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EFFECT

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Pedagogical material on food education towards children for trainers

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PR2: Pedagogical material on food education towards children for trainers

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Part A

Scientific evidence

Existing literature on hydration of children:

Adequate hydration and water intake is an important, previously neglected nutrition -related issue for all people. Especially in children, research has proved that better hydration status improves children's cognitive performance, such as attention, cognitive flexibility and memory, in particular short-term memory [1-3].

Water or milk offers better hydration compared to other fluids, such as sodas that children usually drink [4]. Considering the WHO recommendations in reducing free sugar beverages consumption and the negative proven effects of sweetened beverages on children's health such as dental caries and overweight and obesity, water consumption is better than any other sweet drink for hydration maintenance [5, 6].

Hydration status is critical to the body's process of temperature control. Excessive loss of water through perspiration, if not replaced, can affect health status. Adequate fluid intake depends on ambient temperature. This issue becomes even more crucial if we consider climate change and new challenges such as the expected increases in average global temperatures [7].

Promoting good hydration in schools by several means, namely educating children, making drinkable water available, providing access to well-maintained toilets, and implementing interventions in order to increase water consumption and reduce soft drinks consumption, has a positive impact on children's hydration status [1, 8]. According to a recent review of studies, these interventions have been well received by children and helped them to establish good habits that they will carry on for life [9].

It is worth noting that an easy way to assess hydration is through evaluating the colour of urine, which is a scientifically reliable and practical method for this purpose. This non-invasive approach can also be used in children's education, as it is accessible to their understanding [10-12].

The qualitative study conducted in three countries (France, Greece and Spain) confirms

Module : HYDRATION

previous research that awareness and practical actions in schools are the best way to make children more and more engaged in healthy eating. In relation to hydration, the proposed actions are as follows:

- Installing (and maintaining in proper condition) water fountains in schools, thus ensuring unlimited access to free water.

Children are empowered to take charge of their hydration needs and thereby enhancing their learning experience.

- Advising children to have their personal water bottle or cup that is associated with the use of a self-service water cooler

By having a physical object, children are encouraged to drink water on a daily basis. The creation of an object that can be personalised by the children is an incentive for water consumption.

- Consumption of water by teachers during class time or in their common activities.

In this way, children are indirectly encouraged to consume more water as, at these ages, educators serve as main role models.

- Placing a poster in the school classroom that describes different types of beverages or hydrating foods (such as fruits, vegetables, soups, etc.).

In this way, children will learn different ways to stay hydrated. Also, having a daily visual stimulus makes it more likely for them to consume one of these foods/drinks in their daily routine.

The same qualitative study, which was conducted in three countries, points out that some children seem to have difficulty in understanding why they should follow specific "dietary rules" and why they should consume beverages in certain quantities. For that reason, the message given to children should be adapted to their level of understanding.

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Part B

Activities (title, duration, description, objective, main activity, take home message per activity)

ACTIVITY 1 :

GENERAL INFORMATION : Awareness of the water's journey through the body among children

DESCRIPTION

An activity that makes children think about the circuit that water takes in the body and its implications on good hydration and thus good health

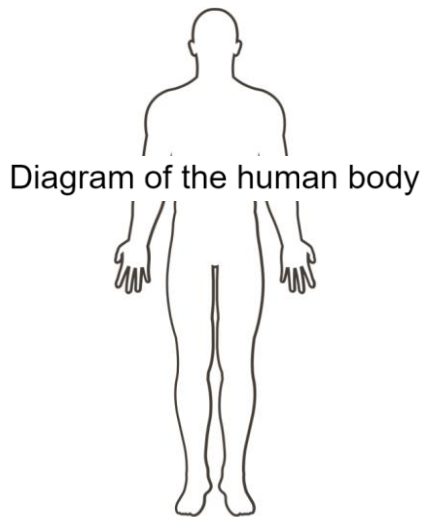
OBJECTIVE

The objective here is to draw with coloured pencils the journey of water through the body in order to understand the ways in which the body eliminates water.

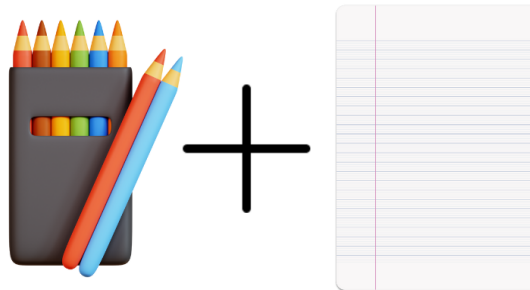
Main activity/game/quiz etc.

Ask the children to :

- Look at a diagram of the human body.
- Think about how water travels through the body: "When you drink water, what route does it take?"
- Draw various suggestions with coloured pencils and ask their classmates to comment on them (hypothesising, comparing, checking, language interaction, etc.).



MATERIALS



Suggest solutions to broaden the field of investigation: what happens...:

- ★ When you've done a lot of running at playtime/sports?
- ★ When you're sick with a fever?
- ★ When it's hot?
- ★ When you breathe in the cold?

Conclude by making a drawing of the human body summarising the ways in which the body eliminates water (drawing of small drops of water): breathing, evaporation, perspiration, urine, stools).

Tip or take home message

The human body needs water to stay healthy, these needs can be higher in situations like:

- High physical activity
- Hot weather
- Illness

ACTIVITY 2 :

GENERAL INFORMATION : *Awareness of the importance of drinking water instead of sugar drinks among children*

DESCRIPTION

Observing the evolution of a bean plant watered by two different ways (Water or Sugar drink) and making conclusions about the best drink for hydration and good health.

OBJECTIVE

Let children realise the beneficial effect of water and the negative effect of sugary drinks on living beings.

Main activity/game/quiz etc.

Firstly, put bean seeds in cotton to germinate them inside small pots.

Half of the pots are regularly watered with water and the other two with a commercial sugary drink (soda), label the pots to differentiate them according to the watering method.

Be careful for the watering that has to be appropriate (enough to cover the plant needs but not too much otherwise the grains could rot !)

Let children discuss the fact that only the beans that received water were able to grow into plants.



Secondly, redivide the resulting plants into two new groups, that will be watered differently: (don't forget to label once more)

- one group will continue to receive water
- the other group will be receiving soda instead from now on

Again, let the children discuss the fact that the Soda and other sweet drinks do not allow plants to stay healthy but make them fade instead

Tip or take home message

Water is the appropriate drink that allows the best hydration .

It is important to stay well hydrated by drinking water to keep yourself healthy .

ACTIVITY 3 :

GENERAL INFORMATION : *Discovering water tastes and encouraging water drinking among children*

DESCRIPTION

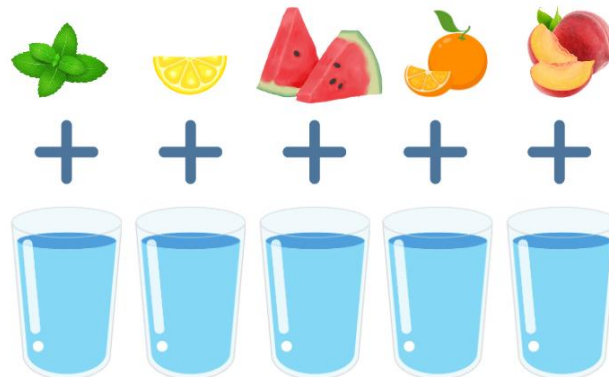
This activity teaches children how to create new water tastes by putting mint leaves fruit pieces

OBJECTIVE

Encourage children to drink more water which is indispensable for their health and indirectly divert them from sweet drinks.

Main activity/game/quiz etc.

Water bar :



Participants are presented with a lineup of different drink containers, each with tap water or sparkling water flavoured using fruit pieces, lemon, mint...

Children taste the different flavoured waters obtained and give their advice about it

They are asked for their opinion about the obtained drinks and what they might suggest to make the taste better

They are then encouraged to reproduce the experiment at home and drink flavoured waters of their choice regularly

Tip or take home message

**Water's taste can be modified using different natural flavours
Water is the best drink ever !**