Research Methods – Knowledge Organiser
Questions to ask yourself: • How do we study people? • How can we make research reflect reality? • What is an experiment?

	Key Term	Definition
1	Hypothesis	A clear, precise, testable statement that is written at the beginning of an investigation. It states the relationship between the variables being investigated.
2	Alternative/Experimental Hypothesis	States a relationship (correlation or difference) between variables.
3	Null Hypothesis	A statement of no relationship (correlation or difference) between variables.
4	Variable	Any 'thing' that can vary or change within an investigation.
5	Dependent Variable (DV)	The thing that the researcher measures in an investigation.
6	Independent Variable (IV)	The thing that is varied/manipulated in an experiment – either deliberately by the experimenter or varies naturally. Each IV = a condition of the experiment.
7	Extraneous variable (EV)	Any variable, apart from the IV, that could have an effect of the DV.
8	Randomisation	Using chance to control the effects of bias when designing a research study.
9	Standardisation procedures	Using exactly the same methods and instructions for all participants in a research study.
10	Field experiment	An experiment that takes place in a natural setting.
11	Laboratory experiment	An experiment that takes place in a controlled environment.
12	Natural experiment	An experiment where the IV is not manipulated by the experimenter but would have changed whether the experimenter was interested or not.
13	Qualitative method	Using data that is expressed in words and is non-numerical.
14	Quantitative method	Using data that can be counted, usually given as numbers.
15	Control group	A group of participants who research no 'treatment'. They are the baseline.
16	Control condition	The condition in a repeated measures design that provides the baseline.
17	Counterbalancing	Used in repeated measures designs to control order effects. Half the participants complete the conditions in one order, and the other half in the opposite order.
18	Experimental design	The different ways in which participants can be organised in relation to the conditions in the experiment.
19	Independent groups	Participants are allocated to different groups where each group represents one experimental condition.
20	Matched pairs	Pairs of participants are matched in terms of variables relevant to the study. One member of each pair takes part in condition A and the other in condition B.
21	Order effects	In repeated measures design, an extraneous variable arising from the order in which conditions are presented.
22	Repeated measures	When all participants take part in all the conditions of the experiment.
23	Sample	A subset of the target population which aims to be representative.
24	Target population	The group that the researcher is interested in studying, from which a smaller sample is selected.
25	Opportunity sample	Selecting people who are willing and available at the time.
26	Random sample	A random technique in which every member of the target population has an equal chance of being selected.
27	Stratified sample	Selecting participants in proportion to their frequency in the target population.

28	Systematic sample	Selecting every nth person on a list of the target population.
29	Closed question	One that has a fixed range of possible answers. Produces quantitative data.
30	Open question	Invites respondents to provide their own answer rather than select one provided. Tends to produce qualitative data.
31	Interview	Interaction between an interviewer and interviewee.
32	Questionnaire	A set of written questions used to find out a person's thought or attitudes on a particular topic.
33	Categories of behaviour	When a target behaviour is broken down into units that can be observed and recorded. E.g. aggression – number of punches, kicks, etc.
34	Inter-observer reliability	The extent to which there is agreement between two or more observers involved in observations of a behaviour.
35	Observation studies	A researcher watches or listens to participants engaging in whatever behaviour is being studied.
36	Correlation	A mathematical technique used to investigate the relationship between co-variables.
37	Case Study	An in-depth investigation of a single individual, group, institution, or event.
38	Reliability	Concerns the consistency of a measurement. Every time a thing is measured the result should be the same.
39	Validity	Concerns whether a result is 'true'. Valid research represents something that is real. When a researcher represents something that is real.
40	Primary data	Information that has been obtained first hand by the researcher for the purposes of a research project.
41	Secondary	Information that has been gathered by someone other than the researcher before the current investigation.
42	Bar chart	A type of graph in which the frequency of each variable is represented by the height of the bar. The categories on the x-axis have no fixed order and there is no true zero.
43	Histogram	A type of graph where the frequency of each category of continuous data is represented by the height of the bar. The data has a true zero and a logical sequence. There are no spaces between the bars.