



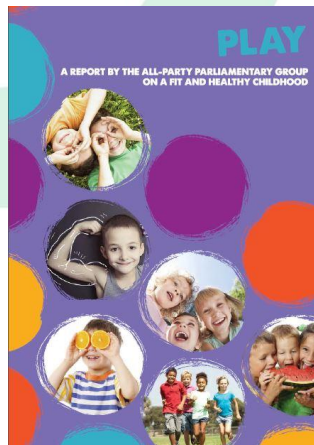
Why Plan for Play?



Outdoor Play and Learning



‘..participation in the OPAL Programme has the potential to reap considerable benefits for children, parents, schools and the wider community.’ - *Independent Report NCB*



***OPAL cited four times as good practice
All Party Parliamentary Group 2015***



**‘I have been in education for 15 years, and by a long way this is the most successful and rewarding project I have ever been involved with.’
Andrew Lynham - Head Teacher**

Expertise?

Equation has many terms and there are several many types of energy exchange. For the purposes here, we can justifiably neglect most of these terms because that type of energy exchange is not taking place. The relationship that represents the water flow in a water rocket is: $\frac{P_1}{\rho} + \frac{(V_1)^2}{2g} = \frac{P_2}{\rho} + \frac{(V_2)^2}{2g}$ where P =bottle pressure, ρ =water mass density, V =water velocity, and g =gravitational constant. If we assume that the initial water velocity inside the bottle (V_1) is zero and the gauge pressure outside the bottle (P_2) is zero, this equation reduces to: $\frac{P}{\rho} = \frac{V^2}{2g}$. If we use the units of slugs/ft² in our density term, the gravitational constant cancels out to

make $\frac{P}{\rho} = \frac{V^2}{2}$. We compute exit velocity then by $V = \sqrt{\frac{P}{\rho} * 2}$. The mass flow rate is the throat area times velocity times

density. $\dot{M} = \pi * r^2 * V * \rho = A_t * V * \rho$

But thrust is $F = \dot{M} * V$

So $F = A_t * V^2 * \rho$ but $V^2 = 2 * \frac{P}{\rho}$

which yields $F = A_t * 2 * P * \frac{\rho}{\rho} = 2 * A_t * P$

We have simplified the equations by neglecting fluid turbulence, fluid viscosity, fluid friction, and other things. These neglected factors combined only account for a very small percentage of the total thrust so this approximation is pretty good. The instantaneous change in

weight of the water rocket as previously mentioned is $\dot{M} = \pi * r^2 * V * \rho = A_t * V * \rho$ but $V = \sqrt{\frac{P}{\rho} * 2}$ so

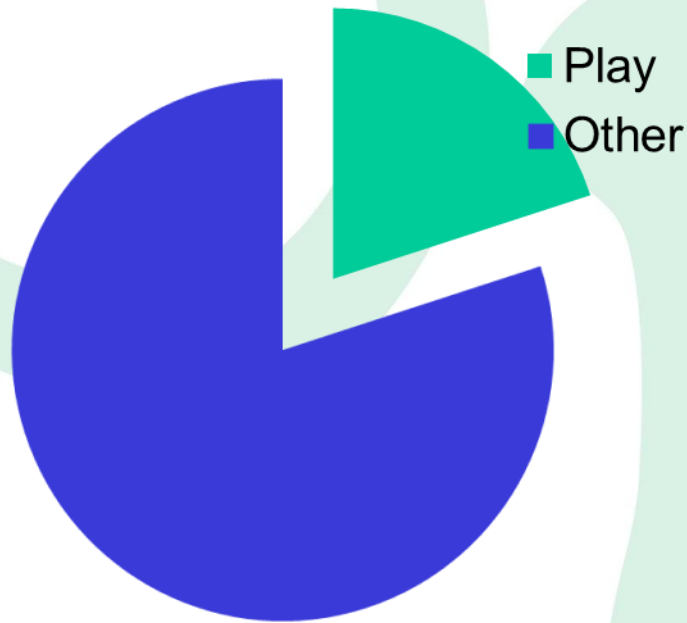
Internet



Play – How important was it to you?



Play makes up 20% of school life



Per Year
231 hours
37 days
7.4 weeks

Primary Years
1.4 years

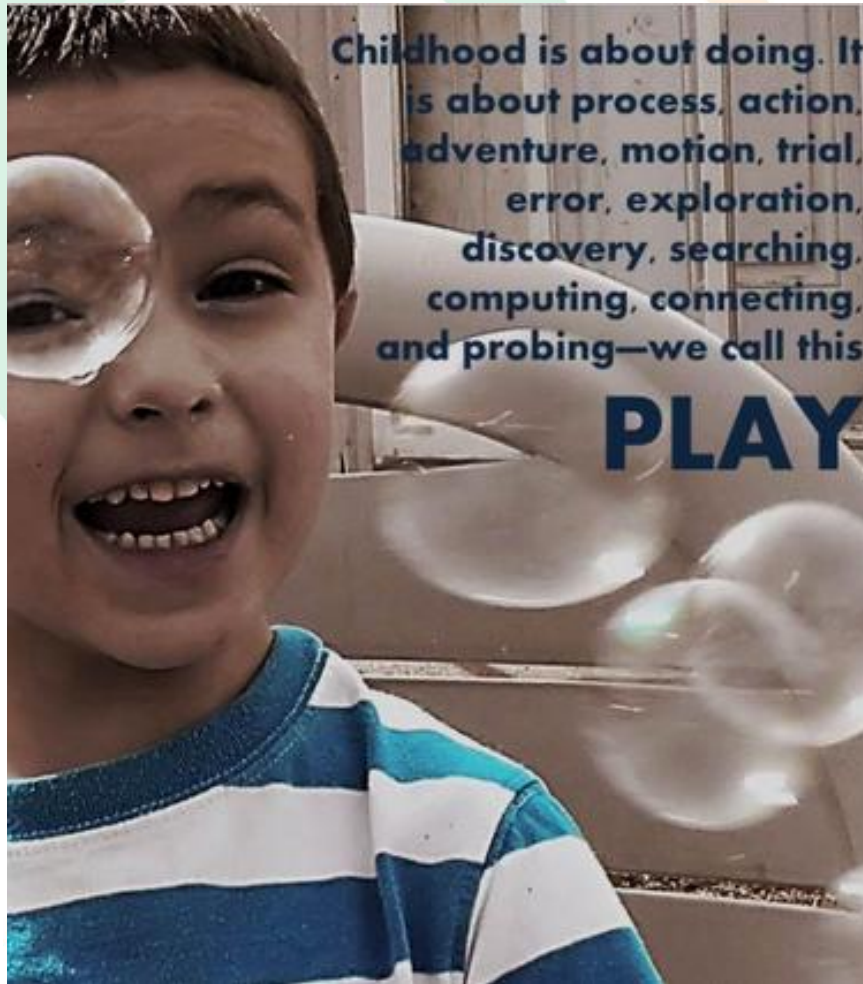




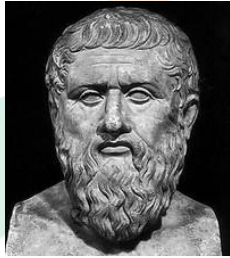
Play enables children to acquire life's essential skills and knowledge that cannot be taught



We do not have to choose between play and learning



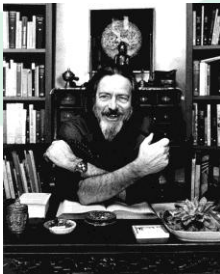
Children need to **PLAY** to
BE ADAPTABLE
CONSTRUCT KNOWLEDGE
PROBLEM SOLVE **LEARN** **CREATE**
PROCESS **EMOTIONS**
INTERNALISE EXPERIENCES
DISCOVER **CHALLENGE**
BE HEALTHY THEMSELVES
LAUGH & HAVE FUN
LEARN TO WORK IMAGINE
TOGETHER LEARN TO LEAD
EXPRESS EXPLORE SPEAK
IDEAS DEVELOP **READ**
MANAGE **AN INQUIRING**
STRESS MIND WRITE
Because PLAY COUNT
matters.



“You can discover more about a person in an hour of play than in a year of conversation.” Plato



“Humanity has advanced, when it has advanced, not because it has been sober, responsible, and cautious, but because it has been playful, rebellious, and immature.”
Tom Robbins



“This is the real secret of life -- to be completely engaged with what you are doing in the here and now. And instead of calling it work, realize it is play.” Alan W Watts



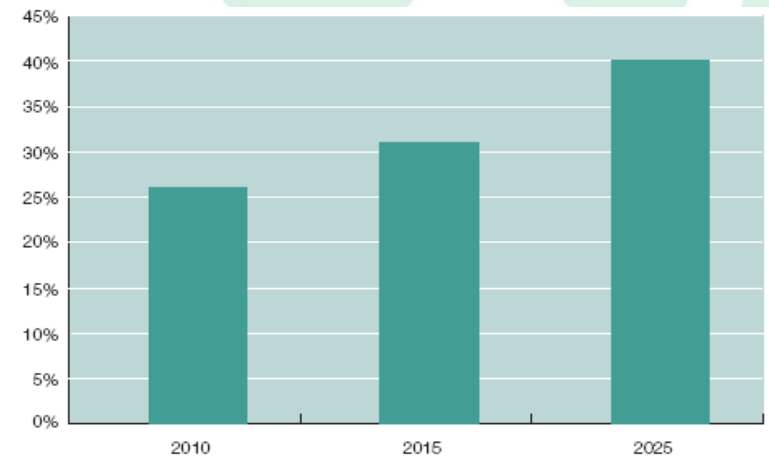
“Combinatory play seems to be the essential feature in productive thought.”

— [Albert Einstein](#)

Childhood has Changed



TRAFFIC





Anxiety

Shared public space



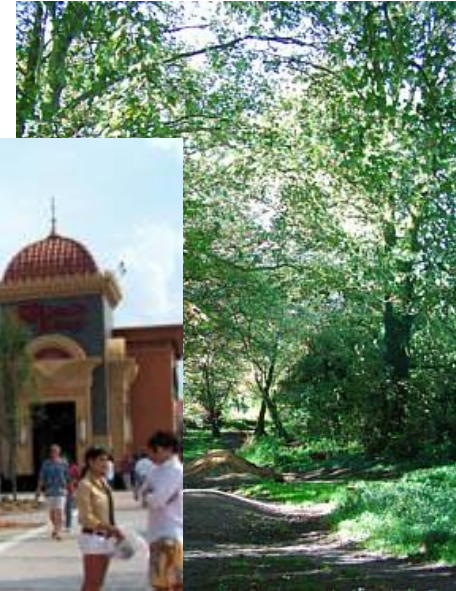
Disproportionate Fear



Risk Aversion



Loss of Informal Space



Loss of play at home



BUSY LIFESTYLES

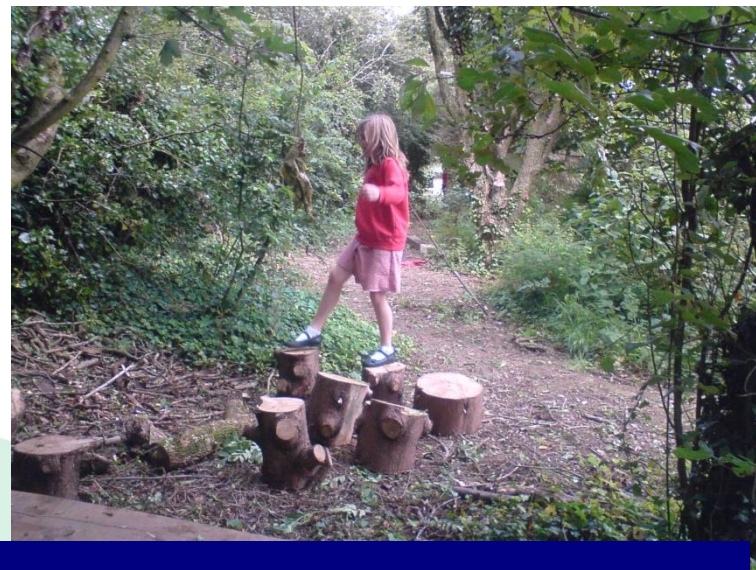


LACK OF VISION



Landscapes for Play





OPAL helps schools to create landscapes for play and learning



Effects



Childhood obesity in UK. One in five obese rising to USA levels – BMA-



In terms of cognitive and conceptual development, 11- and 12-year-old children in year 7 are "now on average between two and three years behind where they were 15 years ago", - Prof M Shayler



The playing range of children 8-14 has decreased by 80% in 20 years



Change

- 2007 National Health and Safety Executive— Absolute safety is neither desirable or achievable



Judith Hackett Head of the Health and Safety Executive



"The creeping culture of risk-aversion and fear of litigation also puts at risk our children's education and preparation for adult life," she said.

"Children today are denied – often on spurious health and safety grounds – many of the formative experiences that shaped my generation.

"Playgrounds have become joyless, for fear of a few cuts and bruises. Science in the classroom is becoming sterile and uninspiring."

"Our message to bureaucrats who perpetuate these myths is clear. Own your own decisions.

"Don't use health and safety law as a convenient scapegoat or we will challenge you."



‘the risk from playing conkers is incredibly low and just not worth bothering about.’ H&S EXEC 2008’

Play is the best form of exercise

*Agreement by: American Centre for Disease Control and
British Medical Association*

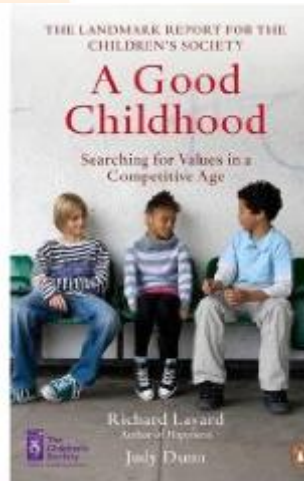
BBC November 2008

***'Running around like a child in a playground may be
better for you than traditional grown-up ways of
taking exercise like jogging and cycling.'***

University of Glamorgan Baker and Davis 2008



Well Being and Quality Childhood



Welfare standards for organic and 'free-range' chickens and eggs



Table 1 Comparison of standards for organic and 'free-range' chickens - poultry meat

	Soil Association ⁱ	Other organic certifiers	Free-range ^v
Flock size	1,000 birds (500 recommended) ⁱⁱ	4,800 birds, but can be as many as 9,000	No limit (typically several thousand)
Fresh grass (resting pasture)	At least 2 months a year + an extra year in every three	At least 2 months a year	No requirement for resting land
Time spent roaming outside (outside access)	At least 2/3 of lifetime	At least 1/3 of lifetime	At least 1/2 of lifetime



What are OPAL schools like?

They are more.....

Playful

Play Team



Mrs Watson



Miss Watkins



Mrs Rich



Mrs Underwood



Mrs Dix

Child Friendly



A stylized illustration on a white background. It features a light orange silhouette of a person in a crouching or crawling pose, facing left. Below the figure is a large, light green circular shape with a thick border, resembling a ring or a stylized 'O'. The word "Caring" is written in a dark green, sans-serif font, positioned over the green circle.

Caring





Creative





Collaborative

Inclusive



Listening

I would like less.....

- fighting and being mean
- bans on games
- rules because they make us feel cramped

I would like more.....

- quiet places to sit and chat with my friends
- stuff to play with
- freedom in what we do
- time on the field
- areas to play in like a sandpit or a woodland

Play

Mrs Watson

Miss Watk

Mrs Underwood



Adventurous





Challenging

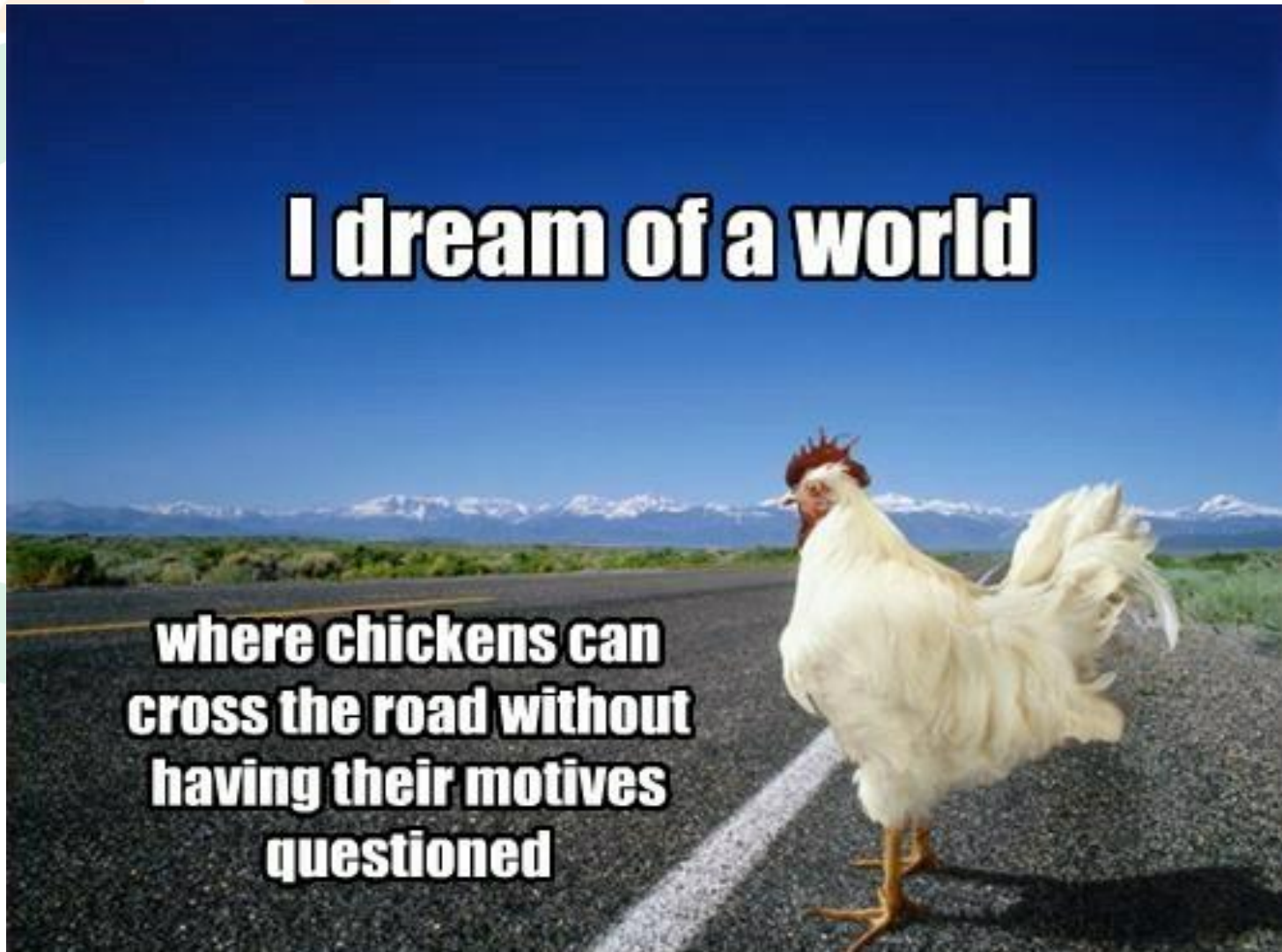
Fun



What can we do?

- **Help provide loose parts**
- **Ensure your child has warm coat and welly boots**
- **Be dirt tolerant**
- **Build competence**





I dream of a world

**where chickens can
cross the road without
having their motives
questioned**



UNCRC Article 31

Every child and young person has the right to rest, play and leisure.

Contacts



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