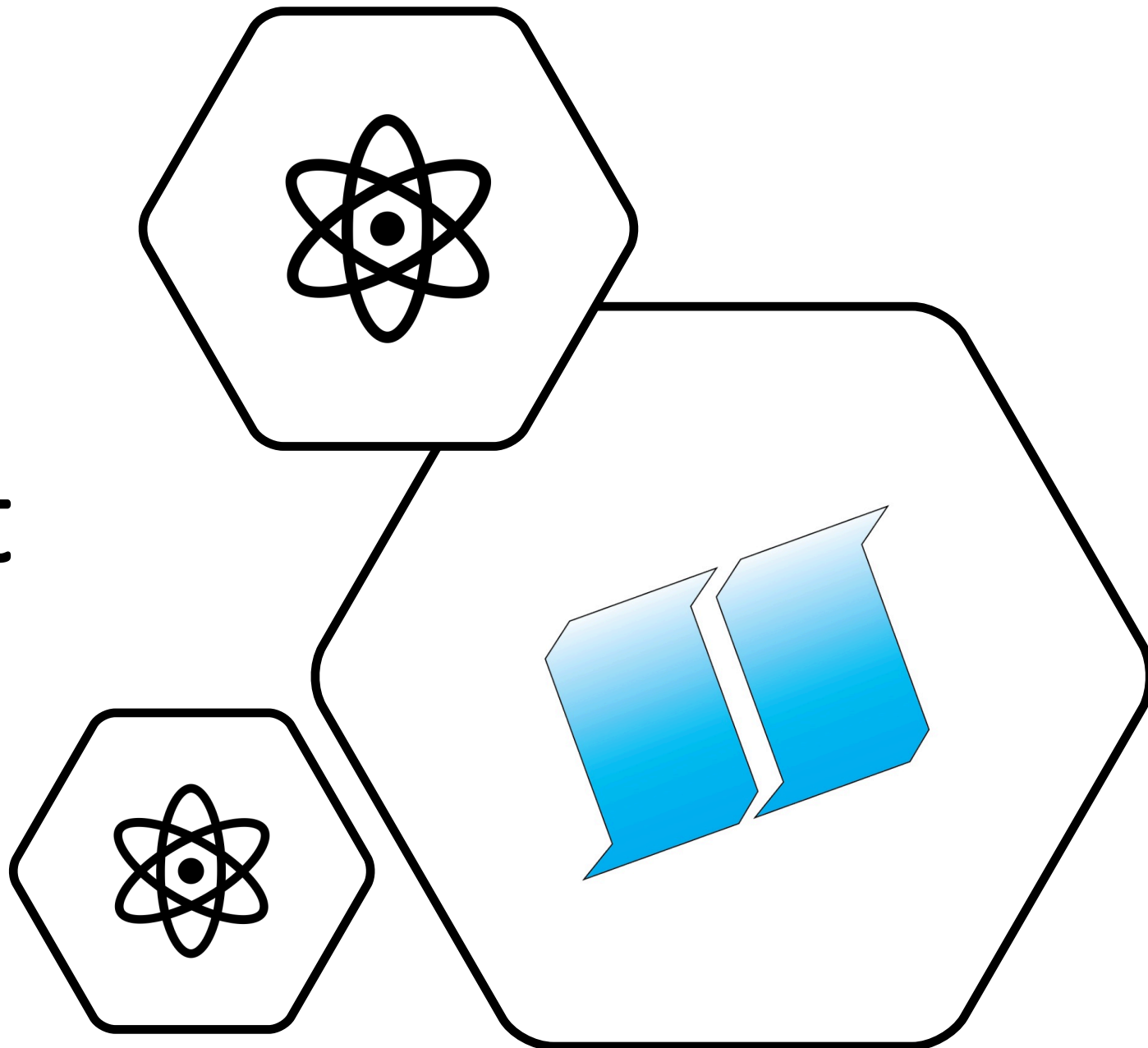
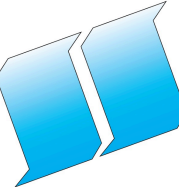


Paper 1 (combined)

Specific heat capacity



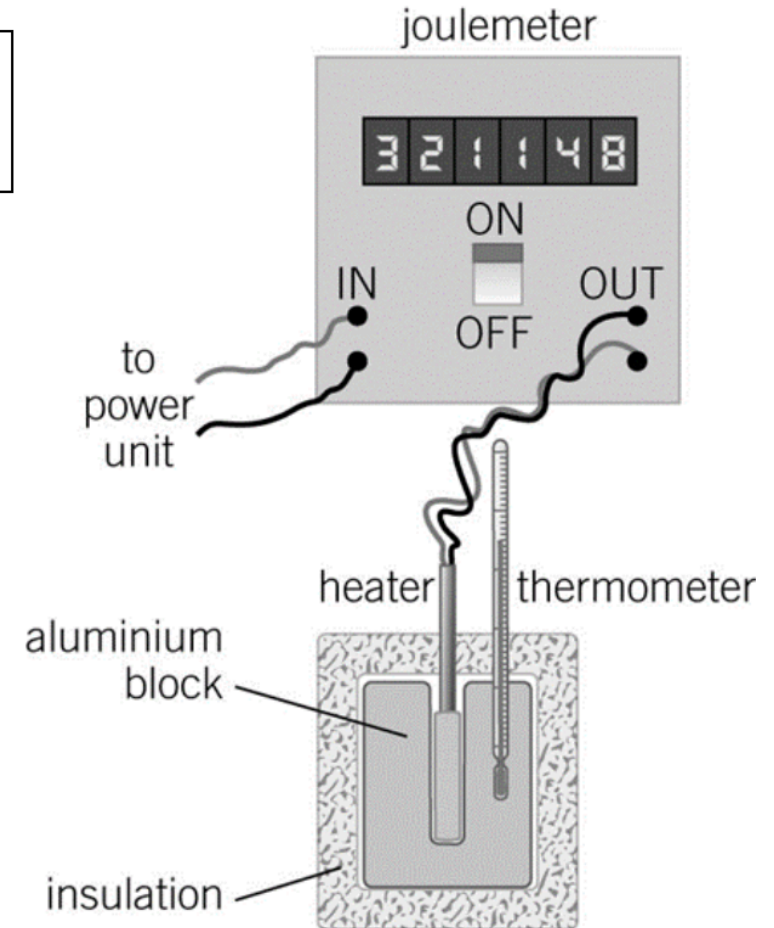


Paper 1 - Specific Heat Capacity

- metal block with two holes
- thermometer
- heater
- power supply
- insulation to wrap around the blocks
- joulemeter
- balance to determine the mass of the blocks
- heatproof mat

Safety:
Care with hot heater

1. Measure the mass of the metal block with the balance
2. Zero the joule meter
3. Take the temperature of the block
4. Turn on the power supply
5. Heat by only around 10°C to reduce heat losses
6. Turn off the supply and record the highest temperature reached
7. Record the electrical energy input from the joulemeter



$$\text{specific heat capacity} = \frac{\text{energy transferred}}{\text{mass} \times \text{temperature rise}}$$

