

# WJEC Wales Biology GCSE

## SP2.5: Reaction time

### Practical notes



## Reaction time

### Aim

Investigation into factors (repetition) affecting reaction times.

Investigate the hypothesis that reaction time taken to catch a ruler decreases with practice.

### Equipment

- 30 cm ruler
- Chair
- Table

### Method

1. Sit down on the chair (with good posture, eyes looking across the room) 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. Repeat steps 1-7 with at least 5 other participants.
9. Find reaction times by using a conversion table to convert the ruler measurements.

Participant	Trial 1		Trial 2 etc	
	Reaction time in cm	Reaction time in s	Reaction time in cm	Reaction time in s

### Extension

Other factors that can be investigated include:

- 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

If participants had participated in a similar task previously, it may affect their performance and the results.

The number on the ruler read from the top of the thumb may be difficult to determine.

