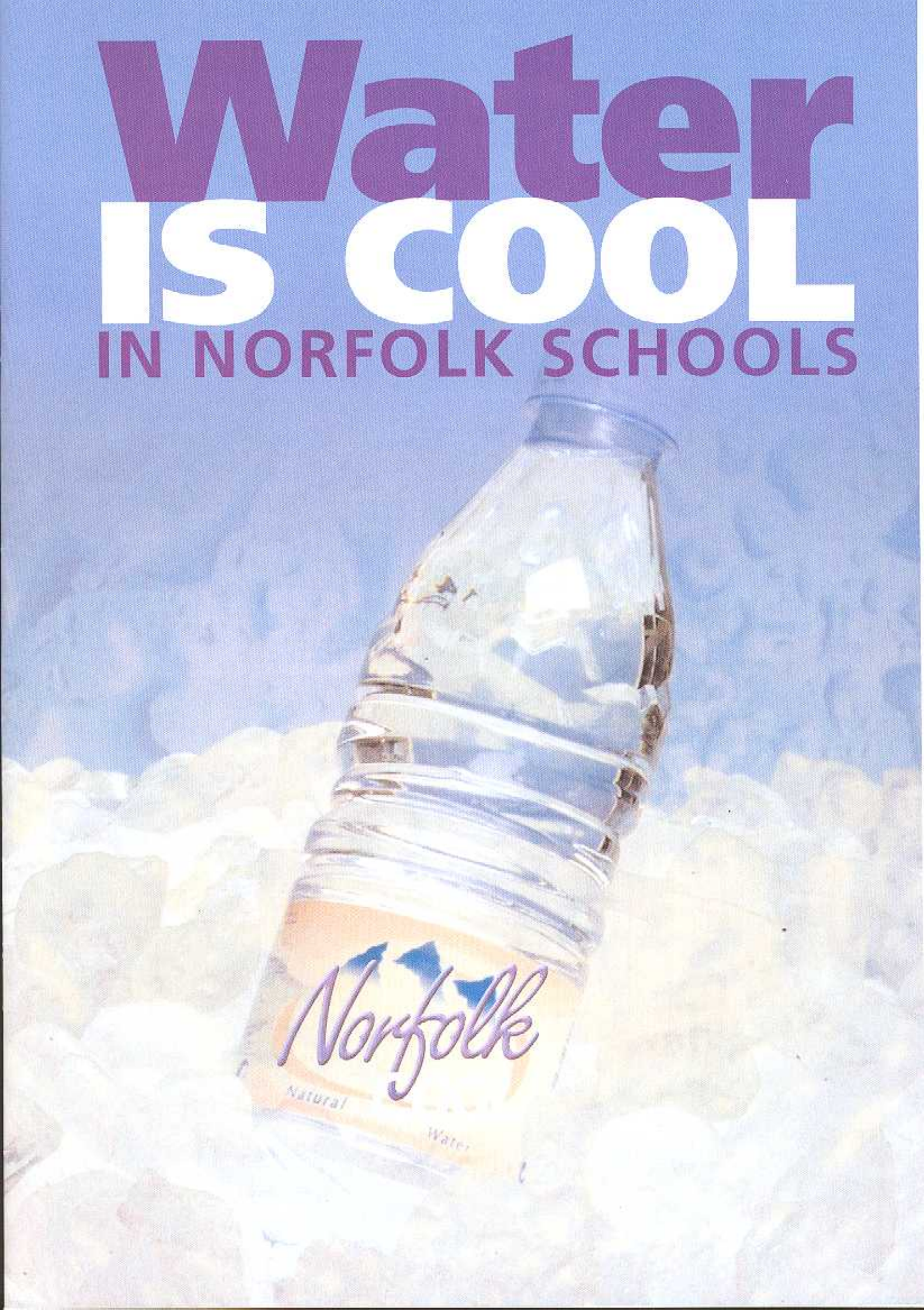
Water IS COOL IN NORFOLK SCHOOLS



About this pack

This pack contains information about:

- The link between effective learning and drinking water
- The health issues linked to drinking an adequate intake of water
- Some practical guidance about how to promote the drinking of water in schools (including photocopiable information for parents and pupils)
- Case studies
- Links to more detailed information, resources and websites

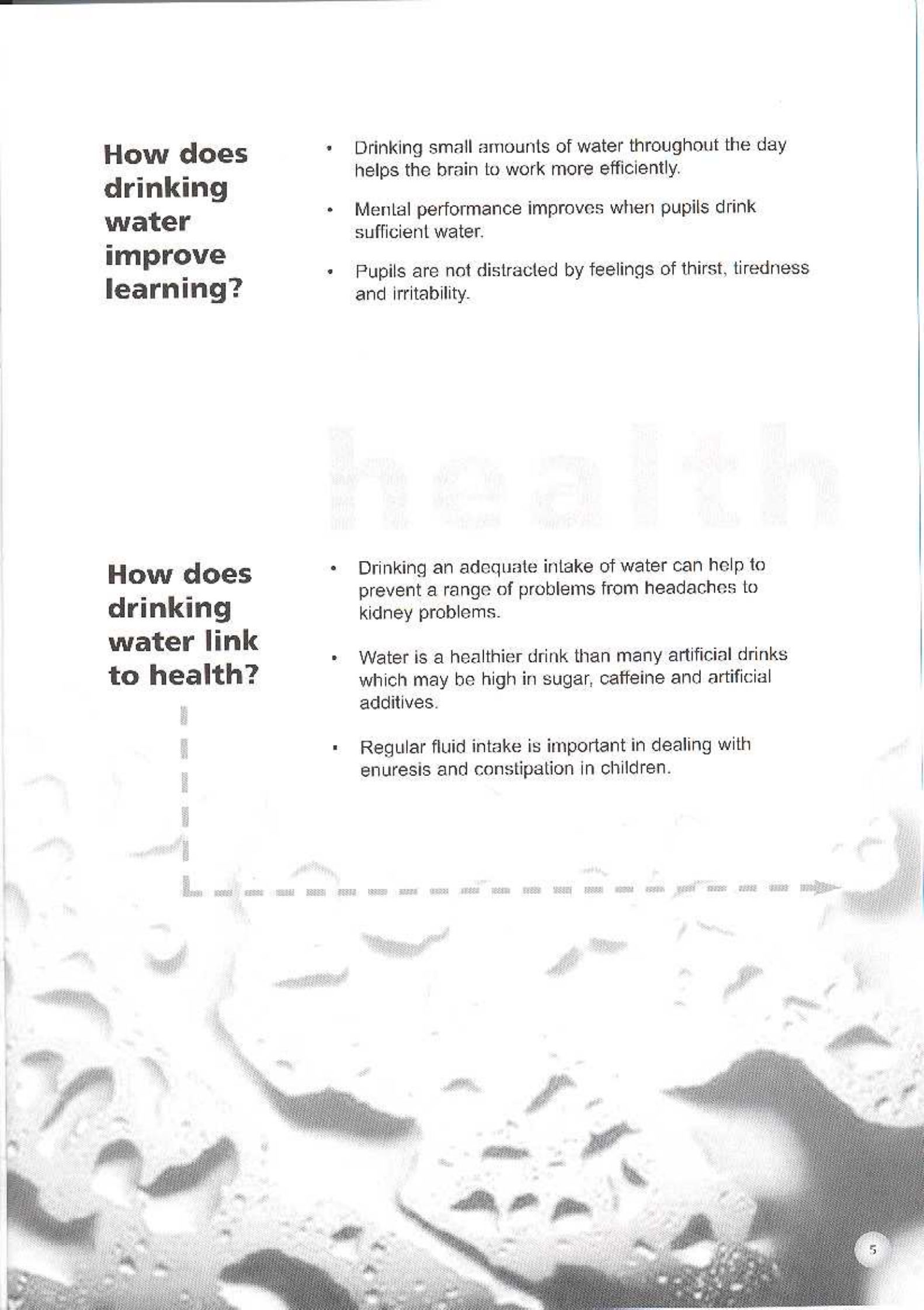
Contents

How does drinking water improve learning?

- Drinking small amounts of water throughout the day helps the brain to work more efficiently.
- Mental performance improves when pupils drink sufficient water.
- Pupils are not distracted by feelings of thirst, tiredness and irritability.

How does drinking water link to health?

- Drinking an adequate intake of water can help to prevent a range of problems from headaches to kidney problems.
- Water is a healthier drink than many artificial drinks which may be high in sugar, caffeine and artificial additives.
- Regular fluid intake is important in dealing with enuresis and constipation in children.

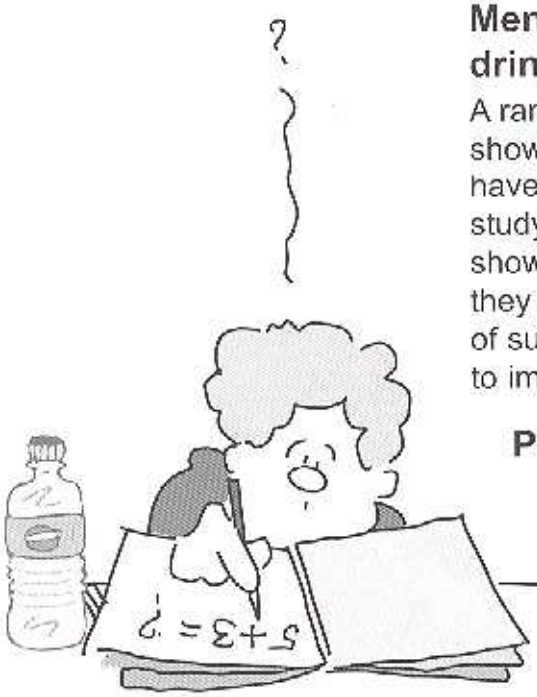


What are the links between drinking water and learning?

Drinking water throughout the day helps the brain work more efficiently

At least 78% of the brain is composed of water. Learning requires effective brain functioning. The brain works most effectively in its vital role of conducting electrochemical impulses to make the connections between the neurons in the brain when it is fully hydrated. There is evidence to show that mild dehydration of only 1-2% has a significant negative effect on brain function in healthy young individuals. For a child of 10 who weighs 30kg 1% dehydration represents a water loss of 300ml (about the amount of water in a large glass).

Children need to be encouraged to drink regularly, ideally before they are thirsty, because the sensation of thirst is not triggered until dehydration is well established. This means that by the time they have become thirsty their brains are not working efficiently. There is also evidence to show that children do not recognise the signs of thirst readily and that if the thirst mechanism is frequently overridden (as can happen in school where there is no easy access to water), it can become de-sensitised.



Mental performance improves when pupils drink sufficient water

A range of studies and anecdotal evidence from schools show that mental performance is improved when learners have adequate access to drinking water. This includes one study conducted by P. Rogers in 2000 of young adults that showed that mental performance decreased 10% when they were thirsty. This is also backed up by a Navy survey of submariners that showed dehydration of 2% is sufficient to impair cognitive function and memory.

Pupils concentrate better because they are not distracted by feelings of thirst, tiredness and irritability

Recent studies have shown that the effective learning time during the school day can be extended by allowing children access to drinking water and so avoiding dehydration. This is reinforced by reports from schools that have introduced schemes ensuring access to drinking water for their pupils.

What are the links between drinking water and health?

Drinking an adequate intake of water can help prevent certain health problems

Many children fail to drink enough fluid during the day. Over a period of time this can contribute to a number of health problems including:

- Constipation
- Bed-wetting (nocturnal enuresis) and day time wetting and soiling problems
- Kidney and urinary tract infections
- Kidney scarring as a result of urinary tract infections
- Acute appendicitis.

Inadequate fluid intake may also play a long-term role in the development of kidney stones, cardiovascular disease and some cancers.

Water is a healthier drink for children than most artificial drinks

Pure clean water is the healthiest option for most children to drink. Many "artificial" drinks contain high levels of sugar, caffeine and artificial additives. These drinks have minimum nutritional value. They contain "empty" calories as well as high levels of sugar and acid which cause damage to teeth. Even sugar-free squash can be acidic and can cause damage to teeth. The damage is greater if these drinks are consumed frequently. Many children are consuming large quantities of drinks which are high in sugar and additives, this may mean that their appetite is diminished and they miss out on valuable nutrients.

Regular fluid intake can help to control problems like enuresis and constipation

Health professionals believe children can help overcome these problems by regular fluid intake and easy access to toilets. It is important that children are encouraged to drink small amounts regularly throughout the day.

Drinking water is essential to maintaining children's health. Children of school age spend much of their time in a controlled school environment. Improving access to water and promoting the importance of an adequate fluid intake is a vital role for schools in promoting good health among their pupils.

What is the situation in Norfolk?

A number of schools are already actively promoting drinking water as part of:

- Thinking Schools
- UFA (University of the First Age)
- Super Learning Days
- Healthy Norfolk Schools

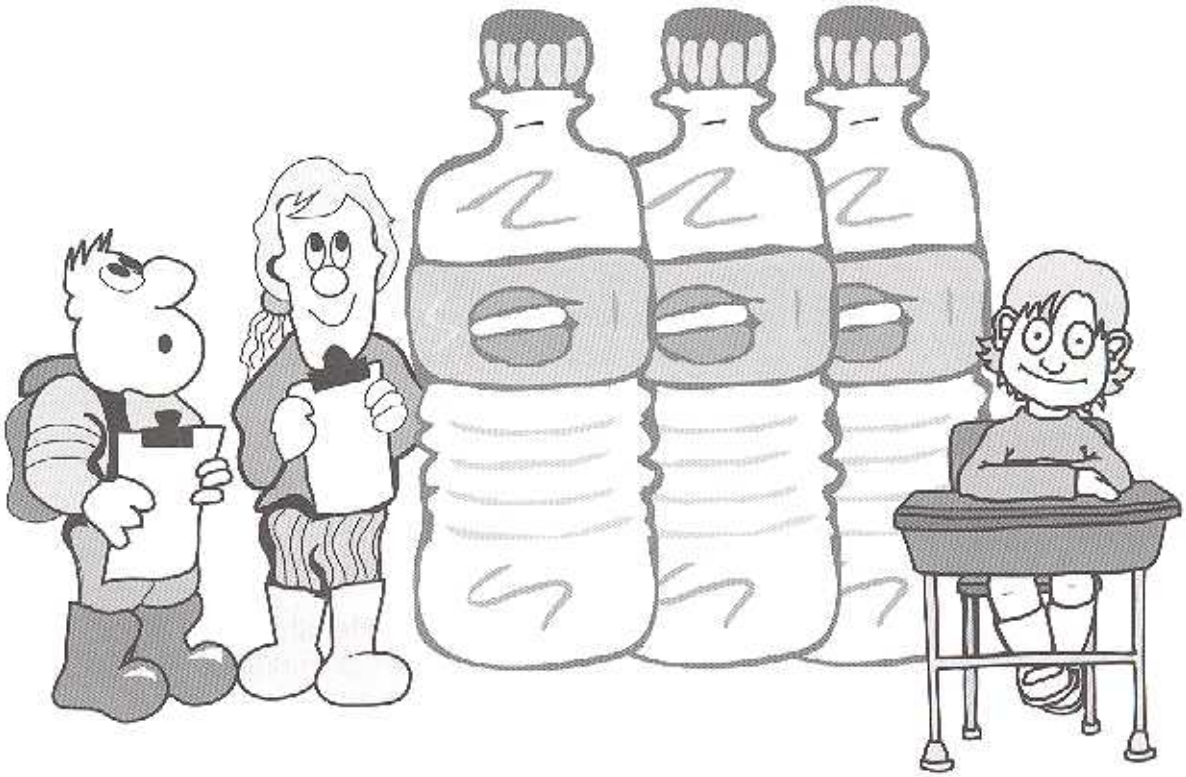
By producing this pack we hope to encourage all Norfolk schools to actively promote drinking water during the school day.

In practically all workplaces water bottles on desks have become a normal sight. Schools are workplaces and there is really no reason why things should be different from the majority of workplaces.

Why don't children drink?

- They are not in the habit of drinking enough.
- They may not readily recognise the 'thirst signal' or it may be de-sensitised.
- Opportunities to have a drink are often limited to morning break and lunch time (few schools give children an afternoon break).
- They prefer to play at break-time rather than queue for water.
- It can be difficult to get a long enough drink from a water fountain.
- Water fountains located in toilet areas or which are not well maintained and cleaned are unhygienic and can be frightening to children.
- Facilities located in isolated places (particularly toilet areas) may be the focus of boisterous behaviour or bullyings or may be perceived as such.
- Water facilities may be inconveniently located or insufficient for the number of pupils.
- They may not be given access to water after PE.
- A child may have to go to the school office or staff room to request a drink.
- Some children do not drink before and during school, as they are unhappy about using the school toilets.
- School water may be unpalatable (taste poor and/or tepid - cool water has been shown to encourage drinking).

- Cups for school taps may not be available or may be communal.
- Water in dining halls may not be provided for all or any children, and where it is, the water served in jugs may be unpalatable (especially if it is not freshly drawn).
- Children may be discouraged from taking water or other drinks to school.
- Children may drink little or nothing from water bottles restricted to cloakrooms.
- Few schools have milk for children at break.



As a result it is not uncommon for children to go for 6-7 hours on school days (longer if they leave home early or stay for an after-school activity) without anything to drink at all and those who do drink may have less than they really need.
Furthermore, many schools find that, for a variety of reasons, some children even start the school day without a drink.

What can schools do to set up a Water is Cool in Schools scheme?

- Involve the whole school. It is important to highlight the benefits of the scheme to the teachers, classroom assistants, governors, caterers, break and lunch supervisors, parents and pupils so that you gain their support.

- A "Water Bottles on Desks" scheme is a very cheap and easy way of starting straight away – guidelines are in this pack.

- "Water Bottles on Desks" schemes have proved to be equally successful in infant, junior and secondary schools.

- Why not pilot a "Water Bottles on Desks" scheme in one year group initially? This will make that group feel special, encourage them to behave responsibly and make other years want to be involved!

- Sources of cool, palatable water should also be available at convenient points throughout school, for drinking from and for refilling bottles (water coolers, taps and water fountains with a swan neck are suitable for this).

- Schools should involve pupils (e.g. through school councils) in deciding which water facilities they install and how the drinking of water is promoted in school.

- If your school has joined the Healthy Norfolk Schools Scheme, your local Co-ordinator may be able to help. (Contact Healthy Norfolk Schools on 01603 433276).

Remember we can *all* benefit from drinking more water

Encourage children to drink plenty of fresh water at school

Teachers may find that drinking more water makes them feel better too

How can schools provide water?

Some options:

Water bottles on desks

It is recommended that this is the most practical system for schools

- Perhaps the easiest, cheapest and most effective way for children to get their water is for them to bring in a plastic bottle of tap water from home that they keep on their desks.
- Ideally, sources of cool and palatable drinking water should also be available in school for children to refill their bottles as necessary.
- Studies have shown that significantly more is drunk by those who have fluids within arm's length than by those who have to get up to go and drink. A bottle also serves as a visual reminder to drink.
- Guidelines for setting up a scheme like this can be found later in this pack.

Water fountains

- Care should be taken to site these away from toilets, and in easily accessible, open areas where students are safe from boisterousness, pushing and bullying.
- The number of fountains should reflect the number of children.
- Modern fountains with swan necks are recommended. These allow bottles to be refilled.

Taps

- Taps must be mains-supplied and should be labelled as drinking water.
- Taps can be used to refill bottles in a "Water Bottles on Desks" scheme.
- Sinks should be clean and empty.
- Drinking taps should not be located in the toilets.

Jugs and cups

- These provide a basic alternative, or a useful temporary option.
- Children can take it in turns to be responsible for washing up the cups.
- Provision of jugs and cups works best when a drinking water source is easily accessible to provide freshly drawn water.

Hygiene: it is very important to ensure good hygiene precautions if using this system. Hand washing and washing of jugs and cups in hot soapy water is essential to prevent the spreading of infection. The use of shared cups is unhygienic and should be discouraged.

Water coolers

- Point of use coolers are plumbed into the mains. These are more convenient and have lower costs than bottled water coolers.
- Because most systems use disposable cups, there are issues about the environment, sustainability and litter which need to be considered.
- Regular maintenance is essential to maintain a hygienic system.

There are many water delivery systems available and a school may need more than one type of water facility. Much will depend on the size of the school, budget, age of pupils, current plumbing and where the water facilities are to be sited. It is important to think about sustainability and environmental considerations.

A note on vending machines

- Schools with vending machines (or tuck shops) might wish to consider selling bottled water and milk as healthy alternatives to the usual sweet soft drinks and juices (note that some flavoured and/or carbonated waters may contain sugar and/or be acidic).
- Vending machines are not an alternative to free good-quality water facilities.

How can schools afford this?

- Many parents are happy to provide a sports bottle for their child.
- Supermarkets and bottled water manufacturers may donate bottles for "Water on Desks Schemes".
- Food co-ops or supermarkets may supply low-cost water for tuck-shops.
- Many suppliers of water facilities offer discounts for schools and additional discounts for larger orders.
- Parent-Teacher Associations are usually keen to help fund better water facilities. Parents and children may want to organise specific water funding events.

How can schools set up a Water Bottles on Desks scheme?

- Introduce the scheme with the health and learning benefits highlighted to all the school. Meetings, newsletters, posters and handouts can be used.
- Negotiate a code of behaviour for how pupils use their water bottles in school and negotiate this prominently.
- Pilot schemes can be used with success to introduce "Water Bottles on Desks" schemes.
- To prevent bottles getting mixed up and to allay concerns about hygiene, a permanent marker or washable label can be used to label bottles with the child's name and class.
- Consider what will work best for you in terms of where bottles are kept.
- Ideally, the teachers role model drinking water in class (and benefit from the water too!).
- Teachers encourage and remind pupils to drink (otherwise many children fail to drink).
- The children should drink only water during class. They should not be allowed to drink sweet drinks in class. This is very important as sweet and/or acidic drinks are harmful to teeth, the more frequently they are drunk the greater the harm to teeth.
- Ideally bottles should be of clear/see-through plastic to avoid other drinks being brought in, or occasional random checks on opaque bottles can be made.
- Non-spill sports-style caps avoid mess if a bottle is accidentally knocked over.
- Bottles can be taken home after school for washing (parents can use hot soapy water or soak in a sterilizing solution) and refilling.
- Children may take their bottles with them when they go to PE lessons or change rooms.
- Water bottles may be barred from science labs, ICT suites or assemblies.
- Water bottles can be in addition to other drinks at breaks (e.g. milk) or in lunchboxes.

What kind of problems might people worry about?

Will children misbehave?

Evidence from schools who do encourage water consumption indicates few problems other than a "settling down" period of a few days.

Will children disrupt lessons because of needing to visit the toilet?

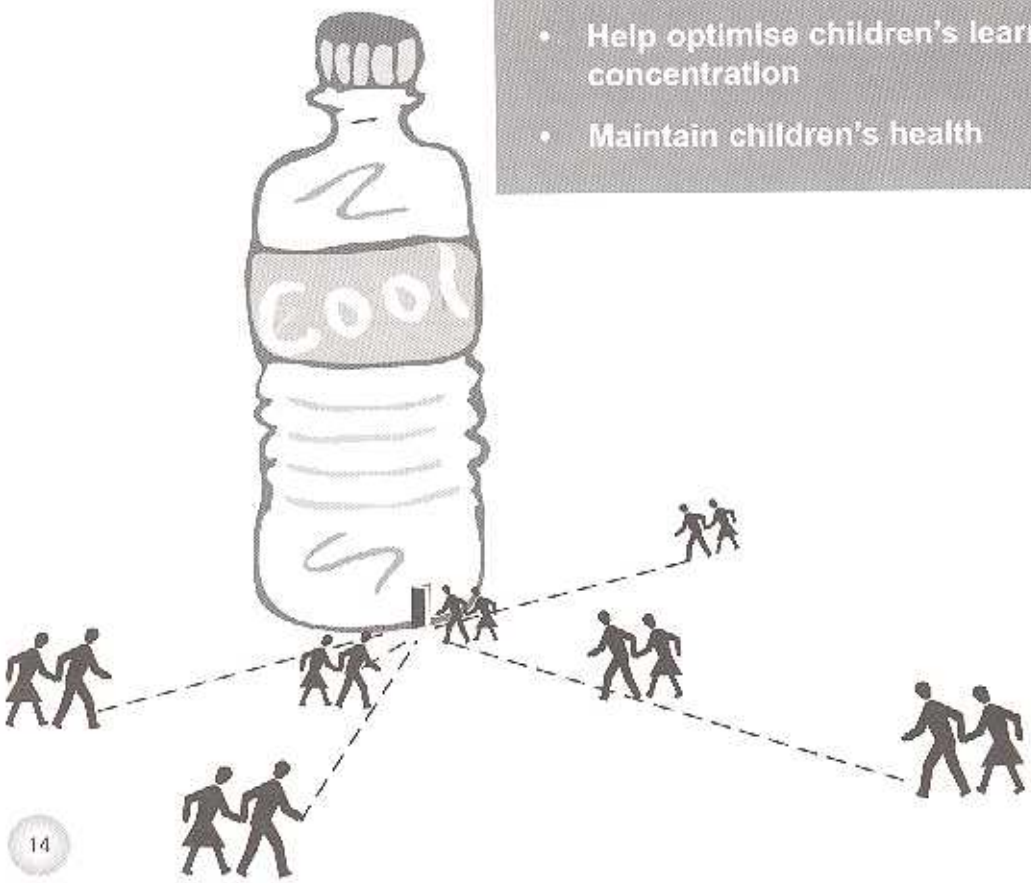
Expectations of pupils needing to leave lessons more frequently to go to the toilet are not, in reality, met. For most of us the bladder soon adjusts to cope with a larger fluid intake. This usually happens within a few weeks.

Will parents support the scheme?

The vast majority of parents are supportive of water schemes, particularly when they are provided with clear information about why they are being introduced and the potential benefits to their children. Most parents support anything which is likely to help their children learn better. For parents whose children suffer with enuresis, repeated urinary tract infections or health problems associated with poor fluid intake, they are likely to welcome the initiative with enthusiasm.

Improving students' access to fresh drinking water and preventing dehydration is important to:

- **Help optimise children's learning and concentration**
- **Maintain children's health**



Case Study from Aylsham High School

It became apparent to us that there was a large demand for drinks during the day and this coincided with national reports on dehydration and the effect of this on concentration. We had installed a water cooler in the staff room and the use of this was far heavier than expected throughout the year. We added another to our conference room.

We also became interested in our students' diet and methods of encouraging healthier eating to tie in with our curriculum policy. Each student is allowed access to bottled water in all lessons. Most bring this from home but we also have a machine in school to which the students have access. In certain controlled conditions, such as laboratory work, we allow access to drinks under stricter conditions.

There has been a noticeable impact late morning and during the afternoon. In meetings to evaluate these changes staff have noted improvements in student work rates across the ability range and particularly with a small number of students who used to become less communicative as time wore on during the school day.

In evaluative discussions with students, they draw attention to the more "work-like" environment. Comments have included:- "we are treated as adults working in an office" and "when you are thirsty with a headache it is better not to have to wait for a drink". The school council have reported back that the students themselves believe that behaviour has improved both due to access to water and because of the better relationships that result from trust in them. We have only had two incidents of poor behaviour connected with drinking in lessons, both involving the same person, but this has been overwhelmingly compensated for by the positive approach of the students.

On introduction we went for a very structured approach with full school and year assemblies on the importance of healthy eating. We negotiated the removal of all fizzy drinks with the canteen and we were very clear about the ground rules for drinking in lessons when addressing students.

There are a number of factors such as positive relationships, change of diet, amount of sleep, removal of high sugar (coloured and flavoured) foods and the introduction of water; all of which probably have a positive effect. Maybe it is also the change in philosophy in that schools don't need to control but to show trust and provide a stimulating environment in which to learn.

T Widdows
Headteacher Aylsham High School
March 2002

Case Study from Tuckswood Community First School

In line with our Statements of Aims and Values, we are concerned with maximising children's independent learning, developing their higher order thinking and helping each child to raise their achievement and attainment. Our wish is to develop a community of enquiry whereby children and adults can retain the natural curiosity and joy of learning and become truly life-long learners. Over the last few years we have looked closely at the neuro-scientific research into 'brain-based learning'. This led us to continue to examine the conditions in which effective learning and teaching takes place, and also the elements involved in developing brain power and children's and adults' ability to recognise the signs of the brain being closed to learning, and to know what to do to rectify the situation.

Following a healthy eating regime and drinking plenty of water plays a large part in keeping children alert and ready for learning. Regular hydration helps prevent headaches and fatigue. We can become mildly dehydrated quickly and our brains will not function as well as they could while we are in this state. Part of their curriculum work involves the children learning about how the brain works and how effective and sustained learning happens. This is part of their 'Brain Basics' learning.

Teachers discuss with their class the importance of drinking water regularly and keeping the brain hydrated. The children are encouraged to sip water often rather than gulp a lot at a time. The messages about the benefits of a healthy diet and drinking water regularly are backed up during Assembly times.

When this was first discussed amongst the staff, several years ago, we decided not to implement water bottles on the children's desks. This was because we have sufficient water fountains along the corridors outside the classrooms and we were also implementing several curriculum developments. The time is right for us now to introduce individual water bottles for the children to have on their desks – the children understand the importance of keeping their brains hydrated and the transition from using fountains to sipping from their individual, named bottles should be a smooth one. The water bottles are in addition to, not a replacement for, the fresh fruit or cereal bar and juice or milk that children have for mid-morning break.

There will be an article for parents in our Summer Newsletter. This will include straightforward information about why drinking water helps learning and good health, how we intend to approach the 'health and safety' issues involved, and the 'code of behaviour' for using water bottles that will be evident in the classrooms. The children will be involved in making posters displaying similar information to put up in their classrooms and throughout the school.

Sue Eagle
Headteacher Tuckswood Community First School, Norwich
March 2002

Water is Cool in School!

Information for pupils

Drinking plenty of water can help you to

- Concentrate better and make your brain more efficient
- Stay healthy
- Have healthier skin and fresher breath
- Feel refreshed and more alert
- Perform better at sports

Lack of water (dehydration) can lead to

- Not performing to the best of your ability at sports
- Tiredness
- Headaches
- Difficulty concentrating
- Unhealthy skin and hair
- Smelly breath
- Health problems such as urine infections and constipation

Tip: *Small amounts of deep yellow, smelly urine is a signal you have not been drinking enough. Drinking more water will encourage a healthy odourless, plentiful flow of urine, no darker than the colour of pale straw, and will encourage you to go to the toilet regularly throughout the day.*

Exercise is thirsty work!

During sport and exercise our bodies lose water through sweating and as water in the air we breathe out. When we exercise hard and in hot conditions our body's water losses can be very high. But you can also lose a lot of water during moderate intermittent exercise outdoors and indoors and in winter. (Even when you don't become sweaty.)

Unless the fluid is replaced quickly, we can become dehydrated. Dehydration has a bad effect on the body's performance and health. Exercise will feel much harder and you will begin to flag sooner.

Scientists advise sportsmen and sportswomen to drink plenty of water – before, during and after taking exercise. Ideally, keep a plastic sports bottle of water next to the pitch, court, gym and poolside and take regular drinks.

Do as the sports' scientists advise: don't wait until you feel thirsty but if you do get thirsty, quench your thirst and then take a few more gulps beyond thirst.

Do try and have a good drink of water before you go back into class otherwise your mental performance could suffer.

If you want to be a winner, why not try drinking more water – maybe you will notice the difference!

Water doesn't harm your teeth and it's free!

Why not carry a small bottle of drinking water in your bag?

Aim to drink at least 6-8 glasses of pure water every day!

Drink more in hot weather and when you're active.

COOL in Norfolk Schools!

The National "Water is Cool in School" campaign was launched in the House of Commons in March 2001 by the Enuresis Resource and Information Centre (ERIC).

To access their full Information pack for parents, log on to their website: www.wateriscoolinschool.org.uk

ERIC
34 Old School House
Britannia Road
Kingswood
Bristol
BS15 8DB
Tel: 0117 960 3060
Fax: 0117 960 0401
info@eric.org.uk

ERIC
Enuresis
Resource & Information Centre

There's nothing cool about a lack of fresh drinking water at school for kids...

The Norfolk Campaign was launched in May 2002 by
Dr Bryan Slater
Director of Education for Norfolk.

The campaign is supported by:
Norfolk Education Department
Norfolk Study Support Programme
Healthy Norfolk Schools
Norfolk Health Authority
ERIC

NORFOLK COUNTY COUNCIL Education

ERIC Enuresis Resource & Information Centre

Norfolk NHS

U.E.A. University of the First Age NORFOLK

Healthy Schools

Water IS COOL in Norfolk Schools!

Information for Parents

Healthy Schools

Water is Cool in Norfolk Schools!

Most children do not drink enough water. Experts recommend that children drink at least 6-8 glasses of water per day; and more in hot weather and when active.

Low fluid intake can lead to health problems and can affect concentration and learning

The link between drinking water and learning

- Drinking water throughout the day helps the brain work more efficiently
- Mental performance improves when pupils drink more water
- Pupils are not distracted by feelings of tiredness, thirst and irritability

The link between drinking water and health

- Drinking water can help prevent a range of health conditions from headaches to kidney problems
- Poor fluid intake during the day can make bedwetting and constipation worse
- Water is a healthier drink than many artificial drinks which may be high in sugar and additives

- **Encourage children to drink more water at school**
- **Encourage schools to provide better drinking water facilities**

Dehydration

If children do not drink enough fluid they can become dehydrated. If they do not drink enough during the day they are unlikely to make up the shortfall during the evening.

Dehydration can cause a variety of symptoms including:

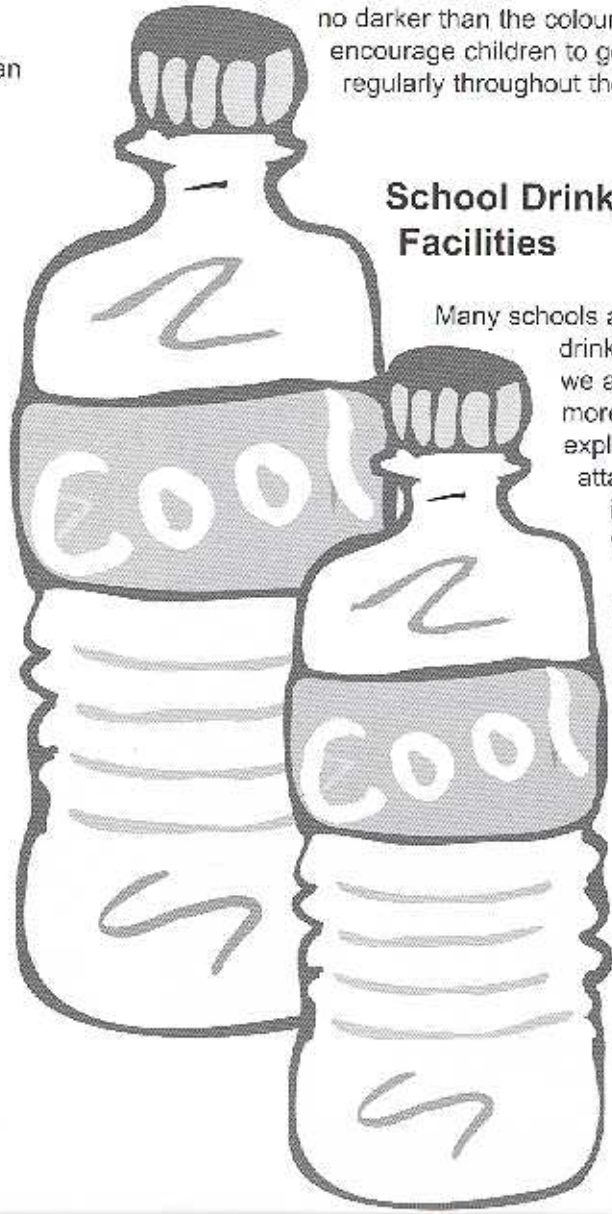
Headaches
Fatigue
Lethargy
Poor concentration
Irritability
Decreased mental performance
Impaired physical & sports performance

However there are usually no visible signs of dehydration for parents/carers or teachers to spot.

Dehydration is also associated with the following health problems:

Constipation
Urinary tract infections (especially in girls)
Bedwetting, daytime wetting and soiling problems
Acute appendicitis
Kidney problems including kidney stones

Children can be taught to recognise when their fluid intake is too low as the urine becomes concentrated (small amounts of deep yellow, cloudy, smelly urine). Drinking more water will encourage a healthy odourless plentiful flow of urine, no darker than the colour of pale straw and encourage children to go to the toilet regularly throughout the day.



School Drinking Water Facilities

Many schools already provide drinking fountains but we are keen to do more. We have explained in a letter attached to this information what we plan to do.

By providing this information to parents and carers we hope that you will understand the potential benefits to children's health and learning and support us in our efforts to promote the drinking of water in our school.

Resources

ERIC is the UK children's medical charity that provides information and support on childhood bed-wetting, daytime wetting and soiling.

They welcome enquiries from parents and professionals.

They launched a national campaign in October 2000, called **Water is Cool in School.**

Contact them at

ERIC
34 Old School House
Britannia Road
Kingswood
Bristol
BS15 8DB
Tel 0117 960 3060
Fax 0117 960 0401

Email info@eric.org.uk
Website www.eric.org.uk

Their information pack contains an extensive list of references.

Healthy Norfolk Schools
Tel: 01603 307356 or 01603 433276

School Nurses and Health Visitors
Contact them through your local medical practice.