Study 2 (cumulative intake study) materials

# 1. Information sheet

A screenshot of a cell phone

Description automatically generated

**VOLUNTEER INFORMATION SHEET**

***The effect of time of day and group vs. lone working on problem-solving ability***

**What is the study about?**

The aim of the study is to examine the effect of time of day and lone vs. group working on people’s problem-solving abilities.

**Who is taking part?**

We are looking for pairs of female friends (not romantic couples or family members) who meet the following criteria:

* Occasional social eaters (1-3 meals per week)
* Are not on any medication known to affect appetite
* Have never been diagnosed with an eating disorder (e.g. anorexia, bulimia)
* Non-smokers
* Non-dieters
* Not athletes in training
* Not pregnant or breastfeeding
* No food allergies
* Are aged over 18 years.
* Have not taken part in a study examining friendship groups and word-based problem solving.
* Have a BMI between 18-25 kg/m2 (you can calculate your BMI here: <https://www.nhs.uk/live-well/healthy-weight/bmi-calculator/>
* Willing to refrain from drinking alcohol and consuming any additional calorie-containing food and drinks, other than those provided in the study, during each of the 3-day phases.
* Like and willing to eat the test foods

**What will I have to do?**

You and your friend will be required to attend the lab over 2 phases of 3 consecutive days. 2 sessions On each day, you will be required to attend the lab in the morning (between 8am and 10am), noon (between 12pm and 2pm), and evening (between 5pm and 7pm). Each testing session will last 20-30 minutes and you will be free to leave the lab between sessions. In one phase, you will attend all sessions with your friend. In the other phase you will attend all sessions alone. In order to control for any effect of food intake on problem-solving, we will provide you with breakfast, lunch, and dinner during the test sessions and request that you **do not eat anything other than the foods provided to you during 3-day test phases**. We also ask that you refrain from drinking alcohol during each 3-day test phase. After each meal, you will be provided with a variety of problem-solving activities to complete. At the end of the study (i.e. on day 3 of phase 2), you will also be asked to complete questionnaires about your general eating habits, and the researcher will measure your height and weight. After completing both sessions, you will receive £60 or 12 RPS points.

**What are the risks?**

There is minimal risk in the study. Prior to taking part, you will complete a food-allergy screening questionnaire to ensure that you are unlikely to suffer any adverse reactions to the lunch meal. If you screen positive on this questionnaire (i.e. if you have any food allergies), you will not be eligible to take part.

**What are the benefits?**

There will be no direct benefits to you from participating, but the information will contribute to wider psychological knowledge.

**What if I do not wish to continue at any stage?**

You are free to withdraw from the study at any stage up until the end of the end of the second study phase. You can refuse to answer any question, and may refuse to do anything requested of you. You will not have to give an explanation as to why you wish to withdraw and you will be compensated for your time (the amount of compensation will be calculated based upon the amount of time spent participating). Please note that, due to the anonymity of your data, it will not be possible to request to withdraw your data following completion of the study.

**What happens to the information?**

Your data will be held confidentially, and any identifiable information will be destroyed immediately after you have completed the study (making your data completely anonymous). You will be allocated a unique ‘ID code’ which will be used to match your responses across testing sessions. During testing, we will keep a separate and secure database linking your name to your ID code, however this information will be destroyed immediately after you have completed the study (or if you request to withdraw from the study). Anonymised data (i.e. with names, email addresses removed) may be submitted to an open-access database in order to make it available to other researchers for further analyses. It will not be possible to identify you in any published reports, or online data, that result from the study.

**What else can I expect from the researcher?**

You can ask any questions about the study that occur to you during your participation and request a copy of any of the results.

**Study Researcher**

Dr Helen Ruddock

**Principal investigator**

Professor Suzanne Higgs

School of Psychology

University of Birmingham

B15 2TT

Tel: 0121 4144907

# 2. Consent form



**CONSENT FORM**

***The effect of time of day and lone vs. group working on problem-solving abilities***

**Please read each of the following statements correctly and initial the boxes if you agree:**

**Initial boxes**

1. I have read the Information Sheet for this study and have had the details of the study explained to me.

2. My questions about the study have been answered to my satisfaction, and I understand that I may ask further questions at any time.

3. I am aware that I am free to withdraw from the study at any time up until the

end of the second session, that I can decline to answer any particular questions in the study, and can decline to complete any task requested of me.

4. I agree to provide information to the researchers on the understanding that it is completely confidential, and that it will be made anonymous following study completion.

5. I understand that the information will be stored in manual and electronic files, and *anonymised* data may be made available to other researchers via a data sharing archive.

6. All data will be held subject to the provisions of the General Data Protection Regulation (2018). I acknowledge that the information provided is being used by the University in accordance with the Act.

**7. I confirm that I wish to participate in this study under the conditions set out here and in the Information Sheet.**

Signed: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Researcher: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

# 3. Allergy screening

**Allergy screening questionnaire**

**Participant Initials\_\_\_\_\_\_ Participant Number (Post Allocation)\_\_\_\_\_\_\_**

This questionnaire is designed to establish your suitability for this research project. The questionnaire will not be used as part of the study data but will be kept separately and securely for your well-being during the study.

Some of the questions ask about personal information. If you do not wish to answer please let the researcher know. All information taken is confidential.

**Please answer as honestly as possible.**

1. Are you taking or using any medicine or any other drug, **Yes / No**

either from your doctor or on your own accord?

If so, please list the items below:

­­­­­­­­­­­­­­\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. Will your use of this medication alter during the course of the study? **Yes / No**

3. Are there any foods you don't eat?  **Yes / No**

If so, please state what and why.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4. Are you allergic to anything that you are aware of? **Yes / No**

5. The following foods have been known to cause allergies. Have you

ever consumed these foods **AND** had an allergic reaction to them?

|  | **Previously Consumed** | **Allergic Reaction** |
| --- | --- | --- |
| **Peanuts** | **Yes / No** | **Yes / No** |
| **Nuts** | **Yes / No** | **Yes / No** |
| **Dairy produce** | **Yes / No** | **Yes / No** |
| **Seeds** | **Yes / No** | **Yes / No** |
| **Eggs** | **Yes / No** | **Yes / No** |
| **Fish** | **Yes / No** | **Yes / No** |
| **Shellfish** | **Yes / No** | **Yes / No** |
| **Soy(a)** | **Yes / No** | **Yes / No** |
| **Celery** | **Yes / No** | **Yes / No** |
| **Mustard** | **Yes / No** | **Yes / No** |
| **Strawberries** | **Yes / No** | **Yes / No** |
| **Cherries** | **Yes / No** | **Yes / No** |

|  | **Previously Consumed** | **Allergic Reaction** |
| --- | --- | --- |
| **Kiwifruit** | **Yes / No** | **Yes / No** |
| **Pulses** | **Yes / No** | **Yes / No** |
| Foods containing **sulphur dioxide/sulphites sulphites** (eg soft drinks, white wine, dried fruits) | **Yes / No** | **Yes / No** |
| Foods containing **lupin** (eg, seeded bread, pastries) | **Yes / No** | **Yes / No** |
| Foods containing **gluten** (eg wheat, rye, barley, oats) | **Yes / No** | **Yes / No** |
| Foods containing **lactose** (eg milk, cheese, ice-cream) | **Yes / No** | **Yes / No** |
| Foods containing **salicylates** (eg dried plums, dates, figs, mushrooms) | **Yes / No** | **Yes / No** |

6. Are there any foods which make your mouth, lips or throat tingle? **Yes / No**

7. Have you ever suffered from anaphylaxis or anaphylactic shock? **Yes / No**

8. Did you suffer from severe childhood allergies? **Yes / No**

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|  |  |
| --- | --- |
| **Date Screened**  **Researcher** | **All questions answered Yes / No**  **Suitable for study Yes / No** |

# 4. Pre-meal Questionnaires

**Appetite assessment (before meal)**

**Q1.** Have you felt ill since your last meal? **Yes / No**  If you have answered ‘Yes’, is your illness likely to affect your appetite (**Yes/No** – please circle) or problem solving ability (**Yes/No** – please circle).

**Q2.** Have you taken any medication which may affect your appetite since your last meal? **Yes / No.**

**Q3.** Have you taken any medication which may affect your problem-solving ability since your last meal? **Yes/No**

If you answered ‘Yes’ to Q2 or Q3, please let us know what, and how much, medication you took:

**Q4.** Have you consumed any other calorie-containing drinks/food since your last meal? **Yes/No**.

If yes, please answer the following questions\*:

## 1) What and how much did you eat? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2) What time did you eat? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3) Where were you when you ate? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4) How many people were with you? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\*These factors might affect your problem-solving ability so it’s important to control for these.

**Q5.** (Answer this question at breakfast only)

Over the past 24 hours, how much time (in minutes) have you spent engaged in:

Light activity (e.g. household chores, slow walking) \_\_\_\_\_\_\_\_\_\_\_\_\_ minutes

Moderate activity (e.g. brisk walking) \_\_\_\_\_\_\_\_\_\_\_\_\_ minutes

Vigorous activity (e.g. running, spinning) \_\_\_\_\_\_\_\_\_\_\_\_\_ minutes

**Q6.** (Answer this question at breakfast on the first day of each phase)

How many days ago (from today) was the first day of your last period? \_\_\_\_\_\_\_\_\_\_\_

# 5. Appetite assessments

By drawing a vertical line through the scale below, please indicate how **HUNGRY** you feel right now.

1. 100

Not at all Extremely

By drawing a vertical line through the scale below, please indicate how **FULL** you feel right now.

1. 100

Not at all Extremely

# 6. Post meal questions (menu 1)

By drawing a vertical line through the scale below, please indicate how **HUNGRY** you feel right now.

0

Not at all

100

Extremely

By drawing a vertical line through the scale below, please indicate how **FULL** you feel right now.

100

Extremely

0

Not at all

By drawing a vertical line through the scale below, please indicate how much you **LIKED** the taste of the toast and Nutella.

0

Didn’t like it at all

100

Liked it a lot

By drawing a vertical line through the scale below, please indicate how much you **LIKED** the taste of the yogurt.

0

Didn’t like it at all

100

Liked it a lot

By drawing a vertical line through the scale below, please indicate how much you **LIKED** the taste of the fruit.

0

Didn’t like it at all

100

Liked it a lot

By drawing a vertical line through the scale below, please indicate how much you **LIKED** the taste of the orange juice.

0

Didn’t like it at all

100

Liked it a lot

Meal: ~~Breakfast~~ / Lunch / ~~Dinner~~

By drawing a vertical line through the scale below, please indicate how **HUNGRY** you feel right now.

0

Not at all

100

Extremely

By drawing a vertical line through the scale below, please indicate how **FULL** you feel right now.

100

Extremely

0

Not at all

By drawing a vertical line through the scale below, please indicate how much you **LIKED** the taste of the quiche.

0

Didn’t like it at all

100

Liked it a lot

By drawing a vertical line through the scale below, please indicate how much you **LIKED** the taste of the potatoes.

0

Didn’t like it at all

100

Liked it a lot

By drawing a vertical line through the scale below, please indicate how much you **LIKED** the taste of the salad.

0

Didn’t like it at all

100

Liked it a lot

By drawing a vertical line through the scale below, please indicate how much you **LIKED** the taste of the brownies.

0

Didn’t like it at all

100

Liked it a lot

By drawing a vertical line through the scale below, please indicate how much you **LIKED** the taste of the crisps.

0

Didn’t like it at all

100

Liked it a lot

By drawing a vertical line through the scale below, please indicate how **HUNGRY** you feel right now.

0

Not at all

100

Extremely

By drawing a vertical line through the scale below, please indicate how **FULL** you feel right now.

100

Extremely

0

Not at all

By drawing a vertical line through the scale below, please indicate how much you **LIKED** the taste of the pasta.

0

Didn’t like it at all

100

Liked it a lot

By drawing a vertical line through the scale below, please indicate how much you **LIKED** the taste of the tiramisu.

0

Didn’t like it at all

100

Liked it a lot

By drawing a vertical line through the scale below, please indicate how much you **LIKED** the taste of the chocolate buttons.

0

Didn’t like it at all

100

Liked it a lot

# 7. Post meal questions (menu 2)

By drawing a vertical line through the scale below, please indicate how **HUNGRY** you feel right now.

0

Not at all

100

Extremely

By drawing a vertical line through the scale below, please indicate how **FULL** you feel right now.

100

Extremely

0

Not at all

By drawing a vertical line through the scale below, please indicate how much you **LIKED** the taste of the bagel with cheese.

0

Didn’t like it at all

100

Liked it a lot

By drawing a vertical line through the scale below, please indicate how much you **LIKED** the taste of the yogurt.

0

Didn’t like it at all

100

Liked it a lot

By drawing a vertical line through the scale below, please indicate how much you **LIKED** the taste of the fruit.

0

Didn’t like it at all

100

Liked it a lot

By drawing a vertical line through the scale below, please indicate how much you **LIKED** the taste of the orange juice.

0

Didn’t like it at all

100

Liked it a lot

Meal: ~~Breakfast~~ / Lunch / ~~Dinner~~

By drawing a vertical line through the scale below, please indicate how **HUNGRY** you feel right now.

0

Not at all

100

Extremely

By drawing a vertical line through the scale below, please indicate how **FULL** you feel right now.

100

Extremely

0

Not at all

By drawing a vertical line through the scale below, please indicate how much you **LIKED** the taste of the veggie burgers.

0

Didn’t like it at all

100

Liked it a lot

By drawing a vertical line through the scale below, please indicate how much you **LIKED** the taste of the bread roll.

0

Didn’t like it at all

100

Liked it a lot

By drawing a vertical line through the scale below, please indicate how much you **LIKED** the taste of the millionaire cake bites.

0

Didn’t like it at all

100

Liked it a lot

By drawing a vertical line through the scale below, please indicate how much you **LIKED** the taste of the tortilla chips.

0

Didn’t like it at all

100

Liked it a lot

Meal: ~~Breakfast~~ / ~~Lunch~~ / Dinner

By drawing a vertical line through the scale below, please indicate how **HUNGRY** you feel right now.

0

Not at all

100

Extremely

By drawing a vertical line through the scale below, please indicate how **FULL** you feel right now.

100

Extremely

0

Not at all

By drawing a vertical line through the scale below, please indicate how much you **LIKED** the taste of the pizza.

0

Didn’t like it at all

100

Liked it a lot

By drawing a vertical line through the scale below, please indicate how much you **LIKED** the taste of the salad.

0

Didn’t like it at all

100

Liked it a lot

By drawing a vertical line through the scale below, please indicate how much you **LIKED** the taste of the chocolate dessert.

0

Didn’t like it at all

100

Liked it a lot

By drawing a vertical line through the scale below, please indicate how much you **LIKED** the taste of the chocolate buttons.

0

Didn’t like it at all

100

Liked it a lot

# 8. Post meal questions (Menu 3)

By drawing a vertical line through the scale below, please indicate how **HUNGRY** you feel right now.

0

Not at all

100

Extremely

By drawing a vertical line through the scale below, please indicate how **FULL** you feel right now.

100

Extremely

0

Not at all

By drawing a vertical line through the scale below, please indicate how much you **LIKED** the taste of the granola.

0

Didn’t like it at all

100

Liked it a lot

By drawing a vertical line through the scale below, please indicate how much you **LIKED** the taste of the yogurt.

0

Didn’t like it at all

100

Liked it a lot

By drawing a vertical line through the scale below, please indicate how much you **LIKED** the taste of the fruit.

0

Didn’t like it at all

100

Liked it a lot

By drawing a vertical line through the scale below, please indicate how much you **LIKED** the taste of the orange juice.

0

Didn’t like it at all

100

Liked it a lot

By drawing a vertical line through the scale below, please indicate how **HUNGRY** you feel right now.

0

Not at all

100

Extremely

By drawing a vertical line through the scale below, please indicate how **FULL** you feel right now.

100

Extremely

0

Not at all

By drawing a vertical line through the scale below, please indicate how much you **LIKED** the taste of the cheese sandwiches

0

Didn’t like it at all

100

Liked it a lot

By drawing a vertical line through the scale below, please indicate how much you **LIKED** the taste of the flapjacks.

0

Didn’t like it at all

100

Liked it a lot

By drawing a vertical line through the scale below, please indicate how much you **LIKED** the taste of the crisps.

0

Didn’t like it at all

100

Liked it a lot

Meal: ~~Breakfast~~ / ~~Lunch~~ / Dinner

By drawing a vertical line through the scale below, please indicate how **HUNGRY** you feel right now.

0

Not at all

100

Extremely

By drawing a vertical line through the scale below, please indicate how **FULL** you feel right now.

100

Extremely

0

Not at all

By drawing a vertical line through the scale below, please indicate how much you **LIKED** the taste of the lasagne.

0

Didn’t like it at all

100

Liked it a lot

By drawing a vertical line through the scale below, please indicate how much you **LIKED** the taste of the chips.

0

Didn’t like it at all

100

Liked it a lot

By drawing a vertical line through the scale below, please indicate how much you **LIKED** the taste of the strawberry cheesecake.

0

Didn’t like it at all

100

Liked it a lot

By drawing a vertical line through the scale below, please indicate how much you **LIKED** the taste of the chocolate.

0

Didn’t like it at all

100

Liked it a lot

# 9. Problem solving tasks

These words can be re-arranged to make other words found in the English language. Your task is to write down the word they can be re-arranged to make as quickly as possible. Some words may have more than one solution, you only need to write one for each word. If you get stuck on one please move on to the next one. You can come back to it. You have 5 minutes to complete as many as you can.

LEPER? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ RAT? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

ROPES? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ PIER? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

CALLER?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ LAST? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

TROUT? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ APT? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

TOUGHS?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ SURF? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

FEAT? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ TACIT? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

NEARER? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ CAUSE \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

These words can be re-arranged to make other words found in the English language. Your task is to write down the word they can be re-arranged to make as quickly as possible. Some words may have more than one solution, you only need to write one for each word. If you get stuck on one please move on to the next one. You can come back to it. You have 5 minutes to complete as many as you can.

FILETS? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ZONED? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

CONE? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ MACE? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

POTION? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ REFILL? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

FREE? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ICON? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

FIBER?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ LURES? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

DADS? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ SHRUB? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

MANORS? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. MARINE?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

DISK? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ VETO? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

MONO? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

These words can be re-arranged to make other words found in the English language. Your task is to write down the word they can be re-arranged to make as quickly as possible. Some words may have more than one solution, you only need to write one for each word. If you get stuck on one please move on to the next one. You can come back to it. You have 5 minutes to complete as many as you can.

SUNLIT? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ DIAL? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

DAIRY? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ MELON?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

FACE? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ EVIL? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

DICE? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ PACE? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

ITEM? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ NAILS? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

DOOM? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

MOIST?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

These words can be re-arranged to make other words found in the English language. Your task is to write down the word they can be re-arranged to make as quickly as possible. Some words may have more than one solution, you only need to write one for each word. If you get stuck on one please move on to the next one. You can come back to it. You have 5 minutes to complete as many as you can.

PANEL? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

DIET? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ NIGHT? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

ROBES? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ SAINT? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

RELAY? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ SATIN? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

FROM? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ VASES? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

SCARE? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ OCEAN?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

INCH? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ GODS? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

SWIPE? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ THERE? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

TONED?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

These words can be re-arranged to make other words found in the English language. Your task is to write down the word they can be re-arranged to make as quickly as possible. Some words may have more than one solution, you only need to write one for each word. If you get stuck on one please move on to the next one. You can come back to it. You have 5 minutes to complete as many as you can.

RIFLE? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ QUIET? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

TRAY? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ LOOT? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

LAYER? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ RUNTS? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

FLESH? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ LOTS? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

HAS? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ MARCH? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

LEEKS? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ TRAMS? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

DAM? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ANT? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

These words can be re-arranged to make other words found in the English language. Your task is to write down the word they can be re-arranged to make as quickly as possible. Some words may have more than one solution, you only need to write one for each word. If you get stuck on one please move on to the next one. You can come back to it. You have 5 minutes to complete as many as you can.

LICKS? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ SLITS? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

LISTS? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ CAUSE? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

COSMIC? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ CHASE?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

CLAM? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ GREASE?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

LOIN? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ MARS? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

PALM? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ TAPE? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

COAL? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ HEATER? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

CORAL? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ DEALER? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

These words can be re-arranged to make other words found in the English language. Your task is to write down the word they can be re-arranged to make as quickly as possible. Some words may have more than one solution, you only need to write one for each word. If you get stuck on one please move on to the next one. You can come back to it. You have 5 minutes to complete as many as you can.

BOWL? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ FLEES? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

BOSS? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ URN? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

NOW? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ BLOW? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

BEAR? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ YAP? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

COOL? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ EAST? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

GULP? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ FOWL? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

IDEA? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ IDLE? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

These words can be re-arranged to make other words found in the English language. Your task is to write down the word they can be re-arranged to make as quickly as possible. Some words may have more than one solution, you only need to write one for each word. If you get stuck on one please move on to the next one. You can come back to it. You have 5 minutes to complete as many as you can.

THAW? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ CHARM? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

EAGER? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ FREAK? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

ADVERB? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ KILLS? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

MEAT? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ FORTH? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

OMITS? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ WASPS? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

FUELS? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ HEIRS? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

OUGHT? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ POOLS? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Jake worked for 5 days and his earnings including tips had a mean of £28 per day. Each day he earned £2 more than the day before. How much did he earn on the 5th day?

2. An alloy is made by mixing metals A and B in the ratio 3:5.

Metal A costs £42 per kg

Metal B costs £20 per kg

How much would it cost to make 400g of the alloy?

3. 40% of the members of a film club are over the age 60. One quarter of the members aged less than 60 are females. There are 63 members who are male and less than 60. How many members are there in the club?

4. Adam, Bella and Carl collect tokens in a game. Bella has 10 more tokens than Adam.  
Carl has 8 more tokens than Bella.

Altogether they have 91 tokens.

How many tokens does Adam have?

5. Alex gives Bob half of his football cards. Bob gives Charlie one third of the cards he receives from Alex. Charlie then keeps the 12 cards he is given.

How many cards did Alex have at the start?

6. Daniel has a pocket full of coins.

One half of the coins are £1 coins

One third of the coins are 20p coins.

The rest of the coins are 50p coins with a total of £1.50

What is the total value of Daniel’s coins?

7. The scores of the first 6 competitors in a contest have a mean of 28 points. When the 7th competitor is included the mean decreases to 27 points. How many points did the 7th competitor score?

8. Use the digits 2, 4, 6, 8 to fill in the missing numbers to make the answer closest to zero

x

-

9. Arthur makes a 12% profit when he sells an antique cabinet. He gives one-quarter of the profit to his partner and pays the rest, £40.50, into his bank account. How much did he sell the cabinet for?

10. Emily has 4 different coins in her pocket. Half of the coins are worth less than 50p

What are the minimum and maximum totals that Emily could have?

# 10. Problem solving questionnaire

**Problem solving questions**

1. On a scale of 1-10, how difficult did you find the task?

1 2 3 4 5 6 7 8 9 10

Very Easy Very Difficult

2. On a scale of 1-10, how well were you able to concentrate on the task?

1 2 3 4 5 6 7 8 9 10

Not very well Very well

1. Do you think you would have performed better on the task if it was at a different time of day?

No

Yes

3a. If you answered ‘Yes’ to question 3, please indicate when you think would be the optimal time to complete this task:

Breakfast Lunch Dinner

1. Answer the following question only if you took part in this session with your friend:

Which strategy did you use to complete the task with your friend?

1. We completed all aspects of the task together
2. We completed the task individually and then compared our responses
3. We divided the task into sections and each completed our own ‘section’ of the task
4. Other strategy (please describe):

# 11. **Participant questionnaire**

**What do you think was the aim of the study?** \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**How old are you?** \_\_\_\_\_\_\_\_\_

**For how long have you known your friend with which you participated in the study?**

**On a scale of 1-10 (10 being the most), how well do you think you know your friend?**

**Not very well Very well**

1 2 3 4 5 6 7 8 9 10

**On a scale of 1-10 (10 being the most), how close do you feel you are with your friend?**

**Not very close Very close**

1 2 3 4 5 6 7 8 9 10

**What is your ethnic group?**

Choose one option that best describes your ethnic group or background

1. English/Welsh/Scottish/Northern Irish/British  
2. Irish  
3. Gypsy or Irish Traveler  
4. Any other White background, please describe \_\_\_\_\_\_\_\_\_\_\_

5. White and Black Caribbean  
6. White and Black African  
7. White and Asian  
8. Any other Mixed/Multiple ethnic background, please describe \_\_\_\_\_\_\_\_\_\_

9. Indian  
10. Pakistani  
11. Bangladeshi  
12. Chinese  
13. Any other Asian background, please describe \_\_\_\_\_\_\_\_\_\_

14. African  
15. Caribbean  
16. Any other Black/African/Caribbean background, please describe \_\_\_\_\_\_\_\_\_\_\_

17. Arab  
18. Any other ethnic group, please describe \_\_\_\_\_\_\_\_\_\_

# 12. Attribution questionnaire

**Please rate whether, and to what extent, each of the factors listed below influenced how much food you ate.**

Did not influence me

Made me eat more than I normally would

Made me eat less than I normally would

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | -4 | -3 | -2 | -1 | 0 | 1 | 2 | 3 | 4 |
| How hungry I was |  |  |  |  |  |  |  |  |  |
| My mood |  |  |  |  |  |  |  |  |  |
| Medical condition |  |  |  |  |  |  |  |  |  |
| The presence of my friend |  |  |  |  |  |  |  |  |  |
| The absence of my friend |  |  |  |  |  |  |  |  |  |
| To get ‘energy’ for the problem-solving task |  |  |  |  |  |  |  |  |  |
| How ‘tasty’ I thought the meal would be |  |  |  |  |  |  |  |  |  |
| What was expected of me |  |  |  |  |  |  |  |  |  |
| It was free food |  |  |  |  |  |  |  |  |  |

**On the previous questionnaire, if you indicated that the presence or absence of your friend influenced how much you ate, please write down *why* you think this was.**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

# **13. Three-Factor Eating Questionnaire**

1. When I smell a delicious food, I find it very difficult to keep from eating, even if I have just finished a meal.

Definitely true (4)/ mostly true (3)/ mostly false (2)/ definitely false (1)

1. I deliberately take small helpings as a means of controlling my weight.

Definitely true (4)/ mostly true (3)/ mostly false (2)/ definitely false (1)

1. When I feel anxious, I find myself eating.

Definitely true (4)/ mostly true (3)/ mostly false (2)/ definitely false (1)

1. Sometimes when I start eating, I just can't seem to stop.

Definitely true (4)/ mostly true (3)/ mostly false (2)/ definitely false (1)

1. Being with someone who is eating often makes me hungry enough to eat also.

Definitely true (4)/ mostly true (3)/ mostly false (2)/ definitely false (1)

1. When I feel blue, I often overeat.

Definitely true (4)/ mostly true (3)/ mostly false (2)/ definitely false (1)

1. When I see a real delicacy, I often get so hungry that I have to eat right away.

Definitely true (4)/ mostly true (3)/ mostly false (2)/ definitely false (1)

1. I get so hungry that my stomach often seems like a bottomless pit.

Definitely true (4)/ mostly true (3)/ mostly false (2)/ definitely false (1)

1. I am always hungry so it is hard for me to stop eating before I finish the food on my plate.

Definitely true (4)/ mostly true (3)/ mostly false (2)/ definitely false (1)

1. When I feel lonely, I console myself by eating.

Definitely true (4)/ mostly true (3)/ mostly false (2)/ definitely false (1)

1. I consciously hold back at meals in order not to weight gain.

Definitely true (4)/ mostly true (3)/ mostly false (2)/ definitely false (1)

1. I do not eat some foods because they make me fat.

Definitely true (4)/ mostly true (3)/ mostly false (2)/ definitely false (1)

1. I am always hungry enough to eat at any time.

Definitely true (4)/ mostly true (3)/ mostly false (2)/ definitely false (1)

1. How often do you feel hungry?

Only at meal times (1)/ sometimes between meals (2)/ often between meals (3)/ almost always (4)

1. How frequently do you avoid “stocking up” on tempting foods?

Almost never (1)/ seldom (2)/ usually (3)/ almost always (4)

1. How likely are you to consciously eat less than you want?

Unlikely (1)/ slightly likely (2)/ moderately likely (3)/ very likely (4)

1. Do you go on eating binges though you are not hungry?

Never (1)/ rarely (2)/ sometimes (3)/ at least once a week (4)

1. On a scale of 1 to 8, where 1 means no restraint in eating (eating whatever you want, whenever you want it) and 8 means total restraint (constantly limiting food intake and never “giving in”), what number would you give yourself?