

GROW SMART

GROW
SMART

An initiative by GROWTH-POINT

In collaboration with



Western Cape
Government
Education

Second Edition 2013



OVER THE RAINBOW

DEAR GROWSMARTER

Welcome to the second edition of Growsmart 2013! We hope you enjoy exploring the wonderful world of colour with us. You can read all about Vuyo and Gemma's amazing visit to the circus and Professor Thandi will show you how to make a rainbow. Plus, there are lots of fun classroom activities for you to do.

Remember, if you want to improve your skills, you must practice a lot. So, sharpen your literacy skills by reading as much as you can. Borrow books from the library and read magazines, newspapers and even comics. Writing will also help. Keep a diary – when you get home from school, try writing a few sentences about some interesting things that happened during the day.

Reading will not only improve your literacy skills, but will also increase your knowledge. You will understand things easier and do better at school, which is really important for your future career. Who knows, you may even become a rich and famous author one day.

Until next time,
The Growsmart Team

wonderful WORDS

accent
abdomen
absolute
advantage
campaign
abbreviation
approximately
accountability
action
ability
alphabet
adventure
acrobatics
caterpillar
accommodate
neighbourhood
transformation
adjust
achieve
approach
aeroplane
activities
cauliflower
astonishment
presumably
advice
address
arrogant
ambitious
artificial
cleanliness
confirmation
pronunciation
afford

ancient
asteroid
attention
assignment
comfortable
considerable
agreed
approve
attitude
bilingual
assistance
concentrate
conversation
annual
because
butchery
breakfast
assumption
considerate
incoherently
answer
bicycle
capacity
calculate
beautician
consistency
intelligence
anthem
blossom
children
celebrity
commitment
contraption
kaleidoscope
armour

cabbage
complain
character
complexity
desperately
unacceptable
author
caravan
computer
chocolate
convention
development
autumn
century
corridor
companion
courageous
electricity
avenue
chicken
creation
confident
dictionary
embarrassed
baboon
confirm
creature
conscious

difference
environment
bangle
contact
crescent
container
earthquake
explanation
beggar
costume
religion
deodorant
equivalent
exterminate
behind
cottage
romantic
escalator
hemisphere
immediately
bishop
country
universe
geography
photograph
independent
bright
courage

neighbour
substitute
information
camera
popular
poisonous
suspicious
magnificent
cancel
produce
satellite
mesmerising
carpet

pyjamas
volunteer
optometrist
choice
survive
planetarium
desert
sentimental
nephew
rescue
sailor
voyage



WORD search

Find the following words hidden in the square to the left. The words may be found left to right, back to front, upside down or even diagonally.

BEIGE
OLIVE
BLACK
ORANGE
BLUE
PINK
BROWN
PURPLE
CHOCOLATE
RED
GOLD

TAN
GREEN
TEAL
INDIGO
TURQUOISE
MAROON
VIOLET
MINT
WHITE
NAVY
YELLOW

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

COLOUR and their meanings

A symbol is something that stands for, or represents, something else. A symbol can be a sign or a mark, a badge or an emblem. Colours can also be used as symbols. Think about traffic lights for example: Green means go, amber means slow down and red means stop.

Colours are often associated with feelings. When someone is 'feeling blue', they are feeling sad. When someone 'sees red', it means they are very angry. When someone is 'yellow', they are cowardly or afraid. Colours can mean different things in different countries and cultures. Some of their meanings have changed over the centuries. Let's explore a few colours and what they mean around the world.

White is often associated with peace. Waving a white flag during war means that you want to surrender. White also symbolises purity, innocence and cleanliness. A bride is usually dressed in white at her wedding. In Chinese culture, white is the colour of mourning and is often seen at funerals.

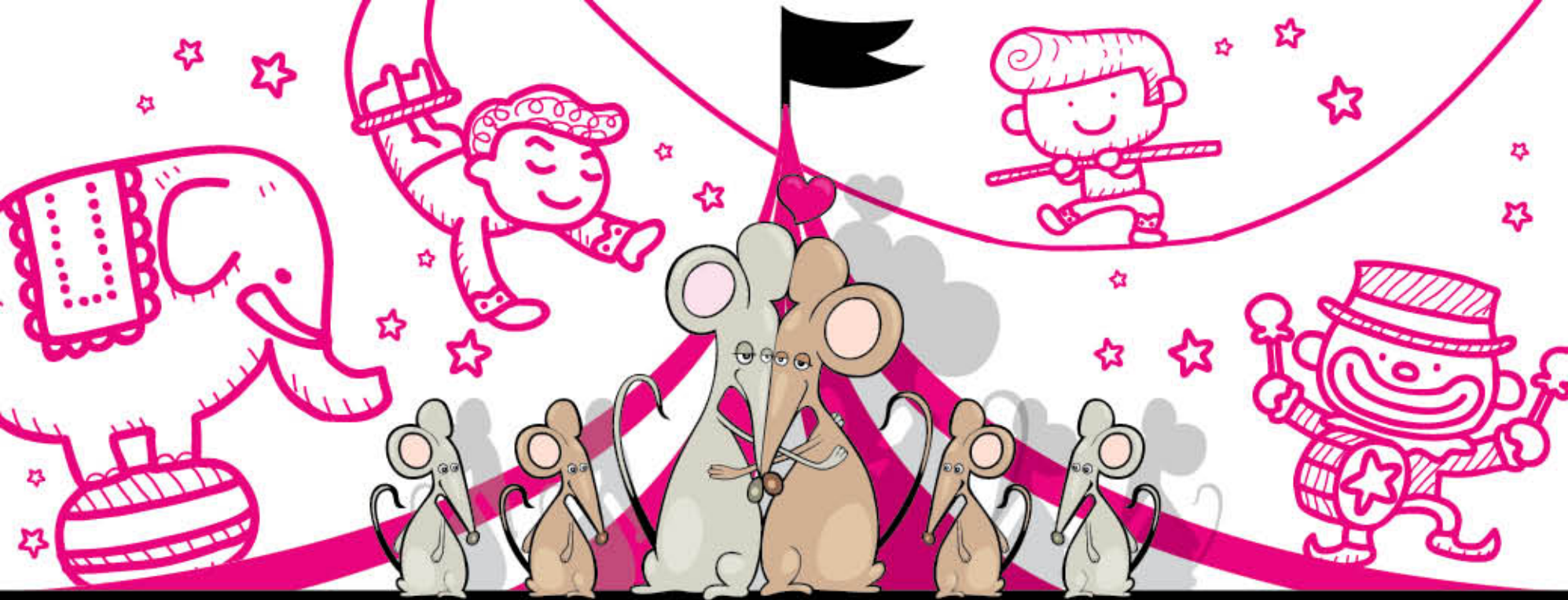
In the Western world, people attending funerals are often dressed in black, because it is the colour of mourning and death. Black can represent darkness, evil, witches and secrecy. However, it can also symbolise humility, wealth, sophistication, elegance and high fashion. In karate, achieving a black belt means that you have mastered the basic skills and techniques and can now assist the instructor.

Green is often used to symbolise nature and the environment. It is the colour of spring and youth. 'Going green' is about finding ways to recycle, to save fuel, electricity and water – and to take care of our planet. Green can be the colour of jealousy, for example when someone is 'green with envy'. When you're feeling nauseous and looking pale, people may describe you as looking 'green around the gills'.

Purple is the colour of royalty, luxury, power, mystery and magic. One of the reasons for this is that purple is very rare in nature. It used to be very expensive to create purple dye. In the army of the United States of America, soldiers wounded in battle receive a medal called a Purple Heart. In Thailand it is the colour of mourning.

Red symbolises danger, aggression, fire, blood and war. It is also the colour of passion, love, excitement and strength. Red is a favourite colour for Christmas and Valentine's Day. It is also one of the most common colours seen on flags. Brides in India dress in red, and so do the Cardinals of the Roman Catholic Church.





VUYO AND GEMMA AT THE

CIRCUS



Vuyo and Gemma decided to surprise their quadruplets with a visit to the circus. The Mousecow Circus was coming to town and the whole family was going!

On the big day, the mouse family got onto their Jack Russell taxi and sped off to see the show. The first thing they saw when they arrived was the huge red and white circus tent. The quadruplets were so excited that they jumped off the taxi before it came to a complete stop, and Vuyo had to give them a lecture about not doing dangerous things like that. The quadruplets nodded and said they were sorry, then off they ran to stand in the queue to buy their tickets.

Vuyo and Gemma knew that a visit to the circus was going to be expensive, so they had saved R500,00 for the trip. The price of a ticket for an adult was R70,00, and a ticket for a child was half the cost of an adult's ticket. Vuyo had to buy tickets for two adults and four children.

How much did the tickets cost in total?

How much money did Vuyo have left after paying for the tickets?

With their tickets in hand, the next step was to buy popcorn and candy floss before the start of the show. Vuyo and Gemma decided to share a box of popcorn, but each of the quadruplets wanted their own popcorn and candy floss.

If one box of popcorn cost R5,00 and one bag of candy floss cost R3,50, what was the total cost for five boxes of popcorn and four bags of candy floss?

How much money was left after Vuyo paid for all the popcorn and candy floss?

The mouse family found their seats and sat down in the packed circus tent. Bright coloured lights shone down on the circus ring in front of them and happy circus music blared from the loudspeakers. Then the curtains opened and a brightly dressed clown with a painted face, orange hair, red nose and large floppy shoes bounced and rolled to the middle of the ring. He immediately jumped up and looked at the audience, as if noticing them for the first time. Then he bowed low and tripped over his own feet. He did a somersault in the air and landed on his bottom. Vuyo, Gemma and the quadruplets roared with laughter until tears streamed down their furry faces.

Trapeze artists flew high above the heads of the mouse family and made them gasp in astonishment.

Time seemed to fly by faster than the trapeze artists and soon it was intermission. The quadruplets were thirsty after all the salty popcorn and sweet candy floss, so the mouse family went looking for the soda kiosk. Each of the quadruplets wanted a different flavour: crème soda, cola, raspberry and orange. Vuyo and Gemma settled for a bottle of sparkling water each.

A bottle of soda was R7,50 and a bottle of sparkling water was R5,00. How much did Vuyo pay in total for four bottles of soda and two bottles of sparkling water?

How much money was left after Vuyo paid for the drinks?

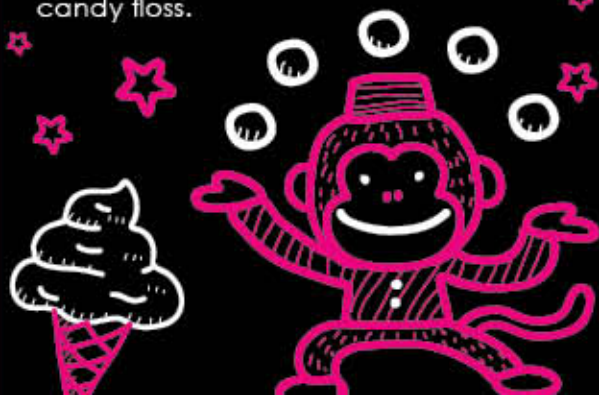
After the interval it was time for the animals to make an appearance. First up were the lions. They were huge and looked very dangerous, but the lion tamer had them all under control. The quadruplets had never seen real lions before! Next came six beautiful white horses with long pink feathers on their heads. They were graceful, elegant and superbly trained. The horses were followed by dogs, camels and seals. The clown came back onto the stage between acts and made sure that the audience rolled about with laughter.

The animals followed the clown as he marched around the ring to the beat of circus music. They waved at the audience while Vuyo, Gemma and the quadruplets were up on their feet along with the hundreds of other mice, all clapping their hands and whistling.

On the way out of the circus tent, Vuyo spent R30,00 for a photograph of the mouse family posing with the clown and the acrobats. Vuyo still had to pay the Jack Russell taxi R50,00.

Vuyo started out with R500,00. After paying for everything, including the photograph and the taxi, did Vuyo have any money left over? If so, how much?

The Mousecow Circus was amazing. The quadruplets all agreed that it was an experience they would never forget. The mouse family had more than enough excitement for one day, and they fell asleep on the taxi ride home. They all had happy dreams about clowns, acrobats, circus music, colours and candy floss.



SENSE-SATIONAL SENSES

Human beings have five ways of sensing the world around them. Our five senses are sight, smell, touch, taste and hearing. Our senses give us information about what's going on around us. They help us to explore, to gain knowledge, to be safe, and to enjoy the world.



SIGHT

We see with our eyes. The eye sits in a hollow area in the skull called the eye socket. Some of the parts that you can easily see in a mirror are the sclera, the iris and the pupil. The white part of the eye is called the sclera. The colourful part of the eye is called the iris. The black circle in the centre of the iris is called the pupil, which is where light enters the eye. The pupil gets smaller when the light is bright, and opens wider when there is less light. The size of the pupil is controlled by the iris.



HEARING

We hear with our ears. There are three parts to the ear: the outer ear, middle ear and inner ear. The part of the ear into which you can put your finger is the outer ear – that's where you'll find ear wax. The eardrum is a thin layer of skin between the outer and middle ear. Sound makes the eardrum vibrate. Behind the eardrum are three tiny bones called the hammer, the anvil and the stirrup. The bones vibrate when the eardrum vibrates. The next part is a curled tube called the cochlea, which contains liquid and tiny hairs.



SMELL

We smell with our nose. There are nerves inside your nose that take messages to your brain about the smells that you are breathing in. Your brain then tells you what you're smelling.



TASTE

We taste with our tongue. Your tongue is covered with thousands and thousands of taste buds. The taste buds on different parts of your tongue allow you to taste different things, such as sweet, sour, salty or bitter. Have you noticed that when you hold your nose, it affects your sense of taste?



TOUCH

We feel with our skin. The nerves beneath your skin send messages to your brain to tell you about what you're touching – such as soft, hard, warm, cold, sticky, smooth, rough and painful.



If all of your five senses stopped working, do you think you could get any knowledge at all about the world around you?

YES

NO



SOLVE THE PROBLEM

1 → $25 - 8 + 13 =$

2 → Which number is larger: $\frac{1}{4}$ or 0.5?

3 → $88 \div 8 =$

4 → Which numbers are missing in the following sequence?
5, 12, 19, , 33, , 47

5 → $8 \times 7 =$

6 → $72 \div 8 =$

7 → Which numbers are missing in the following sequence?
93, 89, 85, , 77, , 69

8 → $12 + 6 + 6 - 14 =$

9 → $10 \times 10 \times 10 =$

CLASSROOM ACTIVITY

HOW MANY WORDS CAN YOU MAKE?

Your task is to take three words and use their letters to make as many new words as you can.

INSTRUCTIONS:

- 1 Write down your first name: _____
- 2 Write down your favourite colour: _____
- 3 Write down your age (using letters, not numbers): _____
- 4 Now use the letters in your three words above to make as many new words as possible.

FOR EXAMPLE, let's say your three words were:

Steven. Blue. Twelve.

Some new words we could make from the letters are:

Bus. Even. Between. Wet. Eleven. Steel. Tweet. Ten. Bun. Seven.

How many new words did you manage to make?

What was the longest new word you made?

COLOURFUL IDIOMS

An idiom is a group of words, a phrase or an expression that means something different from what the individual words actually mean. You can't work out the meaning of an idiom by looking up the words in a dictionary.

An example of an idiom is: 'It's raining cats and dogs.' It does not mean that cats and dogs are literally falling from the sky like rain. The meaning of this idiom is that it's raining very heavily. Another example is 'John has ants in his pants.' It does not mean there are real ants in John's pants, but rather that he is restless or excited about something.

Every language and culture has its own idioms and understanding them can be fun! Here are a few idioms with a colour theme:



TO TURN WHITE AS A GHOST / WHITE AS A SHEET.

Meaning: To look very pale and frightened. "Mary turned white as a ghost when she realised that she did not turn off the oven when she left home this morning."



TO USE YOUR GREY MATTER.

Meaning: Grey matter refers to the soft grey tissue of your brain. "You're going to have to use your grey matter to find the solution to the problem."



TO HAPPEN ONCE IN A BLUE MOON.

Meaning: Something that does not happen very often. A rare event. "Emily and Nancy are sisters, but they have little contact with each other. They only get together once in a blue moon."



TO HAVE A YELLOW STREAK.

Meaning: A person with a yellow streak is someone who can act cowardly at times. "Sometimes I think Thomas has a yellow streak in him, because he never wants to go on any of the roller coasters at Ratanga Junction."



TO BE TICKLED PINK.

Meaning: To be tickled pink means to be very pleased about something. "I was tickled pink when I saw the high marks I received for the maths test."



TO BE A BLACK SHEEP.

Meaning: A black sheep is an idiom used to describe someone in a group or a family who behaves very differently or badly, or is just simply odd. "Steve is the black sheep of our family. His behaviour is disgraceful and always causes us great embarrassment."



TO BE CAUGHT RED-HANDED.

Meaning: When someone is caught in the act of doing something wrong, like stealing or cheating. "The policeman caught the robber red-handed as he was breaking into the bank."



TO GIVE THE GREEN LIGHT.

Meaning: To give the green light means to give permission for something to go ahead or to be done. "Mrs Jones gave us the green light to go home early today."

FIND THE MISSING LETTERS

Look at the letters in the box. Some letters of the alphabet are missing. See if you can work out which letters are missing. Then use the missing letters to make a word describing something colourful that appears in the sky.

C X G L S
D J F V
K P U Q Z
T H E M Y



CAN YOU SOLVE THESE PROBLEMS?

PETER THE GARDENER

Peter is going to earn some money by cleaning up his neighbours' gardens. He plans to clean 10 gardens and charge R15,50 for each garden. His sister, Petra, is going to help him. Peter is going to pay Petra R80,00 for helping him.

How much will Peter earn for cleaning the 10 gardens?

How much money will he have left after he pays Petra?

LOUISE'S CUPCAKES

Louise loves baking cupcakes. She decides to bake 24 cupcakes and sell them to her friends. It cost Louise R54,00 in total to make the cupcakes.

How much did it cost Louise to make each cupcake?

How much must she charge for each cupcake in order to make a profit of R90,00?

THE POTATO FIELD

Ricardo is planning to plant potatoes. His field will have 15 rows with 110 potato plants in each row. Ricardo has a new potato planting machine and he expects to plant the entire field in 6 hours.

What is the total number of potato plants he will have in his field?

How many potato plants will he plant in each hour?

CLASSROOM ACTIVITY

MATCH THE WORDS!

SYNONYMS. ANTONYMS. Don't let those two words give you a headache. It's easy to understand synonyms and antonyms.

SYNONYMS are words that have a similar, or the same, meaning. Remember it this way: similar, same, synonym. They all start with the letter S.

ANTONYMS are words that are opposite in meaning to each other. Here are some examples of synonyms and antonyms:

WORD	SYNONYMS	ANTONYMS
Quick	Speedy, fast, flying	Slow, unhurried, lazy
Unhappy	Sad, depressed, miserable	Happy, joyful, cheerful
Rude	Insulting, vulgar, cheeky	Kind, polite, respectful
Honest	Truthful, sincere, trustworthy	Dishonest, deceptive, false
Intelligent	Smart, bright, brilliant	Stupid, foolish, unintelligent

Can you match the following words with their **ANTONYMS**?

Permanent	Innocent
Optimist	Compulsory
Voluntary	Vertical
Accept	Scarce
Exterior	Refuse
Deliberately	Descend
Complicated	Temporary
Abundant	Simple
Ascend	Pessimist
Horizontal	Interior
Guilt	Accidentally

Can you match the following words with their **SYNONYMS**?

Hazardous	Enormous
Buy	Holy
Shrink	Weird
Abandon	Larger
Bigger	Contract
Strange	Terrible
Happy	Drowsy
Awful	Purchase
Huge	Discard
Sleepy	Dangerous
Sacred	Joyful

NO BULLIES ALLOWED

Nobody likes bullies. A bully is a boy or a girl who tries to hurt others by calling them names, spreading rumours, or making them feel uncomfortable or afraid. Sometimes bullies will hurt other children by pushing, kicking, hitting and tripping them, or forcing them to do something that is not right.

WHY DO BULLIES DO IT?

Sometimes it's just an easy way to get what they want. Sometimes they do it to feel important or to impress their friends. Sometimes they do it to others because they themselves are being bullied by someone else.

HOW DOES IT FEEL TO BE BULLIED?

Children who are being bullied often feel helpless to do anything about the situation. The bully is usually bigger and stronger. They feel sad and too scared or embarrassed to talk about it. They feel lonely and afraid whenever the bully is around.

WHAT CAN YOU DO IF YOU ARE BEING BULLIED?

- Remember that bullying is totally unacceptable and should never be kept secret.
- Tell someone you trust, such as your parents, the principal, a teacher, or a friend. If they can't help you, then speak to someone else.
- Act brave and don't let the bully see that you are upset.
- Avoid the places where the bully has been picking on you.

WHAT SHOULD YOU DO WHEN YOU SEE SOMEONE BEING BULLIED?

- Find a friend, a teacher or another adult to help stop it.
- Do not encourage or support the bully.
- Support the child who is being bullied and be kind to them.



PROFESSOR THANDI'S FUN SCIENCE EXPERIMENT

ALL ABOUT RAINBOWS

Did you know that rainbows only appear in the sky if the sun is shining and it's raining at the same time? Have you noticed that you always seem to be between the sun and the rainbow?

THE COLOURS OF LIGHT

You may not know it, but the white light from the sun actually contains different colours of light, such as red, orange, yellow, green, blue, indigo and violet. You can see these seven colours when you look at a rainbow in the sky.

HOW TO REMEMBER THE COLOURS OF THE RAINBOW

If you want to remember the colours of the rainbow in their correct order, just think of the name ROY G. BIV. The letters of the name stand for the first letter of each colour:

R	Red
O	Orange
Y	Yellow
G	Green
B	Blue
I	Indigo
V	Violet

YOU WILL NEED

- A glass of water
- A pencil
- A piece of white paper
- Masking tape
- A flashlight (a torch)
- A CD or DVD

INSTRUCTIONS

1. Holding the pencil at one end, dip the other end into the water. Hold it there and look at the pencil from different angles. Does it look like the pencil bends when it enters the water?
2. Cover the lens of the flashlight with two pieces of masking tape, so that you have a slit in the middle through which the light can shine. Shine the flashlight through the glass of water, so that the light shines onto the paper. A rainbow should appear on the paper. Try raising the glass or changing the angle of the flashlight to make a better rainbow.
3. Shine the flashlight on the CD. In fact, you may not even need the flashlight to see the rainbow on the CD.

RESULTS

1. The pencil in the glass of water appears to bend when it enters the water, but in fact it's still perfectly straight. What you are seeing is the bending of light. The light bends because it behaves differently in the water than it does in air.
2. The light from the flashlight is white light which contains all the colours of the rainbow. When the white light passes through the water, it bends and splits into the different colours.
3. The CD has a similar effect on white light. The light is bent slightly and therefore the different colours can be seen.