Choose a mulch from the list above, one per group.



3. Measure a square on the soil 50cm x 50cm and cover with your mulch.
4. Water card and straw thoroughly to stop it from blowing away - peg down the others using kebab sticks.
5. After one week at the same time of day take the temperature of a patch of bare soil again, then take the temperature of the soil under your mulches. Note down with the weather conditions on your paper.
6. Note down and compare everyone's results. Did the mulches make a difference? Which soil was the warmest? Repeat steps 5 and 6 after a second week.

