# Temperature-controlling textiles

***Education in Chemistry***February 2020  
[rsc.li/2vraXnI](https://rsc.li/2vraXnI)

Get a feel for the high-tech fabrics that can help us maintain our preferred temperature.

## Make a smart jacket

Set up your experiment as shown by your teacher. Use this table to record the temperature of the water inside your bottle at time intervals of 30 seconds.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Temperature reading (°C) | | | | | | | | | | | | | | | | |
| Time (mins) 🡪 | 0.0 | 0.5 | 1.0 | 1.5 | 2.0 | 2.5 | 3.0 | 3.5 | 4.0 | 4.5 | 5.0 | 5.5 | 6.0 | 6.5 | 7.0 | 7.5 | 8.0 |
| No jacket  (control) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Charcoal |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Aluminium foil |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Hydrogel |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Cork |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sand |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |