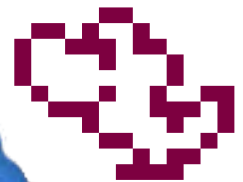




Experts in managing mobile computing



Games Based Learning Guide





Introduction

Once reserved for Christmas wish-lists and after-school playtime, video and computer games are fast-becoming valuable resources for the classroom. Whether designed for commercial markets or specifically for the education sector, played on consoles, the internet or tablet computers, games are thought to have a positive impact upon pupils' learning.

Although the use of games-based learning is not yet widespread in UK schools, despite many schools championing the cause, with Education Secretary, Michael Gove, arguing that these types of technologies could aid the teaching of maths and science, this may start to change.

This guide aims to give those interested in adopting games-based learning a brief introduction to using video and computer games in the classroom. This booklet is by no means definitive, but it should provide a starting point to help you decide whether games-based learning could be beneficial to your pupils.

We hope you find it useful.



Why use video and computer games in the classroom?

Here are just some of the reasons to adopt games-based learning:

- **Games boost pupil's confidence** - According to Derek Robertson from Education Scotland's Consolarium team, games-based learning can foster pupils' self-esteem. If pupils play a game with the appropriate level of difficulty, they will feel a sense of achievement and satisfaction once they have completed a challenge. This should motivate pupils to try their hand at a more difficult game or level next time.
- **Games develop pupils' problem solving skills** - Computer and video games often require pupils to gather information in order to solve a mission. Games are designed to be fun and interactive, so pupils are encouraged to work through the game to complete given tasks, solving problems along the way.
- **Games develop pupils' social skills** - Despite newspaper reports that video games can isolate children, many interactive games actually help to develop pupils' interpersonal skills. Multi-player games can encourage pupils to work together to achieve a goal and, if games consoles are shared between students, pupils will learn how to work in groups. This fact is illustrated perfectly by education technology specialist Katy Scott, who highlights that the online game World of Warcraft not only highlights young peoples' leadership and collaborative skills, but develops students into 'truly global citizens'; pupils interact with players of all races, genders and backgrounds.
- **Games make learning fun** - Games can encourage learning when pupils are not even aware that they are learning. As a result, they can be a fantastic tool to explain concepts to pupils with short attention spans and can be used to motivate learners.
- **Games force pupils to think** - According to Derek Robertson from Education Scotland's Consolarium team, games-based learning develops learners' ability to observe, question, hypothesise and test. Many games require gamers to develop a strategy; when things go wrong, pupils need to change their strategy in order to complete the game.



How to use computer and video games in the classroom

As education technology specialist Katy Scott highlights, using computer and video games in class is not just simply about sitting pupils in front of a games console.

Games are great for stimulating learning, but need to be supported by other teaching tools to ensure that pupils receive the correct learning outcomes from their onscreen play. You could create worksheets, hold discussions or even ask pupils to write blog posts to encourage pupils to reflect on what they have learnt from a game.

Amongst other things, games and games consoles can be used in the classroom to:

- improve maths and literary skills, using brain training games
- create animated films or record audio, using the Nintendo DSi
- provide a starting point for educational projects
- revise content, using online quizzes
- take photographs for art projects, using the Nintendo DSi
- for exercise, using dance mats or Wii Fit during 'wet play'
- to introduce complex topics
- to teach content, for example modern foreign languages.



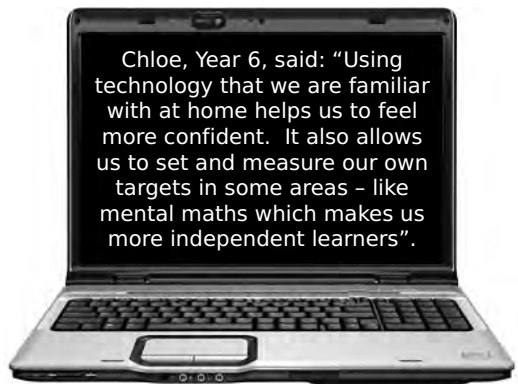
St Peter and St Paul Primary School is game to learn with LapSafe Products

St Peter and St Paul CE Primary School in Burgh-le-Marsh is located on the east coast, close to the busy resort of Skegness. Over the last three years, the school has used innovative digital media technologies to support and strengthen teaching and learning experiences for both staff and children. Pupils have benefited from projects supported by Lincolnshire County Council and CfBT, including visual literacy, film making, and games based learning and have even taken part in the pilot for the national FILM-Mark award.

Sarah Smith, Headteacher at St Peter and St Paul's CE Primary School, believes that it is essential for children to acquire ICT skills from a young age. She said: "In a rapidly developing world, we have taken the view that our teachers need to use technology as a tool to engage and motivate children to optimise learning experiences. Children lead our developments in the roles of Digital Media Champions and have been key to driving forward our ambitions. This group of children help to inform our teachers and pupils, as well as those in neighbouring schools, about new technologies."

Although children at St Peter and St Paul's CE Primary School use a variety of digital media throughout the school day, the application of games based learning has helped pupils to develop a range of specific skills, including:

- strategic thinking
- planning; communication
- application of numbers
- negotiating skills
- group decision-making
- data-handling
- eye-hand coordination



As Sarah continues: "As a school, we took the decision to use the Nintendo DSi as a focus to develop mental maths recall. Each class regularly use DSis to support their maths development using "Maths Trainer". With this game, each child has specific activities to complete, from counting objects and number recognition, to times tables and mixed questions. Every time that a child undertakes an activity, the DSi records their time and score, which the child then records on a sheet. This way, the children can track their progress in accuracy and speed."



The school's teachers and teaching assistants support pupils to consider when they need to move on to their next challenge, based upon each child's progress. According to Sarah: "We use mental maths DSi sessions to agree and measure targets, set by the children themselves, giving pupils greater ownership and understanding of their learning. These targets are also used as evidence in pupil progress meetings. We use DSis to support individual children, meaning that they can be used with all abilities and ages, including children with SEND and gifted and talented mathematicians."

At St Peter and St Paul's CE Primary School, it is not just the pupils that benefit from using digital media. As Sarah continues: "Our teachers find using handheld technology, like the DSi, an exciting way to engage children and develop their mental maths recall. Not only is the DSi affordable, portable, and very easy to use by staff and children alike, it is also perfect to stimulate a lesson starter or group activity. We use the 'pictchat' option on the devices to allow everyone to participate and record assessment responses in a new inventive way."

In order to ensure that their gaming devices are charged and ready to be used, pupils and staff at St Peter and St Paul's CE Primary School use the USB Charging Case from LapSafe® Products. As Sarah explains: "Due to the heavy demands on the DSi units, charging and storing the devices quickly became a problem. We were having to spend a great deal of time setting up each DSi to charge and then gathering them up for each week to use. As a result, we approached LapSafe® to help us to develop a charging and storage system."

"We trialled and purchased two of their cases, which have addressed all of our needs, and are easy for both pupils and teachers to use. Teachers now want to use games based learning in many of their lessons, which has put pressure on the demands for the DSis, so the Lapsafe® USB Charging Case has quickly addressed our charging needs. Each case has space for 16 DSis, which are simply housed and connected to charge. The cases are light and portable to store and to transport around school, as well as being robust, well finished and very affordable for schools."

Sarah concludes: "Our Digital Media Champions strongly believe in the impact of the DSi in mental maths progress and pupil engagement that they have led workshops for parents and governors. This quickly led them to share their expertise with other schools and teachers locally and even deliver teacher professional development across our network of local schools."



How to select a suitable game

However, not all games will be suitable for classroom use, so it is important to 'test play' the game first to ensure that it is suitable for your pupils. According to the European SchoolNet Digital Games in Schools handbook, you need to ensure that your chosen game:

- has a clear and easy-to-use interface
- includes an option to save a game and resume play later
- includes a mute button, in order not to disrupt other pupils from their learning
- has language and content that is appropriate to the gamers' age
- has an easy learning curve that allows pupils to make mistakes at the beginning, but also encourages them to work up through different levels
- has clear objectives so that pupils are clear of what they need to do.



Examples of games to use in the classroom

- **Manga High** - a collection of free maths games to play online
- Dr Kawashima's Brain Training - Nintendo DSi
- Nintendogs for the Nintendo DSi
- BBC Bitesize interactive revision quizzes
- Lemonadegame.com - a free online game to help pupils develop business skills by selling virtual lemonade
- Banana Hunt - an angle estimation game for the iPad and iPhone where pupils move monkeys around the screen to locate bananas.

Managing games

Using computer and video games in the classroom can be both fun and educational, but these extra resources need to be effectively managed to ensure that games consoles and tablets are ready to be used when they are needed. In addition to creating rotas and booking forms to ensure that each class is given time to play particular games, you also need to decide how you will securely store and charge your games consoles. To help make managing games consoles and iPads easier, we've developed two solutions:

The USB Charging Case - perfect for the Nintendo DSi and the Sony PSP

A carry case designed for ease of use, the LapSafe® USB Charging Case features 16 individual built-in cables to charge USB devices in the fastest possible time. Each lead uses low voltage (five volts) charging and is individually fused for safety. The case comes with a two metre mains lead with a five amp fuse, is independently CE Certified and meets all required British safety standards.

The UnoCart™ for iPads charging trolley

The UnoCart™ for iPads incorporates safe synchronisation and charging for one MacBook or laptop in 16 and 32 bay iPad versions, enabling fully-charged tablets to be shared between classrooms and buildings. The trolley provides safe and secure overnight storage for a MacBook and allows iPads to sync to the machine using iTunes. It includes effective USB cable management, a top mounted socket with USB connectivity for the MacBook and features an in-built security cable to secure the MacBook whilst on top of the cabinet during the synchronisation process.

The UnoCart™ charges iPads horizontally without pull out shelves, which could cause instability and risk pupil safety and features a rear service door for use by an ICT technician to prevent access by students. The unit is available with three charging options, 'Sync only', 'Charge only' and 'Sync and Charge', and a factory setting or training can be given to provide scheduled 'Sync and Charge' cycles to be communicated to the iPads. The unit is independently CE Certified and meets HSE guidelines.



Sources:

Game to Learn has been compiled using the following sources from:
Katy Scott, 'Let Them Play: Video Gaming in Education', Stretch Your Digital Dollar, 7 March 2011, <http://digitaldollar.edublogs.org/2011/03/07/let-them-play-video-gaming-in-education/>

Derek Robertson, 'About Games-Based Learning', Education Scotland, www.ltscotland.org.uk/usingglowandict/gamesbasedlearning/about/understanding.asp

Dr Patrick Felicia, The European Schoolnet, Digital Games in Schools: A Handbook for Teachers, June 2009





3 Wakes Hall Business Centre
Wakes Colne
COLCHESTER
Essex
CO6 2DY
United Kingdom

Call us free on 0800 130 3456

T: 0845 230 1010 F: 0845 230 1020

www.lapsafe.com sales@lapsafe.com

Twitter: @lapsafe