

# WJEC England Biology GCSE

## SP4.1: Reaction time

### Practical notes



## Reaction time

### Aim

Investigation into factors (repetition) affecting reaction times.

### Equipment

- Metre ruler
- Chair
- Table

### Method

1. Sit down on the chair and place your forearm of your weaker/non-dominant hand on the table with your hand hanging over the end of the table.
2. Have your partner hold a ruler with the bottom end in between your fingers so you can practice holding the ruler with 2 fingers.
3. Have your partner hold the ruler and remove your fingers.
4. Have your partner hold the ruler in line so that the 0 mark is level with the top of your thumb.
5. Your partner will drop the ruler without telling you beforehand, and you will catch the ruler as quickly as you can.
6. Note and record the number level with the top of your thumb after you have caught the ruler in a table such as below.
7. Repeat the test at least 5 times.
8. Swap places with your partner and repeat steps 1-7.
9. Find reaction times by using a conversion table to convert the ruler measurements.

Drop test attempts	Ruler measurements in cm		Reaction times in seconds	
	Person 1	Person 2	Person 1	Person 2

### Extension

Other factors that can be investigated include

- Background noise/ distraction
  - Carry out one experiment in a room with background noise/play video of background noise.
  - Carry out another experiment in a noise-controlled room.
- Dominant hand and non-dominant hand
  - Carry out two experiments, one with the participant using their dominant hand, the other using their non-dominant hand.



### Sources of error

Participants may have different experiences in performing a similar task previously i.e. some participants may already be practiced in this task.

Sample size may be too small to make a valid conclusion.

