Name: _____

Worksheet Booklet

Katoomba High School

Stage 4 (8B)

Instructions

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

Work out the answers for the additions and subtractions below.

A.	364	B.	563	C.	726	D.	843	E.	698
	+ 83		+ 197		+ 249		− 21		− 143

G.	814	H.	146	I.	273	K.	783	L.	862
	− 265		+ 384		+ 569		+ 197		− 50

M.	917	N.	269	O.	275	P.	387
	− 78		− 147		54		172
					+ 160		+ 49

R.	28	S.	4608	T.	6729	U.	2314
	134		− 4138		− 6558		− 1978
	+ 179

V.	54	W.	1893	Y.	25
	179		− 1588		593
	8				1473
	+ 247				+ 29

Match the letters that go with the answers you found above to the same numbers below, to decode the rhyme.

305 530 555 122   305 489 341 980 842 122 549   305 842 171 530

122 336 839 760 555 341

822 489 122 171   812 555 171   2120 489 336 341   839 842 122 822

470 812 336 839 760 555 341

608 812 447 975 555   488 447 812 336 555   2120 489 336   122 555 555 822

171 489   760 555   341 842 549 530 171   447 122 822   470 336 975 975 555 555 822

Home Study Unit 4

1 There are 10 **list** words hidden in this **wordsearch**.

Find the 10 words and then write, in alphabetical order, the missing 4 words.

A	S	E	E	W	P	D	O	F	E	W	R	I
B	E	K	D	O	R	P	R	B	K	L	A	T
P	G	J	O	T	M	O	O	S	W	A	B	D
K	R	V	M	O	L	L	T	D	E	Y	O	E
P	R	O	M	O	T	E	T	E	T	U	D	B
M	U	D	B	W	A	R	D	R	O	B	E	O
E	D	O	R	E	D	E	N	O	U	P	K	L
O	B	D	E	N	O	T	E	L	Q	P	D	G

_____
_____
_____
_____
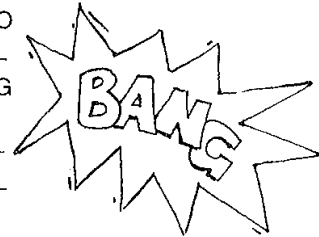
2 Unjumble: p s e d i o e _____   e t p m o o r _____

       b w d o a e r r _____   b e l o g _____

3 Which **list** or **champs'** words contain . . .

a 3 vowels and 2 consonants? (3) _____ _____ _____

b 2 vowels and 3 consonants? (3) _____ _____ _____

c 3 vowels and 3 consonants? (1) _____

d 3 vowels and 4 consonants? (4) _____ _____ _____ _____

4 Funny Pictures: Draw . . .

a globe under a wardrobe   a microbe toting a book of quotes

5 Use a dictionary to find the definitions of . . .

anecdote _____

microbe _____

corrode _____

Vocabulary Extension

1 a Another word for worldwide is g l o b __ __ .   **b** Something occurring in episodes is e p i s o d __ __ .

   c When something bursts inwards it is said to __ __p l o d e .

2 What does the expression 'learning by rote' mean? _____

General Knowledge Acronyms

An **acronym** is a word formed from the initial letters of other words.

LOTE is an acronym used by the Victorian educational authorities. It means Languages Other Than English.

Use a dictionary to help you to find out what the following acronyms mean . . .

R A D A R _____

L A S E R _____

A N Z A C _____

U N E S C O _____

Worksheet 5-03 Integer review

1 Find:

a $3 + (-5)$

b $-3 + 5$

c $3 - 5$

d -3×5

e $-3 - 5$

f $3 - (-5)$

g $-3 + (-5)$

h $-3 \times (-5)$

i $-3 - (-5)$

2 Find the temperature when:

a 8°C drops by 10°

b -5°C rises by 4°

c -9°C drops by 2°

d -1°C rises by 7°

e 6°C drops by 9°

f -10°C rises by 3°

3 Find:

a $18 \div (-2) \times (-3)$

b $\dfrac{45}{-9}$

c $-4 \times (-7) \times (-2)$

d $7 - 10 - 4$

e $-4 \times (-4) + 3 \div (-1)$

f $-2 + 2 - 8 + 8$

g $-3 + 9 + (-2) - 5$

h $\dfrac{3 \times (-10)}{-6}$

i $-5 \times [7 - (-3 + 4)]$

j $4 \times (-2) + 6$

k $28 - 8 \times 3$

l $-11 + 5 \times (-3) \div 3$

4 Complete these tables:

a

+	-2	7	0	-9	-3
1					
-5					
8					
3					
-1					

b

×	3	-6	2	10	-7
5					
-4					
-2					
7					
-1					

5 Find the difference when the temperature changes from:

a 2°C to 14°C

b -3°C to 5°C

c 6°C to -1°C

d -4°C to -8°C

e -5°C to 0°C

f -9°C to -1°C

6 Find:

a $-3 \times 6 + (-4) \times 6$

b $-7 - (4 - 9) - 10$

c $5 \times (-2) + 4 \times (-1) + 12$

d $2 \times (-4) \times 8$

e $\dfrac{-24 + 4}{4 - 8}$

f $(-4)^2 + (-3)^2$

g $(-3 - 3) \times 10$

h $14 - 18 \div (-2)$

i $[3 \times (7 - 10) + 5] \div 4$

j $12 - [-8 \div (-1) + 2]$

k $18 + 3 - 4 \times 7$

l $-5 \times 8 - 27 \div (-3)$

Assignment 30: The Origin of Chemistry

Chemical processes were used to make copper and iron probably as early as 8000 BC (late Stone Age) and 3000 BC (Bronze Age). Glass was made as early as 2600 BC. But chemistry did not begin as a serious study till the middle ages when the *alchemists* were attempting, among other things, to find ways of turning common metal into gold. In the process they began to discover the laws of chemistry and a large range of new chemicals, including the mineral acids. By 1800 it was fast becoming a *science*, a body of ordered knowledge verifiable by experiment.

An alchemist at work (part of sketch by Pieter Bruegel the Elder)

Elements

The ancient Greeks believed in the existence of only four elements that make up the whole universe — fire, air, earth and water. By the beginning of the nineteenth century, twenty-two elements had been correctly identified (thirteen metals and nine non-metals). Today ninety-two naturally occurring elements are known and another twelve or so have been produced artificially in atomic reactors. The lightest is hydrogen, the heaviest natural element is uranium. By definition, these elements make up all matter, but cannot themselves be simplified into components.

Atoms as logical

In the fifth century BC the Greek philosopher Democritus proposed that all matter was composed of tiny indivisible particles. He reasoned that if an object was cut into smaller and smaller pieces, eventually bits so small would be obtained that they would be indivisible. These particles he called *atoms* (from the Greek: *atomos* — indivisible).

Scientific proof

John Dalton resurrected the atomic theory in 1808, but whereas Democritus had based his idea on reason alone, Dalton based his on experiments. The path to modern scientific atomic theory was paved by the French chemist Antoine Lavoisier (1743–94). Using accurate scales he discovered the *Law of Definite Proportions* — that when two pure substances combine to

95

form a given compound, they do so in definite proportions by weight.


John Dalton

Dalton's atomic theory

John Dalton (1766–1844) saw in this the first proof of atoms. He could only make sense of the law if each element was made up of separate particles *all* having the same weight. In 1808 he proposed his *Atomic Theory* — that each element consisted of one kind of atom only, different from the atoms of all other elements, and that atoms of different elements combined to form compounds.

Part of Dalton's original list

For example:
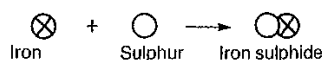
Atomic weights

Dalton even worked out the first relative atomic weights based on 1 for hydrogen, the lightest element, using the ratio of combining weights in a chemical reaction. For instance, seeing that 8 grams of oxygen combined with 1 gram of hydrogen, he figured the atomic weight of oxygen to be 8. However, his results were wrong since he believed all atoms combined in a simple 1:1 ratio. Today we know that the formula for water is H_2O, a 2:1 ratio, and we know the atomic weight of oxygen to be 16.

ELEMENT	DALTON'S VALUES	TODAY'S VALUES
Hydrogen	1	1.008
Carbon	5.4	12
Oxygen	7	16
Sulphur	13	32.1
Sodium	28	23
Iron	50	55.8
Copper	56	63.5

Table 30.1 Dalton's atomic weights compared with modern values

Questions

Answer in sentence form.

1. Who were the *alchemists*?
2. State the *Law of Definite Proportions*.
3. How was the word *atom* derived?
4. What is meant by the atomic weight of an element?
5. How is Greek philosophy different from modern science in its approach to problems?

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Exercise 14B
1. A water tank holds 2 kL of water. How many litres is this?
2. A litre bottle of lemonade costs 98c. How much does John pay for 3 bottles?
3. Write down the number of millilitres in a litre.
4. How many litres are there in a kilolitre?
5. How many millilitres are there in 4 litres?
6. How many millilitres in 5 litres?
7. How many millilitres in 6 litres?
8. How many millilitres in 10 litres?
9. Express 7000 mL in litres.
10. Express 8000 mL in litres.

Time

```
60 seconds   = 1 minute
60 minutes   = 1 hour
24 hours     = 1 day
```
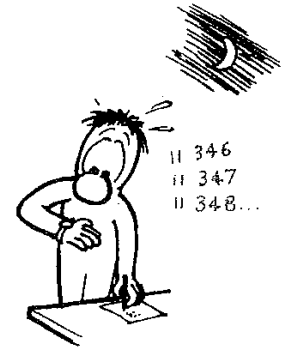
Exercise 14C
1. Write down the number of seconds in 1 minute.
2. How many seconds are there in
   (a) 3 minutes?
   (b) 5 minutes?
   (c) 25 minutes?

3. Copy and complete:
   (a) 2 days   = ... hours
   (b) $1\frac{1}{2}$ hours = ... minutes
   (c) 120 minutes = ... hours
   (d) 3 weeks = ... days
   (e) 28 days = ... weeks
   (f) 1 fortnight = ... days
   (g) 48 months = ... years
   (h) 104 weeks = ... years
   (i) 1 century = ... years
   (j) 1 leap year = ... days

4. How many minutes are there in:
   (a) 2 hours?
   (b) $3\frac{1}{2}$ hours?
   (c) 1 hour 17 minutes?
   (d) three-quarters of an hour?

5. Write down the times shown here.
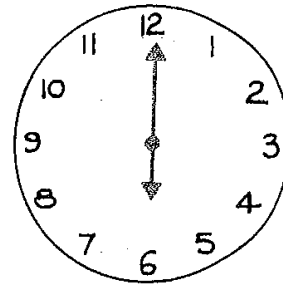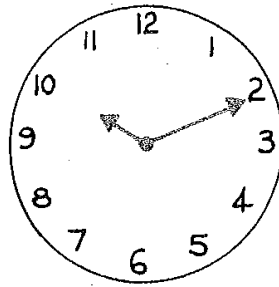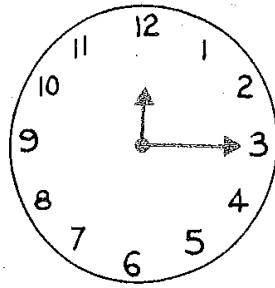
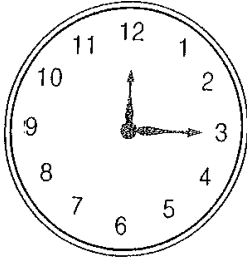6. How many minutes are there from
   (a) 12 noon to 12.30 p.m.?
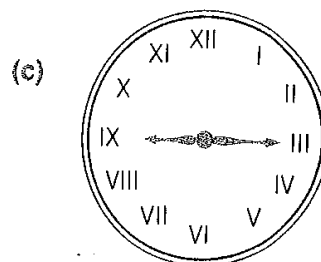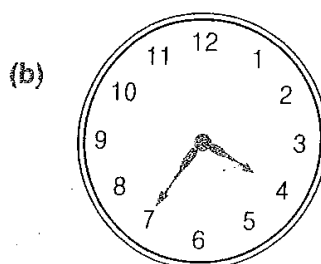   (b) 8.15 a.m. to 8.40 a.m.?
   (c) 6.45 p.m. to 7.12 p.m.?
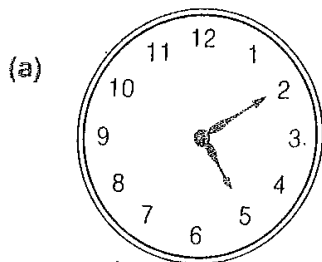
7. What times are shown here? Write your answer in words in two different ways.

Example

Answer
(i) twelve fifteen
or
(ii) a quarter past twelve

(a)

(b)

(c)

8. (a) How long is it from 6.30 p.m. to midnight?
   (b) How long is it from 9 a.m. to 1.30 p.m.?
   (c) A train is due to arrive at 10.15 a.m. but is 3 minutes late. What time does it arrive?
   (d) A train is due to arrive at 2.45 p.m. but is 5 minutes early. What time does it arrive?
   (e) Draw a clock face showing the time at 6.20.
   (f) Draw a clock face showing the time at 11.45.

9. Many modern watches show *digital* time. Some of you will have *digital* watches. What time is shown in each of the following?

Example

9:45

We say:
nine forty-five
or
a quarter to ten

(a) 9:30   (b) 2:55   (c) 12:04

The 24-hour clock is being used more and more, and helps to avoid confusion.

Examples   Airline timetables
            Time on a video recorder
Can you think of more?

10. Copy and complete the table. Discuss with your teacher how to say these times.

(a)

1 a.m.	0100	1 p.m.	1300
2 a.m.	0200	2 p.m.	1400
3 a.m.	0300	3 p.m.	1500
4 a.m.	0	4 p.m.	1600
5 a.m.	0	5 p.m.	
6 a.m.	0	6 p.m.	
7 a.m.		7 p.m.	
8 a.m.		8 p.m.	2000
9 a.m.		9 p.m.	2100
10 a.m.	1000	10 p.m.	
11 a.m.		11 p.m.	
12 noon	1200	12 midnight	2400
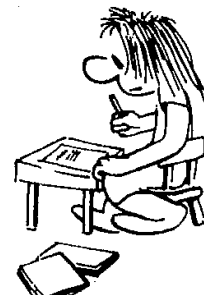
General Science – Word Race

1 How many five-letter science-related words can you write under each heading in fifteen minutes? Some words may fit under more than one heading.

CHEMISTRY	PHYSICS	BIOLOGY

2 Now repeat the exercise with four-letter science words!

CHEMISTRY	PHYSICS	BIOLOGY

Classroom Unit 5 _u_e

The List

cube	jube	tube		produce	reduce	deduce	truce
include	conclude	attitude	altitude	intrude	elude	solitude	
refuge		duke	fluke	juke-box			
rule	mule	molecule	ridicule				
plume	fume	assume	costume	perfume	resume		

1 Which **list** word . . . ?

a a noble man _____

b to begin again _____

c height above sea level _____

d chewy fruit-flavoured lolly _____

e a shelter _____

f another name for a donkey _____

g end _____

h work out by reasoning _____

2 Write in one interesting sentence: produce   costume   perfume _____

_____

3 How many faces has a cube? _____

4 Write a **list** word in the gaps in these sentences . . .

a The weary travellers sought _____ from the ferocious storm in an abandoned hayshed.

b The children's _____ to moving improved after they realised that their new house had a swimming pool.

c Many spectators lined the roadway as the _____ and duchess passed by.

d Life in a lighthouse can be one of _____ .

e The whale disappeared after a final huge slap of the water with its broad _____ .

f We danced happily to the music of the _____ until late that evening.

Word Building

1 Add the **suffix** –tion to the following **list** words (be careful) . . .

produce _____   reduce _____   deduce _____

assume (careful!) _____   resume (careful!) _____

Write 2 of your new words in one interesting sentence.

2 Add the **suffix** –sion to the following words (be careful!) . . .

include _____   conclude _____   intrude _____

exclude _____   delude _____

Write one sentence containing any two of these new words. _____

For Champs   exclude   gratitude   deluge   delude   multitude   interlude

Copy on to grid paper and complete from this list of words:

CENTURY   MINUTE
DECADE   PARENTHESES
HEIGHT   OPERATION
HOUR   QUANTITY
LIQUID   SECOND
LITRE   SYMBOL
METRIC

Activity

The following questions attempt to analyse your leadership style. Read each item carefully. Think about how you usually behave when you are the leader in a group situation. Using the key, circle the letter that most closely describes your style. Circle only one choice per question.

A = Always   O = Often   S = Sometimes   R = Rarely   N = Never

1.	I take time to explain how a job should be carried out.	A O S R N
2.	I explain the part that others' are to play in the group.	A O S R N
3.	I make clear the rules and procedures for others to follow in detail.	A O S R N
4.	I organise myself.	A O S R N
5.	I let people know how well they are doing.	A O S R N
6.	I let people know what is expected of them.	A O S R N
7.	I encourage the use of uniform procedures for others to follow in detail.	A O S R N
8.	I make my attitude clear to others.	A O S R N
9.	I assign others to particular tasks.	A O S R N
10.	I make sure that others understand their part in the group.	A O S R N
11.	I schedule what I want the others to do.	A O S R N
12.	I ask that others follow standard rules and regulations.	A O S R N
13.	I make working on a job more pleasant.	A O S R N
14.	I go out of my way to be helpful to others.	A O S R N
15.	I respect others' feelings and opinions.	A O S R N
16.	I am thoughtful and considerate of others.	A O S R N
17.	I maintain a friendly atmosphere in the group.	A O S R N
18.	I do little things to make it more pleasant for others to be a member of my group.	A O S R N
19.	I treat others as equals.	A O S R N
20.	I give others advance notice of change and explain how it will affect them.	A O S R N
21.	I look out for others' personal welfare.	A O S R N
22.	I am approachable and friendly toward others.	A O S R N

Scoring

For Questions 1-12 score:
- 5 points – Always
- 4 points – Often
- 3 points – Sometimes
- 2 points – Rarely
- 1 point – Never

A total greater than 47 indicates you like to initiate structure. You plan, organise, direct, and control the work of others.

For questions 13-22 score:
- 5 points – Always
- 4 points – Often
- 3 points – Sometimes
- 2 points – Rarely
- 1 point – Never

A total greater than 40 indicates that you are a considerate leader. A considerate leader is one who is concerned with the comfort, well being, and contributions of others.

60

Use the prices listed in the Supermarket Specials above to answer the following.

> **Example**
> Mrs Bell bought the following items at the supermarket:
> 1 packet tea, 1 bottle tomato sauce, 1 kg sausages,
> ½ kg cheese.
> Make out her bill and the total cost.
>
> | | |
> |---|---|
> | 1 packet tea | $1.55 |
> | 1 bottle tomato sauce | $1.35 |
> | 1 kg sausages | $2.29 |
> | ½ kg cheese | $2.49 |
> | Total cost | $7.68 |

Make out these bills.

1. 1 kg bacon, 2 packets tea, 1 size 16 chicken, 6 apples.
2. 1 kg cheese, 2 packets sugar, 2 kg carrots, 1 kg rissoles.
3. 2 bottles cream, 10 apples, 1 kg bacon, 1 bottle tomato sauce, 1 packet sugar.
4. 4 kidneys, 1 kg chicken pieces, 1 kg cheese, 1 bottle cream, 2 packets tea.
5. 2 packets sugar, 2 packets tea, 4 kg carrots, ½ kg cheese, 3 bottles cream.
6. 2 kg hamburger mince, 3 kidneys, 1 kg bacon, 2 kg carrots.
7. 7 apples, 3 kg carrots, 1 size 16 chicken, 2 bottles tomato sauce.
8. 2 kg sausages, 6 kidneys, 2 kg chicken pieces, 1 kg hamburger mince.
9. Jim and Sue are holding a barbecue and inviting their friends. They buy the following food at the supermarket: 5 kg sausages, 5 kg hamburger mince, 3 bottles tomato sauce, 20 apples. How much will it cost them?
10. The local restaurant orders 10 chickens from the supermarket. How much will they cost?

Discount

Sometimes goods are sold more cheaply than the *marked price*. The money that is subtracted is called a *discount*.

> **Example**
> The marked price of a bicycle is $184.00 but it is to be sold with a discount of $4.50. What is the selling price?
>
> | | |
> |---|---|
> | Marked price | $184.00 − |
> | Discount | $4.50 |
> | Selling price | $179.50 |

Exercise 8F

Work out the selling price for each of these articles.

Article	Marked price	Discount
1. Bicycle	$279	$35
2. Record	$13.50	$2.75
3. Shirt	$49.00	$4.90
4. Shoes	$54.99	$5.49
5. Fishing rod	$77.80	$7.78
6. Record player	$299.95	$4.25
7. Football	$37.30	$5
8. Tennis racquet	$64.34	$3.20
9. Book	$24.50	$4.90
10. Cassette	$8.99	$1.50

SUGGESTED PRACTICAL WORK

Work out the cost of your school uniform.

WORDS

List
dollars
cents
money
point
special
discount
article
price

Copy and complete each sentence using the list given.

(a) David had enough _____ to buy the _____ .

(b) Jenny could not afford the _____ listed in the catalogue.

(c) When money is written in figures, there is a _____ between the _____ and cents.

(d) A skateboard marked at $54 was sold for $50. The _____ was $4.

(e) The advertisement read 'Supermarket _____, Saturday only'.
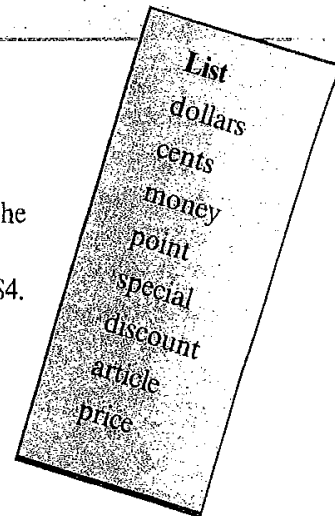
WEEKLY TEST 8

1. Write in dollars:
   (a) 200c　　(b) 120c　　(c) 345c　　(d) 1346c

2. Write in cents:
   (a) $1　　(b) $10　　(c) $2.20　　(d) $9.45

3. Find the sum of $2.56 and $3.65.

4. What is the difference between $15.60 and $3.75?

5. Use the 'Supermarket Specials' on page 60 to make out and total these bills:
   (a) 1 kg bacon, 1 bottle of tomato sauce, 2 kidneys, a size 16 chicken and a packet of tea.
   (b) 1 bottle of cream, 1 packet of sugar, 2 size 16 chickens and 2 kg sausages.

6. Copy and complete this table.

Article	Marked price	Discount	Selling price
(a) Bicycle	$320	$32	
(b) Jeans	$65	$8	
(c) Video	$899	$50.50	

Looking back

7. One week the crowd at a Panther's home game was 13 780. At the next home game the crowd was 16 445. What was the increase?

8. Lorraine bought a cassette for $8.99 and a record for $12.99. What was the total cost?

9. What is the missing number?

   $57 + 118 + \boxed{} = 500$

10. (a) Arrange these numbers in order, from smallest to largest:
       243, 432, 342, 423, 234, 324

    (b) What is the difference between the smallest and the largest?

Home Study Unit 5

1 Use the **code** A = C B = D C = E etc. to identify these **list** words . . .

C V V K V W F G _____ G N W F G _____ F G F W E G _____

C U U W O G _____ F W M G _____ O W N G _____

T G H W I G _____ L W D G _____

Can you say which endings these letter combinations are . . . ?

– W F G _____ – W E G _____ – W O G _____ – W M G _____

– W N G _____ – W I G _____ – W D G _____

2 Find all of the **list** words ending with –ule and –ume in this **wordsearch** . . .

U	A	S	S	U	M	E	U	P	U	M	E	U
R	P	E	R	F	U	M	E	M	L	M	U	E
E	U	E	M	E	L	U	R	E	S	U	M	E
U	M	L	U	U	E	C	O	S	T	U	M	E
M	O	L	E	C	U	L	E	U	F	M	E	E

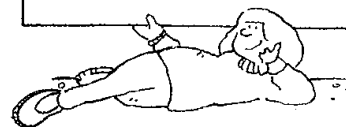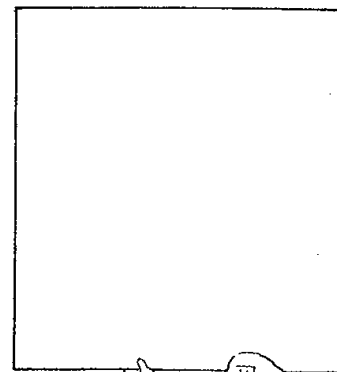**3 Funny Pictures:** Draw . . . a huge duke, wearing a costume with a plume, taking refuge from a deluge.

4 Write the missing letters . . .

__ o l e __ __ __ __   __ e r f __ __ __   s __ __ __ t __ __ __

Vocabulary Extension

Use a dictionary to help you write the definitions of the **champs'** words.

exclude _____

gratitude _____

deluge _____

delude _____

multitude _____

interlude _____

General Knowledge

1 Find the capital cities nearest to these Longtitudes and Latitudes . . .

Latitude	Longtitude		Latitude	Longtitude	
38 degrees S	145 degrees E	_____	42 degrees N	12 degrees E	_____
35 degrees N	140 degrees E	_____	51 degrees N	0 degrees	_____
41 degrees N	74 degrees W	_____			

2 What am I? I am one of Australia's major highways. __ __ __e

3 What am I? I am the second longest river in Europe. I rise in the Black Forest in Germany and then I flow to the Black Sea. _____

Chemistry opposites

1 Using a chemistry context, write the opposite word for each term below.

fission	_____	explode	_____
anion	_____	dissolve	_____
proton (+)	_____	ignite	_____
active	_____	base	_____
saturated	_____	pure	_____
rare	_____	weak	_____
melt	_____	metal	_____
polar	_____	oxidise	_____

2 Label the laboratory tools below using the words provided.

BEAKER	BUNSEN BURNER	ROUND-BOTTOM FLASK		WATCH GLASS
TRIPOD AND GAUZE PAD	TEST TUBE	CLAMP	FUNNEL	PIPETTE

35

Numbers crossword
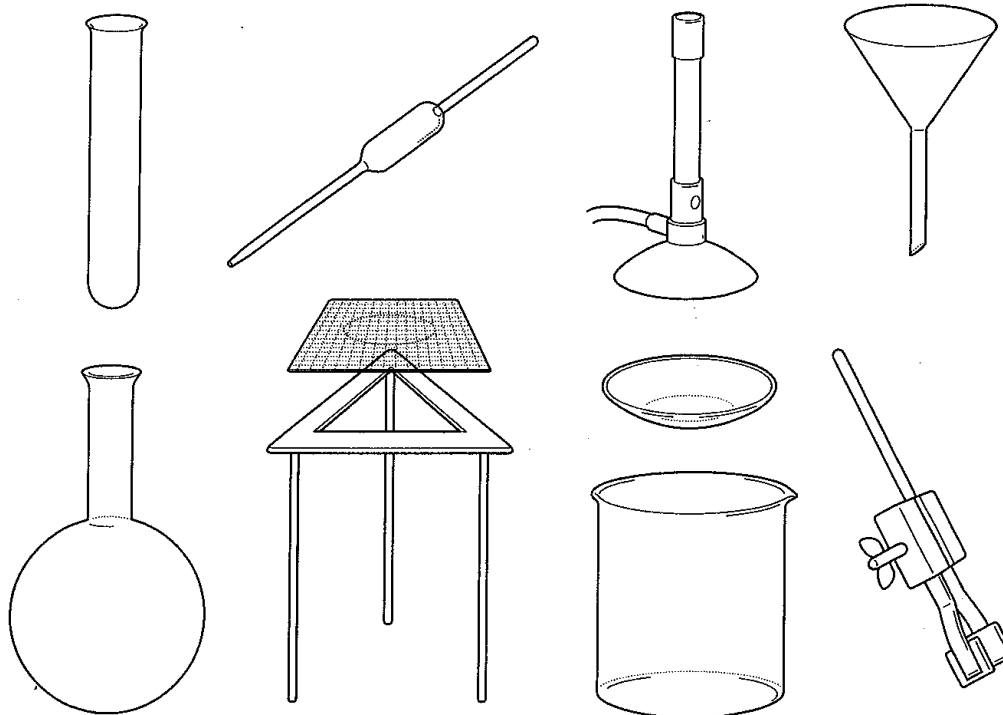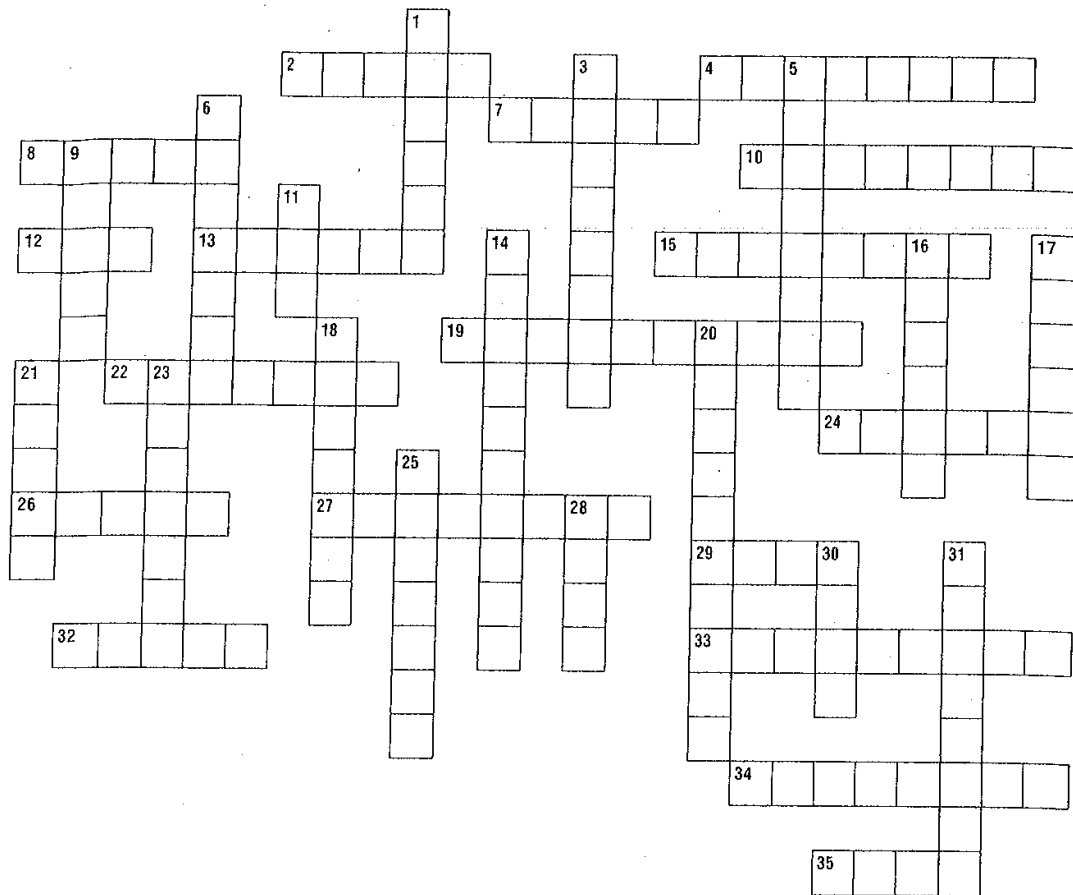
Clues across

2 A number from 0 to 9
4 The product of a negative and a positive is this
7 To approximate to a number of decimal places
8 The 4 in 10^4
10 The product of two negatives is this
12 To find a sum, you _____
13 To multiply by 2
15 To make simpler
19 From largest to smallest
22 Positive or negative whole number
24 Fraction where numerator < denominator
26 $3\frac{1}{4}$ is a _____ numeral
27 To 'times'
29 $\sqrt{\ }$ means square _____
32 To divide by 2
33 The top number in a fraction
34 To find the value
35 When the power is 3

Clues down

1 ÷
3 To 'minus'
5 ( ) are called _____ symbols
6 The answer to a multiplication
9 Doing × before + is an example of _____ of operations
11 The _____ of 18 and 12 is 30
14 Addition is one of the 4 basic o_____
16 A number that divides into a given number
17 To multiply by itself
18 Special fractions with denominators that are powers of 10
20 The answer to a subtraction
21 A number that has only two factors
23 7 is an example of a Hindu-Arabic _____
25 1.708 has three decimal _____
28 Dividing by a two-digit number requires _____ division
30 To find a number's prime factors, use a factor _____
31 To make an educated guess

Smoking losing its cool with the young

Secondary school students are giving cigarettes the thumbs-down, with smoking rates for 12 to 15-year-olds hitting their lowest level in almost 20 years.

A report reveals that every week in Victoria in 2002, about 62 000 people aged between 12 and 17 smoked, down from almost 74 000 in 1999.

The Cancer Council Victoria study also shows that these students are smoking fewer cigarettes, down from 2 million a week in 1999 to 1.5 million last year.

Council director David Hill said that while this was encouraging, it was important to continue working to reduce smoking among young people.

'If there are 62 000 kids in secondary schools in Victoria smoking and they continue to smoke throughout life, we would expect about half of them to die prematurely of tobacco-related illness, so we can't let that happen,' Professor Hill said.

The youth smoking trends report is based on surveys conducted in 2002 with more than 4000 students aged between 12 and 17 at 62 schools statewide. The surveys started in 1984 and are carried out every three years.

The 2002 report found that among students aged 12 to 15, the number of smokers — those who had smoked in the past week — had dropped to the lowest level since the survey started. Twelve per cent of boys and 13 per cent of girls smoked. The number of students in this age group who had tried smoking also fell, from 53 per cent in 1999 to 43 per cent in 2002.

Among those aged 16 and 17, more than two-thirds had tried smoking, but the survey found that the number defined as smokers was down.

In 2002, 26 per cent of boys said they had smoked in the past week, compared to a high of 32 per cent in 1993, and

30 per cent of girls were classified as smokers, down from a high of 37 per cent in 1996.

Other findings include:
- Young people with smoking parents are more likely to smoke than those without.
- Students who live in homes where smoking is allowed inside were 80 per cent more likely to have tried smoking.
- The proportion of 12 to 15-year-olds buying their own cigarettes fell from 25 per cent in 1999 to 15 per cent in 2002.
- Young males smoke on average 28 cigarettes a week, compared to 26 for young females.

Quit executive director Todd Harper said the downwards trend showed that anti-smoking initiatives and the banning of smoking in public places were working. '(But) unless we ban smoking in pubs and clubs, when these teenagers move into that environment in the next few years, they're just as likely to take up smoking,' he said.

Source: C. C. Leung & C. Camilleri, 'Smoking losing its cool with the young', *The Age,* 9 December 2003, p. 5.

Questions

1. Which organisation conducted the survey into smoking among secondary school students?
2. Were there more or fewer smokers in 2002 than in 1999?
3. What does Professor Hill predict will be the result of smoking for half the teenage smokers?
4. Why do you think the percentage of young people who smoke is falling?
5. Which environments are blamed for young people taking up smoking?
6. In October 2004, the New South Wales and Victorian governments announced that smoking would be banned indoors in pubs and clubs from 1 July 2007. Find out more about the new regulations and the stages of implementation. What effects do you think these new laws will have on young people's rates of smoking?

Converting improper fractions to mixed numbers

Fishing for fractions

Fred the fisherman has gone down to the pier to catch some fish, but he needs your help to catch them. Fred needs to use the correct improper fraction to catch each fish. You can help him by drawing a fishing line from each improper fraction to the fish with its matching proper fraction.

$\dfrac{9}{4}$ $\dfrac{8}{3}$ $\dfrac{15}{9}$ $\dfrac{3}{2}$ $\dfrac{7}{2}$ $\dfrac{10}{3}$ $\dfrac{14}{10}$ $\dfrac{17}{9}$ $\dfrac{27}{10}$ $\dfrac{6}{5}$ $\dfrac{13}{2}$ $\dfrac{17}{7}$

$1\dfrac{1}{2}$

$2\dfrac{7}{10}$

$1\dfrac{8}{9}$

$3\dfrac{1}{2}$

$2\dfrac{3}{7}$

$1\dfrac{4}{10} = 1\dfrac{2}{5}$

$2\dfrac{2}{3}$

$6\dfrac{1}{2}$

$3\dfrac{1}{3}$

$1\dfrac{6}{9} = 1\dfrac{2}{3}$

$1\dfrac{1}{5}$

$2\dfrac{1}{4}$