Woskheet Booklet
Katoomba High School
Stage 4 (7A)

Instructions
- Complete all the sheets in this booklet
- Write in the space provided
- Hand booklet in to Deputy Principal
Fraction distraction

1. What fraction of each circle is shaded?
   (a) \( \frac{1}{8} \)   (b)   (c)   
   (d)   (e)   (f)   
   (g)   (h)   (i)   

2. Write the fractions above in order of size, starting with the smallest.

3. What fraction of a complete turn does the minute hand of a clock turn through between:
   (a) 10:00 and 10:15? \( \frac{\frac{15}{60}}{4} \)
   (b) 10:00 and 10:20? 
   (c) 8:15 and 8:45? 
   (d) 7:30 and 7:40? 
   (e) 5:00 and 5:40? 
   (f) 3:05 and 3:50? 
   (g) 1:40 and 1:45? 
   (h) 12:05 and 12:55? 
   (i) 9:10 and 10:00? 
   (j) 2:15 and 2:40? 
   (k) 6:20 and 6:55? 
   (l) 4:15 and 4:16? 

B

Alex is thinking of two times between 4:00 pm and 5:00 pm. Between the two times the minute hand turns \( \frac{7}{12} \) of a complete turn. Find six pairs of times that Alex could be thinking of.

4:20 pm and 4:55 pm 

Remember that the number on the bottom of a fraction, called the denominator, tells you how many equal parts the whole is split into. The number on the top, called the numerator, is how many of those parts you are talking about. In A3, give your answers in their simplest form (divide the numerator and the denominator by the same number, if you can).
Numbers 22-31

<table>
<thead>
<tr>
<th>French</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>zéro</td>
<td>seize</td>
</tr>
<tr>
<td>un</td>
<td>dix-sept</td>
</tr>
<tr>
<td>deux</td>
<td>dix-huit</td>
</tr>
<tr>
<td>trois</td>
<td>dix-neuf</td>
</tr>
<tr>
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<td>vingt</td>
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<tr>
<td>cinq</td>
<td>vingt et un</td>
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<td>six</td>
<td>vingt-deux</td>
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<tr>
<td>sept</td>
<td>vingt-trois</td>
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<tr>
<td>huit</td>
<td>vingt-quatre</td>
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<tr>
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<td>vingt-cinq</td>
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<td>vingt-neuf</td>
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<tr>
<td>quatorze</td>
<td>trente</td>
</tr>
<tr>
<td>quinze</td>
<td>trente et un</td>
</tr>
</tbody>
</table>
Week 8

MONEY

100c = $1.00

Examples
350c = $3.50
300c = $3.00
227c = $2.27

Exercise 8A
Write in dollars.
1. 200c
2. 150c
3. 345c
4. 400c
5. 239c
6. 131c
7. 279c
8. 500c
9. 536c
10. 1240c

Exercise 8B
Write in cents.
1. $1.24
2. $3.87
3. $6.00
4. $2.87
5. $9.45
6. $5.76
7. $2.45
8. $12.60
9. $23.56
10. $32.20

Addition and subtraction
We must all learn to add and subtract money easily and quickly if we are to look after our own pocket money and, later on, our own wages. If you can add numbers, then you can add money. Just remember to place the cents under the cents, the point under the point and the dollars under the dollars.
Exercise 8C

Work out the following:

1. $2.56 + $1.71
2. $3.23 + $2.82
3. $1.09 + $1.10
4. $2.43 + $3.12
5. $3.33 + $2.27
6. $3.83 + $2.34
7. $5.63 + $2.02
8. $2.80 + $2.08

Example

$4.32 + $3.23 = $7.55

Exercise 8D

Work out the following subtractions:

1. $0.34 − $0.21
2. $3.76 − $2.54
3. $2.76 − $0.32
4. $4.89 − $2.76
5. $8.99 − $3.22
6. $6.45 − $3.21
7. $4.64 − $1.42
8. $6.77 − $4.55
9. $9.72 − $7.41
10. $7.47 − $5.22
11. $23.23 − $20.12
12. $10.89 − $9.45
13. $45.67 − $23.56
14. $65.23 − $12.23
15. $13.13 − $12.00
16. $5.00 − $4.20
17. $10.00 − $9.75
18. $20.00 − $15.50
19. $2.00 − $1.98
20. $1.00 − $0.67

Making out bills

SUPERMARKET SPECIALS

TEA (250g) $1.55
SUGAR (1kg) 99c per pkt
BACON $6.90 per kg
TOMATO SAUCE $1.35
CHEESE $4.98 per kg
SAUSAGES $2.29 per kg
KIDNEYS 28c each
CHICKEN PIECES $2.99 per kg
RISSOLES $4.49 per kg
HAMBURGER MINCE $2.75 per kg

CARROTS $1.15 per kg

APPLES 25c each

Size 16
CHICKEN $5.40
How to spot a ‘quacky’ web site

The best way to avoid being quacked is to reject quackery’s promoters. Each item listed below signifies that a website is not a trustworthy information source. The hyperlinks will take you to articles on Quackwatch that explain why.

**General characteristics**
- Any site used to market herbs or dietary supplements. Although some are useful, I do not believe it is possible to sell them profitably without deception, which typically includes: (a) lack of full disclosure of relevant facts, (b) promotion or sale of products that lack a rational use, and/or (c) failure to provide advice indicating who should not use the products. During the past 25 years, I have never encountered a seller who did not do at least one of these three things.

- Any site used to market or promote homeopathic products. No such products have been proven effective.
- Any site that generally promotes ‘alternative’ methods. There are more than a thousand ‘alternative’ methods. The vast majority are worthless.
- Any site that promotes ‘nontoxic’, ‘natural’, ‘holistic’, or ‘miraculous’ treatments.

**False statements about nutrition**
- Everyone should take vitamins.
- Vitamins are effective against stress.
- Taking vitamins makes people more energetic.
- Organic foods are safer and/or more nutritious than ordinary foods.
- Losing weight is easy.
- Special diets can cure cancer.

- Diet is the principal cause of hyperactivity.

**False statements about ‘alternative’ methods**
- Acupuncture is effective against a long list of diseases.
- Chelation therapy is an effective substitute for bypass surgery.
- Chiropractic treatment is effective against a large number of diseases.
- Herbs are generally superior to prescription drugs.
- Homeopathic products are effective remedies.
- Spines should be checked and adjusted regularly by a chiropractor.

**False statements about other issues**
- Fluoridation is dangerous.
- Immunizations are dangerous.
- Mercury-amalgam (‘silver’) fillings should be removed because they make people sick.

*Source: S. Barret, www.quackwatch.org/01QuackeryRelatedTopics/quackweb.html*

**Questions**
1. What claims about nutrition does the writer recommend that you need to be aware of?
2. Using the search words ‘nutrition’, ‘vitamins’ and ‘weight loss’ find a website that promotes a nutrition-based product.
3. Critically analyse any specific claims that you believe may be false or inaccurate and say why you believe this to be so.

**Consumer protection**

Fortunately, a number of agencies provide accurate information about health products and services for young people and ensure their rights as consumers are protected. First, we need to be aware that Australia supports a United Nations agreement that has broad guidelines for consumer protection. The guidelines are:

- the right to safety — consumers have a right to be protected against products and services that may be hazardous to one’s health
1. Follow the lift’s movements, starting at the ground floor (zero). Write which floor the lift stops at each time.

2. Write each instruction as an addition or subtraction statement. Use + for up and use − for down.

<table>
<thead>
<tr>
<th>From floor</th>
<th>To floor</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>down 6</td>
</tr>
<tr>
<td>−6</td>
<td>up 8</td>
</tr>
<tr>
<td>−1</td>
<td>down 4</td>
</tr>
<tr>
<td>−2</td>
<td>up 9</td>
</tr>
<tr>
<td>−3</td>
<td>down 7</td>
</tr>
<tr>
<td>−4</td>
<td>down 5</td>
</tr>
<tr>
<td>−5</td>
<td>up 8</td>
</tr>
<tr>
<td>−6</td>
<td>down 2</td>
</tr>
<tr>
<td>−7</td>
<td>down 2</td>
</tr>
<tr>
<td>−8</td>
<td>up 7</td>
</tr>
</tbody>
</table>

In a quiz, contestants score 2 points for a correct answer, −3 points for an incorrect answer and −1 point for a pass.

What does each contestant score in total?

(a) correct incorrect correct incorrect correct pass incorrect
    2     −3     2     −3     2     −1     −3
(b) correct correct pass incorrect incorrect incorrect correct
    2     2     2     −3     2     −1     2
(c) pass incorrect correct incorrect correct pass correct
    2     −3     2     −3     2     −1     2
(d) pass correct correct incorrect incorrect correct pass
    2     2     2     −3     2     −1     2
(e) incorrect incorrect incorrect correct correct pass correct
    −3     −3     −3     2     −1     2     2

Counting up or down the number line will help you. It is sometimes useful to use zero as a ‘stopover’ when adding or subtracting: for example, if you are answering $6 - 9 = ?$, go down from 6 to zero first, and then down three more to find the answer (−3).
ACROSS
1. Do not test chemicals by using this sense
3. Colour of a smoky bunsen flame
5. Sensible footwear for the lab
6. Dangerous to do this to people in the lab
7. Laboratory accidents that should be treated with cold water
11. This solid can be used to put out small laboratory fires
12. Beakers or flasks are stood on this when they are heated
14. General name given to a laboratory chemical
16. Colour of a hot bunsen flame
18. Laboratory burner
19. Used for transferring small quantities of liquids
20. Chemical with a low pH

DOWN
1. What you have to do to a hypothesis
2. A conical piece of glassware
4. Should be applied immediately if chemicals get in the eye
7. Container for heating liquids
8. Used for stirring
9. Mixed with gas for a hotter flame
10. Controls the gas mixture in a bunsen
13. You do this with the results of experiments
15. Use this when heating a beaker or flask on a tripod
17. Unit of electrical current
Colour in the answers to the 8x and 9x tables in different colours.
Classroom Unit 1:ate as in vibrate

The List
separate illustrate operate appreciate debate
estate evaporate concentrate vibrate participate

1 Unjumble these list words:
ttsleliura __ __ __ __ __ __ __ ebedta __ __ __ __
rtotacconoe __ __ __ __ __ __ __ reetpoa __ __ __ __

2 Write dictionary definitions for these list words:
a evaporate ________________________________
b participate ________________________________
c appreciate ________________________________

3 Write these words in interesting sentences:
a separate .

b estate

______________________________

c vibrate

______________________________

4 Match the following definitions with list or champs' words:
to focus or direct towards one point ________________
to go faster ________________
to work or to perform surgery ________________
to provide pictures ________________
to have a space for ________________

Word Building

1 Add the suffix -ion to the following words (be careful):
separate ________________  operate ________________  accommodate ________________
appreciate ________________  concentrate ________________  evaporate ________________
exaggerate ________________  vibrate ________________  participate ________________
accelerate ________________

2 Select 3 of your new words and write each in a sentence.

______________________________

______________________________

For Champs accommodate accelerate exaggerate

Weekly Test Results: ___ out of 10, plus ___ Bonus Champs' Points = Total ___
SUGGESTED PRACTICAL WORK

Pretend that you have been given $1000.00 to spend. Make a list of the things you would most wish to buy with the money.

WORDS TO LEARN

operation order grouping symbol

WEEKLY TEST 16

1. Work out the following:
   (a) $2 \times 3 + 6$
   (b) $4 \times 2 - 1$
   (c) $5 \times 3 + 4$
   (d) $6 \times 2 - 10$

2. Be careful with these:
   (a) $5 + 2 \times 3$
   (b) $2 \times 3 + 4$
   (c) $8 + 6 \times 2$
   (d) $4 + 7 \times 6$

3. Work out the following:
   (a) $(2 + 3) \times 2$
   (b) $(5 - 4) \times 3$
   (c) $2 \times (6 + 4)$
   (d) $4 \times (10 - 6)$

4. More brackets:
   (a) $(2 + 3) \times (3 + 4)$
   (b) $(3 + 5) \times (2 + 1)$
   (c) $(5 + 3) \times (10 - 6)$
   (d) $(11 - 3) \times (5 - 3)$

Looking back

5. (a) $176 \div 16$
   (b) Find the product of 36 and 23.

6. (a) What is the name of this solid?
   (b) How many faces has it?
   (c) How many edges has it?

7. What is the perimeter of this figure?

8. Graph on the number line the odd numbers less than 11.

9. A farmer buys 13 m of chicken wire at $7.00 per metre. How much does it cost him?

10. Mrs Barker buys a tea set at $125, a set of saucepans costing $76 and an electric frypan costing $85. How much is her bill?
L’Ecole

A. Trouvez les mots français dans la quête («Cherchez le mot») et mettez un cercle autour de ces mots.

1. brosse
2. bureau
3. carte
4. cour de récréation
5. craie
6. crayon
7. élève
8. étudiant
9. étudiante
10. gomme

11. gymnase
12. horloge
13. livre
14. papier
15. professeur
16. pupitre
17. règle
18. salle de classe
19. stylo
20. tableau

B. Trouvez le proverbe français en mettant un cercle autour des lettres qui restent.

S A C V O I R C E B S T P O U N
V O R I R A P H O R L O G E O S
C T A B L E A U E O S B E I A I
R L Y U E R P U R S S A T L P O
O Y O R A V I P C S A A L P R N
I N N E U I E L R E E E T S A C
E O O A T L R E H R D R O L A R
E A U U A É F O C E I O P G P U
L R I E G E R É C E E T U X I E
È C R L R E R L C A L E R É L S
V S É U L A O T É É E M G U P S
E T E R D S P U I G Y M N A S E
T Y T R S I L E G M R O H I L F
R L U E T É E R V U B G M O G O
A O T É T U DI A N T E E S M R
C R A I E Y L O S E R T I P U P

C. Mettez le numéro correct du mot français qui correspond au mot anglais.

1. ______ book
2. ______ chalk
3. ______ chalkboard
4. ______ classroom
5. ______ clock
6. ______ desk (1)
7. ______ desk (2)
8. ______ rubber
9. ______ duster
10. ______ gymnasium
11. ______ map
12. ______ paper
13. ______ pen
14. ______ pencil
15. ______ playground
16. ______ ruler
17. ______ student (1)
18. ______ student (2)
19. ______ student (3)
20. ______ teacher
Introductory Physics

Assignment 5: States of Matter?

Water exists as ice, as a liquid and as water vapour. Liquid water, when cooled sufficiently, becomes ice. Ice melts when it is heated. When heated, water evaporates. It becomes a gas. If cooled, water vapour condenses, turning into a liquid once more, and solidifies upon further cooling.

States
Most substances occur in three forms: solid, liquid and gas. We call these forms the states in which these substances occur just as we might describe a person as in a state, or condition of shock. ‘Melting’ is an example of a ‘change of state’.

Matter
Solids, liquids and gases all occupy space and have weight. These are the properties of matter as distinct from, say, energy, which does not occupy space or have weight.

Changing states
Under conditions of ‘normal’ air pressure, changes of state occur at certain temperatures. Pure water freezes at exactly 0°C and vaporizes at exactly 100°C. These are known as the freezing point and boiling point of water. In a pressure cooker it may boil at about 120°C while in the reduced pressure conditions of Mt Everest it may be as low as 70°C.

The melting or freezing point of substances as well as their boiling point are characteristics that may be used to identify them. Lead melts at 327°C, iron at

<table>
<thead>
<tr>
<th>SUBSTANCE</th>
<th>MELTING/FREEZING TEMPERATURE</th>
<th>VAPORIZATION/CONDENSATION TEMPERATURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tungsten</td>
<td>3400°C</td>
<td>5930°C</td>
</tr>
<tr>
<td>Carbon</td>
<td>3730°C</td>
<td>4830°C</td>
</tr>
<tr>
<td>Iron</td>
<td>1528°C</td>
<td>3000°C</td>
</tr>
<tr>
<td>Copper</td>
<td>1083°C</td>
<td>2600°C</td>
</tr>
<tr>
<td>Tin</td>
<td>232°C</td>
<td>2270°C</td>
</tr>
<tr>
<td>Lead</td>
<td>327°C</td>
<td>1730°C</td>
</tr>
<tr>
<td>Table Salt</td>
<td>801°C</td>
<td>1465°C</td>
</tr>
<tr>
<td>Mercury</td>
<td>-39°C</td>
<td>375°C</td>
</tr>
<tr>
<td>Carbon Dioxide</td>
<td>-57°C</td>
<td>-57°C</td>
</tr>
<tr>
<td>Alcohol</td>
<td>-114°C</td>
<td>78°C</td>
</tr>
<tr>
<td>Oxygen</td>
<td>-219°C</td>
<td>-183°C</td>
</tr>
<tr>
<td>Helium</td>
<td>-270°C</td>
<td>-269°C</td>
</tr>
</tbody>
</table>
1528°C and tungsten at 3400°C. Mercury freezes at −39°C, carbon dioxide at −57°C, alcohol at −114°C and helium at −270°C (nearly 'Absolute Zero', which is the lowest temperature possible). Lead boils at 1730°C and tungsten at 5930°C, the highest of any element. Oxygen liquefies at −183°C and solidifies at −219°C. Table salt fuses at 801°C and the fusion point of aluminium is 660°C.

Two substances that are odd-men-out are glass and carbon dioxide. Solid carbon dioxide ('dry ice') doesn't melt or boil, but turns straight from a solid to a gas (it sublimes) at −57°C. Glass has no melting point but simply gets softer and softer as we heat it. Because it has no melting point, we describe it as a supercooled liquid.

Each of the three states of matter have quite different properties. When a solid melts the liquid formed occupies about the same volume as the solid — the atoms move no further apart. But a liquid flows and becomes the shape of its container. The atoms held in place in a solid begin to move about freely. Liquids mix, or diffuse, slowly. When a liquid becomes a gas its volume increases: its atoms are much further apart. As a result, gases are compressible whereas solids and liquids are incompressible.

<table>
<thead>
<tr>
<th>SOLID</th>
<th>Fixed shape</th>
<th>Incompressible</th>
<th>Do not diffuse</th>
<th>Atoms bound close together in fixed positions</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIQUID</td>
<td>Flows</td>
<td>Incompressible</td>
<td>Diffuse slowly</td>
<td>Atoms close together but free to move about</td>
</tr>
<tr>
<td>GAS</td>
<td>Flows</td>
<td>Compressible</td>
<td>Diffuse rapidly</td>
<td>Atoms far apart and racing about madly</td>
</tr>
</tbody>
</table>
The atoms making up a gas move about very rapidly, striking the walls of the container and exerting pressure on it. Gases also diffuse rapidly due to the motion of their atoms. This picture of the motion of atoms in solids, liquids and gases is called the Kinetic Particle Theory of Matter (Greek: Kinesis — motion).

Questions
1. What is matter (paragraph 3)? In what three states does it occur?
2. Find phrases in the passage that have the same meanings as these words:
   (a) vaporizes;
   (b) sublimes;
   (c) condenses;
   (d) fuses.
   As an example — melts = turns to a liquid.
3. Find as many pairs of words as possible which describe change of state and which have opposite meanings, e.g. freezing and melting.
4. What do we mean when we say ‘iron freezes at 1528°C’?
5. Which element has:
   (a) the highest melting point?
   (b) the lowest freezing point?
6. What are the boiling and freezing points of water under normal conditions? Does it always boil (or freeze) at these temperatures?
7. Describe the Kinetic Particle Theory of Matter with the aid of a diagram.
8. Which state of matter ‘contains’ the most heat?
9. Copy out the Table on page 12.
10. Copy these words into your spelling list: Matter, solid, liquid, gas, gases, compressible, incompressible, diffusion, pressure, kinetic, particle, theory.

Advanced

Research
12. Why are carbon brushes used on the commutator of an electric motor? (There are two reasons.) Possibly you could ask someone who is an electrician.
13. Why are tungsten bits used to cut steel? (There are two reasons.) You could ask an industrial arts teacher.
14. What is liquid helium used for?
15. What is Absolute Zero? What happens to the atoms at this point? (See volume 2)
Home Study Unit 1

1 Write in alphabetical order:
   appreciate exaggerate accommodate estate evaporate accelerate

2 Write the smaller words in each of the following:
   example: accommodate (4) = a date ate
   a concentrate (7) =
   b estate (4) =
   c participate (6) =

3 Which list or champs' words would be suitable synonyms for the following?
   a draw
   b part
   c quicken
   d partake
   e work
   f value

4 Use suitable list or champs' words to fill the gaps in these sentences:
   a The recipe asked us to _______________ the yolk from the egg white before placing it in the bowl.
   b The wealthy businessman had left his entire _______________ to his only daughter in his will.
   c Billy, who had just told us he had been kidnapped by Aliens, was known to _______________ a little.
   d When the sun shone again we watched the liquid _______________ before our eyes.

Vocabulary Extension
Which list or champs' words would best fit into these groups?
   nurse, surgeon, rehabilitate, hospital, _______________
   discuss, argue, dispute, reason, _______________
   sketch, draw, engrave, draft, _______________
   magnify, expand, colour, overestimate, _______________
   shake, oscillate, quiver, tremble, pulsate, _______________

General Knowledge
What am I?
1 I am the highest order of mammals which includes man, apes, monkeys etc. _______________
2 I am what a cow does when it 'chews the cud'. _______________
3 I come from the French words presto and digit. I mean to conjure or to create a magical illusion. _______________
Half our nation is now overweight

HEALTH ministers are planning a national strategy to combat obesity, as latest research shows almost half the population of Australia is overweight.

Experts say obesity will overtake smoking as the biggest health problem of the decade. They are predicting a quarter of the population will be suffering from weight-related diabetes by 2013.

Doctors have coined the phrase ‘diabesity’ to describe the condition, which is affecting a rising number of chronically overweight adults and children. Health problems linked to weight are believed to be costing taxpayers at least $3 billion a year.

Researchers at Westmead Children’s Hospital say four in 10 Australian children will be overweight within 10 years... [and] the proportion of children who are overweight is growing by at least 1 per cent a year.

‘Unless the trend reverses, we will run into perception problems — because that’s going to be the way half the kids look,’ Westmead Adolescence Health Research Centre executive director Dr Michael Booth says.

The average weight of Australian adults has increased five per cent in the past decade to 74.3 kilograms, according to a recent Australian Bureau of Statistics report.

More than half of all men (58 per cent) and 42 per cent of women are overweight...

Diabetes Australia NSW spokeswoman Angie Middlehurst says children as young as six are being treated for mature-onset diabetes, a condition once confined to overweight adults in their 40s.

Fatty diets and a lack of exercise have also seen 10-year-olds treated for cardiovascular disease.


Questions
1. What proportion of Australia’s population is overweight?
2. What will be the biggest health problem in this decade?
3. Explain why you think an overweight population is costly to taxpayers.
4. Explain what Dr Michael Booth means by ‘perception problems’.
5. What diseases normally associated with middle age are increasing in children?

HEALTH FACT

Over a 10-year period from 1985 to 1995, the number of overweight children almost doubled and the number of obese children more than tripled. In Australia, around 21 per cent of boys and 23 per cent of girls are now considered overweight or obese. Part of the obesity problem is linked to children not being active. Australian children now watch an average of 20–30 hours of television per week.

180  STRAND 2: INDIVIDUAL AND COMMUNITY HEALTH
Grid Reference - The Hidden Friend

Colour the following squares and you will find a smiling friend

Co-ordinates:
D3  I2  C7
N5  B6  F2
D8  C4  L6
G2  E9  E3
J8  K11  L4
F12  M4  Q7
F4  F9  H12
H13  H2  J3
O8  P9  B5
M6  H9  D12
E13  P6  Q8
J12  K3  S8
G11  O5  K7
I9  R9  E6

Different colour

Colour the following squares in blue (or black and red when indicated) and you will find an enthusiastic friend

Co-ordinates:
G11  A4  D1  F7  K12  L3
P6  N8  Q8  A9  I12  S8
C2  O2  B11  S9  H8  L12
M6  M11  N7  R10  O5
P12  R3  Q2  B5  E2
F8  N10  A7  M4  O8
Q1  J13  O11  M5  G4
C7  D8  C8  G5  E5
H12  B10  E3  F10  A8
G6  D12  E4  S4  P1
P8  S6  H3  Q11  S7
C1  B3  E3  C11  Q7
E8  A6  L8  D6  O4
R5

Change Colour:
K2  J1  J2  I2

Change Colour:
L9  J5  I5  J4  H9  K5
Mots cachés

Regarde bien la page.
Dans cette grille trouve onze mots de Noël.
Commence avec C et continue de lettre en lettre (pas de diagonale).

départ

G U O B C A D E
I E C N I Y O A
N E A R P E J U
N R E T A U X N
E C R E S L E O
N I D C H E B O
D G E L I E S U
E N A E O T E L

arrivée

un cadeau
une bougie
des boules
une étoile
une dinde
des guirlandes

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EXERCISE

12 Some Logical Thinking Puzzles

Objectives
To improve skills in  • analysing written information to reach logical conclusions

Instructions
Analyse the information in each of the puzzles so that you can answer the questions which follow them.

Puzzle 1
Sally, Bob, Patrick and Richard are an astronomer, a geneticist, a radiologist and a pathologist.
(a) The radiologist often asked the geneticist if she could help him.
(b) Bob and the astronomer sometimes had lunch together.
(c) Richard, Bob and the radiologist all enjoy modern music.

Question 1: Who does what?
Question 2: What does each of these branches of science study?

Puzzle 2
Angelo, Bronwyn, Charles, Donna and Eva have a beaker, a measuring cylinder, a Bunsen burner, a tripod and a test tube.
(a) Charles’ piece of equipment is not made of glass.
(b) Eva’s will do the same job as Angelo’s but it is not as accurate.
(c) Donna needs matches to make hers work.

Question: Who has which piece of equipment?

Puzzle 3
Three pieces of laboratory apparatus are labelled A, B and C. They are used for measuring liquid volumes, heating things, and for cleaning test tubes.
A is not the Bunsen burner or the measuring cylinder, and B is not the Bunsen burner.

Question: What label is on each piece of equipment?

Puzzle 4
Four rocks are labelled P, Q, R and S.
(a) R is heavier than Q, but lighter than S.
(b) P is lighter than S, but heavier than R.
(c) The mass of the rocks is 5, 10, 15 and 20 grams, but not in that order.

Question: What is the mass of each rock?