1) **Steps in the Scientific Method**

Can you select the correct steps in order?

**Step 1:** Identify the research topic

**Step 2:** Formulate the research hypothesis

**Step 3:** Design the research

**Step 4:** Collect the data

**Step 5:** Analyse the data

**Step 6:** Interpret and evaluate the results

**Step 7:** Report the research findings
2) **Identify the Steps of the Scientific Method:**

**Study 1**

In a study about "Helping Others", researchers set out to determine in which circumstances people are likely to help others. The steps of the study are shown below in a jumbled order. Can you determine for each one which research step is involved?

**Interpret and evaluate the results**: The evidence from this study shows that people are indeed influenced to help others if they see someone else helping in similar circumstances.

**Collect the data**: Count the number of cars that stop in each condition.

**Design the research**: Control condition - busy street with a broken-down car; experimental condition - add a car with the same problem one-third of a kilometre back, with someone helping the affected driver. Count
2000 cars in each condition.

_Analyse the data_: A larger percentage of people stopped to help when they had just seen someone being helped.

_Formulate the research hypothesis_: People will be more likely to help someone change a car tyre if they have just seen someone else offering this kind of help.

_Identify the research question_: What influences people to help others?

3)

_Identify the Steps of the Scientific Method: Study 2_

In a study about "Alcohol and Driving Ability", researchers set out to determine how alcohol consumption affects driving. The steps of the study are shown below in a jumbled order. Can you determine for each one which research step is involved?
**Design the research**: Control group consumes non-alcoholic drink ("placebo"); experimental group consumes pre-determined amount of alcohol; participants undergo a simulated driving task.

**Identify the research question**: How does alcohol consumption affect driving skill?

**Interpret and evaluate the results**: Alcohol consumption impairs driving ability.

**Analyse the data**: The mean number of errors for the experimental group was 48, compared to the control group's error rate of 16.

**Formulate the research hypothesis**: The participants who consume alcohol will make more errors in the driving simulation task than the participants who consume no alcohol.

**Collect the data**: Gather the results of all participants on the driving simulation task.

4)

**Crucial Definitions**

Type the correct word or phrase in each space below, using the list of gap fillers provided.
behaviour • correlational study • empirical • experiment • hypothesis • mental states • psychology • replication • scientific method

a _replication_: Running a study again in order to establish whether the results can be duplicated and are therefore reliable and accurate.

b _behaviour_: Any observable action carried out by a person or animal

c _hypothesis_: A testable prediction about the relationship between variables in a study

d _psychology_: The scientific study of thoughts, feelings and behaviour

e _empirical_: Information based on observation and
experiments rather than speculation and theory

**f. mental states**: Thoughts and feelings

**g. scientific method**: Following a systematic, predetermined set of steps in order to plan and conduct research and collect empirical evidence

**h. experiment**: The only research method that allows one to establish a cause-effect relationship, if well conceived and appropriately carried out

**i. correlational study**: A study that allows one to investigate the relationship between two variables (such as age and number of car accidents), yet WITHOUT establishing a cause-effect relationship