

playing to learn



Games consoles in the classroom offer far more than end-of-term fun. As **Ollie Bray** explains, they present endless possibilities for learning too...



Good teachers use good tools and computer games are just that – one reason why they're becoming a common sight in schools all over the UK. More than this, however, if used in the right way they can also be incredibly motivating and are extremely culturally relevant to young people.

As well as games specifically made for education, some forward-thinking teachers are starting to use commercial games to support the curriculum. The game is used as a stimulus or a context for learning and then the teacher 'retro-fits' learning experiences around the game's story.

A great example of a game that can be used in this way is *Endless Ocean* or *Endless Ocean 2: Adventures of the Deep* for the Nintendo Wii. The game places the player in the role of a scuba diver exploring various oceans in search of sea creatures and sunken treasure. As you explore the game, you encounter a number of marine species ranging from smaller fish and penguins to massive whale sharks, manta rays and humpback whales. Your underwater camera allows you to photograph everything that you find, and you also have the opportunity to explore underwater caves, shipwrecks and deep ocean trenches.

As well as being educational in its own right, the game provides a great stimulus for learning and a gentle introduction for teachers who wish to start using computer games in their classroom.

GAME ON!

IT IS NOT JUST ENDLESS OCEAN THAT CAN BE USED AS A CONTEXTUAL HUB FOR LEARNING: THERE ARE A NUMBER OF OTHER GAMES THAT, WITH THE RIGHT IMAGINATION, CAN BE USED TO CREATE STIMULATING LEARNING ENVIRONMENTS...

■ **Wild Earth African Safari:** This game for the Nintendo Wii takes place in the Serengeti National Park. Your role is to take award-winning pictures of exotic animals in their natural habitats without disturbing them. From running with herds of zebra, to following hunting lions and scavenging vultures, students can be immersed in a world of African wildlife. <http://bit.ly/bzKJp8>

■ **Mario and Sonic at the Olympic Games:** A great game to introduce children to the Olympics and Olympic sports. Nintendo will be creating a special London 2012 version of the game, so get your lesson planning thinking cap on now! <http://bit.ly/d4DnsE>

■ **Guitar Hero:** Available on all of the main games consoles, Guitar Hero makes a great context for a project on rock music. guitarhero.com

■ **Samba de Amigo:** A samba-inspired rhythm music game for the Nintendo Wii – great for projects on South America! <http://bit.ly/dAenJb>

With a little bit of imagination it's possible to create a whole topic's worth of work around the game – which is fundamentally a project about the sea.

An ocean of ideas

The following suggestions and examples represent just a few of the ways in which *Endless Ocean* can inspire work across the primary curriculum.

Positive play

JUST WHAT IS THE EDUCATIONAL VALUE OF GAMES?

- Games are a form of play. That gives us intense and passionate involvement.
- Games are a form of fun. That gives us enjoyment and pleasure.
- Games have rules. That gives us structure.
- Games have goals. That gives us motivation.
- Games have problem solving. That sparks our creativity.
- Games have representation and story. That gives us emotion.
- Games have interaction. That gives us social groups.
- Games have outcomes and feedback. That gives us learning.



Literacy

Endless Ocean is a beautiful and immersive world, providing a great context for imaginative and creative writing. Also, because the game is an unfolding story, there's scope for children to write factually and document their findings – the creatures they discover and the people they meet.

For example, during an *Endless Ocean* project children at Priestsic Primary School in Nottinghamshire watched how the different sea creatures moved and then began thinking about words to describe their behaviour – e.g. they concluded that 'elegantly ripples' was a good way to describe the Red Stingray. They then used the game's in-built marine life fact file to find out more about the ray, before working independently to create some short sentences describing the creature.

In Scotland, children at Cowie Primary School, Stirling designed their own fish and then animated them using software package *CrazyTalk*. A key part of this activity was the children imagining they'd discovered a new species in the ocean and describing how it survived and adapted over time.

Numeracy

Just like most computer games, *Endless Ocean* produces lots of numbers and data that can be captured by the class and turned into real and relevant maths problems. For example, during the project at Cowie Primary School children were encouraged to measure exactly how long seven metres is after learning about the size of the Great White shark. They also tracked their underwater findings on spreadsheets and used this information for data sorting exercises. Finally, they discovered a lot of quite complicated maths when they tried to find out about buoyancy!

Also, as you explore the game you unlock sections of an interactive map, which is ideal for introducing the concepts of coordinates, direction and distance.

Science

There's a host of science project work that can be done in relation to the game. Why don't you try some class projects that start with a single question? Here are a few possibilities to get you started:

- How will climate change affect polar animals?
- How have sharks changed over time?
- Why don't submarines sink?
- How do divers breathe underwater?
- How does cold water affect divers?
- Why do we get low tides and high tides?
- Why do we sometimes get waves on a beach when there's no wind?
- Why is the sea warmer in the UK in October than July?

Social subjects

As well as the obvious links to geography (locations of the world's oceans etc.), during the game you also encounter a number of underwater features. In *Endless Ocean 2: Adventures of the Deep* these include a Greek shipwreck and an Egyptian temple, both of which provide an ideal context to take the learning of the class in a different direction.

Technology

The only way that people can survive at sea is with technology, so there's lots of scope to link the game to designing and making things – for example, survival equipment, boats, engines, breathing apparatus and even lighthouses. As part of an *Endless Ocean* project, some schools

in Sheffield had a go at designing and building their own lifeboats. They used the RNLI website as a stimulus (<http://bit.ly/a0jgiG>) and also took the opportunity to talk about the role of the other emergency services as part of the children's learning.

And finally...

If you're really going to be creative and take this project seriously, don't forget to divide your class up into 'dive teams' for group work and appoint 'dive leaders' to help manage certain aspects of how the groups work together.

Find out more

For more information on this topic, visit:

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Learning and Teaching Scotland –
Itscotland.org.uk
Endless Ocean (official site) –
endlessocean.com