

# Nintendo Wii

## Video Gaming Console

### A White Paper



Chelsea Pedersen  
Pedersenc2@winthrop.edu  
November 17, 2010

This white paper was written as an assignment for Dr. Marshall G. Jones's EDUC 651 class at Winthrop University, Rock Hill, SC. All rights reserved by the author. Permission is granted to use this white paper provided the user notifies the author in writing prior to use.

# What is the Wii?



The Wii is a video game console created by Nintendo in 2006. A feature that sets the Wii apart from other gaming consoles is the wireless controller. The Wii controller is a handheld pointing device that can detect motion in three different dimensions. The Wii also has Wi-Fi capabilities allowing the user to access and use the Internet while viewing it on a monitor. It is backwards compatible, allowing the Wii system to operate using accessories from previous Nintendo systems such as the Nintendo GameCube. Wii users are able to play GameCube games as well as utilize GameCube controllers with the Wii system. However the GameCube controllers do not provide the same wireless motion controlled experience as the Wii controllers.








## How much does it cost? Where can it be found? What is included?

The Wii console costs \$199.99 and can be found in a variety of retailers and video gaming stores. Nintendo has begun producing the system in red as well as black in addition to the standard white console. There is no price variance between colors. When you purchase your Wii Console most retailers sell it as a part of a bundle. This bundle includes the Wii Console, One Wii Remote Plus controller, One Nunchuck controller, sensor bar, standard composite cable, power cord, Wii Sports game, and Wii Sports Resort game.

## What do I need? Controllers, games, accessories.

In order to operate the Wii console a monitor or other projection device is needed. The device you plug the Wii into must have a place for Audio input as well as video input; if you are using a television most of these jacks are located on the back of the device. There are a variety of different accessories for the Wii, below are some of the accessories that are commonly sold on an individual basis outside of the bundle purchased with a new console. There are other accessories that are required for specific games and most of them can be purchased in a bundle with the game.

Accessory	Cost	Why do I need it?
<p>Wii Remote Plus Controller</p> 	<p>\$39.99</p>	<p>The bundle you purchase only comes with one controller. For ease of use with multiple participants it would be useful to have multiple controllers. There can be up to 4 participants in many games, so have four controllers and call it a party.</p>
<p>Nunchuck</p> 	<p>\$19.99</p>	<p>There are many games that utilize the nunchuck in addition to the Wii Remote Plus Controller. The demand is not as high for the nunchuck as it is for the controller. You may only need one extra.</p>

Accessory	Cost	Why do I need it?
<p><b>Classic Controller Pro</b></p> 	\$19.99	The Wii Remote Plus Control can be difficult to handle by some; the classic controller is more of a standard shaped and may be more comfortable for use while playing some games.
<p><b>Wii Quad Charge Station</b></p> 	\$39.99	With a set of rechargeable batteries, the charging stations can charge four remotes at a time and hopefully can reduce the number of batteries consumed by the controllers.
<p><b>Universal Dance Pad</b></p> 	\$19.99	For use with dance games such as <i>Dance, Dance Revolution</i> .
<p><b>Wii Memory Card</b></p> 	\$14.99	The memory card provides extra storage space used to save game information in addition to the 512 MB of storage built into the Wii console. If you were to create a class set of Miis this would be a valuable accessory to invest in.
<p><b>Wii MotionPlus</b></p> 	\$24.99	Some of the newer Wii games like Wii Sports Resort require the MotionPlus sensor. Newer game bundles include one sensor, but they need to be purchased for additional Wii remotes.
<p><b>Wii Fit Balance board</b></p> 	\$59.99	The Balance board can be purchased used from most video game stores. It cannot be purchased new without purchase of Wii Fit Plus. The Balance board can be used with a variety of sports simulation games that requires users to shift their weight to be successful.
<p><b>Wii Wireless Sensor Bar</b></p> 	\$19.99	The wireless sensor bar gives you more freedom when it comes to setting up your Wii console. When using the Wii in the classroom this allows you to connect the console to the projector and place the sensor bar under the screen.

The chart below shows a sample of the different types of games available for the Wii. There are hundreds of games available for the Wii. Games range in price from about \$19.99 - \$99.99. There are also games that can be found and prices outside of this range, but the majority of games will be in this range.

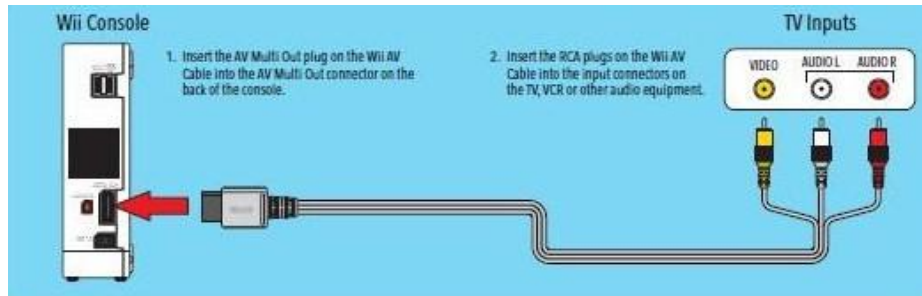
Game	Price	Category	Description	Accessories needed
<b>Wii Fit Plus</b>	\$19.99-\$99.99	Fitness, Sports	A fitness game that allows you to customize a personal workout consisting of balance games, strength training, and yoga exercises. Makes working out fun.	Needs Wii fit board, but the board can be purchased along with the game. The price range shows the game only price and the game plus board price.
<b>Sports Resort</b>	\$49.99	Multi-Sport, Sports	Wii Sports Resort takes place on a tropical island and is a collection of sports games that anyone can play.	Comes with newer Wii bundles. If you already have a Wii and purchase the game make sure you have the Wii MotionPlus accessory.
<b>Mario &amp; Sonic at the Olympic Winter Games</b>	\$49.99	Multi-Sport, Sports	Mario versus Sonic and a cast of other characters compete in the Winter Olympics. Players can compete in skiing, snowboarding, or play a game of hockey.	The Wii balance board may be needed depending on the sport.
<b>Are you Smarter than a 5<sup>th</sup> Grader?</b>	\$19.99	Puzzle & Cards	Based on the Jeff Foxworthy show <i>Are You Smarter than a 5<sup>th</sup> Grader?</i> A great way for students to compete in the classroom.	None needed
<b>Margot's Word Brain</b>	\$9.99	Puzzle & Cards	A variety of word games to test your vocabulary, spelling, or general language skills.	None needed
<b>My Word Coach</b>	\$14.99	Puzzle & Cards	A fun and challenging way to improve verbal skills through a variety of engaging activities and exercises.	None needed

Game	Price	Category	Description	Accessories needed
<b>Jeopardy</b>	\$29.99	Puzzle & Cards	Play the game like they do on TV! Join Alex Trebek and test your knowledge on a variety of different topics.	None needed
<b>Big Brain Academy: Wii Degree</b>	\$29.99	Educational, Puzzle & Cards	A collection of brain teasers to really get you thinking. Compete with a friend or work together to solve the brain teasers.	None needed

### How to use it?

The first step to using the Wii is hooking the console up to the monitor. The Wii console can be placed in a horizontal or vertical position. If it is in a vertical position make sure it is placed in the console stand. After deciding where to place your Wii it is time to hook the Wii to the display device. Plug the composite cable into the back of the Wii and then plug the Audio and Video cables into the television or projector. After plugging in the Audio and Video cables plug the sensor bar into the back of the Wii, the jack is red and can be found on the back of the Wii. Once you have plugged the sensor bar into the Wii you can now place it either above or below the screen or television. If your screen or television is mounted on the wall place the sensor bar below, if the television or screen is placed at eye level you have the option to choose where you place the sensor bar. No matter where the sensor bar is placed make sure that it is on a flat surface. Finally it is time to plug your Wii into its power source. Plug the AC adapter into the remaining slot and plug the other end into the wall. Now your Wii is ready to power on. Some new accessories may require syncing with your console. This is a simple process that is outlined in your user manual. Once your Wii is plugged in and all accessories are ready to go you are ready to get started with your Wii. You can create your first Mii or begin by playing a game. Set up and operation varies for each game. Refer to the operation manuals that accompany the game for further information.





Plug the composite cable into the back of the Wii and then plug the audio and video cables into their corresponding jacks on the monitor.



Place the sensor bar above or below the monitor and plug the cable into the red jack on the back of the Wii.

## Wii Channels

The Wii has several different channels on the Wii menu, each of which serves a different function. The disc channel is where you would find any games that you have inserted into the disc slot. The Mii Channel allows you to create and manage personal avatars. The Photo channel allows you to upload and manage pictures. Wii Shop Channels allows you to purchase games that will be saved directly to the console and accessible through the Wii menu once they are downloaded. The Forecast Channel and News Channels give access to the weather as well as the news.

## Miis

Miis are personal avatars the students can create, allowing the students to have their own personal identity for participation in Wii games. Miis can also help students with setting and tracking personal goals. When a student utilizes their Mii they are given the option to save their progress before ending each session, enabling them to track their progress throughout the school year. Miis also allow students to express their individuality and creativity. While some students may choose to create Miis that resemble themselves other students may create Miis that look nothing like them. There are two major drawbacks to creating a Mii for each student. The first drawback of creating a class set of Miis is the amount of time it would consume to create the Miis. The second drawback of a class set of Miis is the amount of storage space it would require. If you were to create a class set of Miis for students to save game data to it would be important to invest in a memory card for extra storage.



## Wi-Fi

The Wii is capable of connecting to Wi-Fi allowing users to access and browse the internet as well as connect with other players across the room or across the world. The Wi-Fi connection is easy to make with step-by-step instructions included when you purchase your Wii. Once your Wii is connected to the Wi-Fi you can browse the internet and download games online. Certain games are compatible with Wi-Fi and come with twelve digit friend codes. Exchange codes with a friend or another classroom and you are set.

## How can I use the Wii in the classroom?

Digital natives are students who do not need to learn technology but understand it and need to experience it. The growing population of digital natives in classrooms the introduction of technology is pertinent to their learning. The Wii can help solve many instructional problems. As a physical educator there are a variety of curricular issues the Wii can help to solve. One of the issues physical educators face is keeping lessons appropriate for a variety of skill levels. By integrating the Wii into the classroom it puts all students on the same level; it does not matter if they are athletic when it comes to using a video game.. For example, games like Wii Sports Resort have a 3 point shooting contest. In order to be successful in the contest one must use proper form when shooting the basketball. This is extremely helpful for a student who has not developed the skill enough to be successful when shooting a real basketball. The Wii can also be used in place of other equipment. While only four students can participate with the most Wii games at one time it is great for station activities and it also does not require an excessive amount of space. All one needs to use the Wii as a station is a plug for the television or projector and a plug for the Wii console. The Wii has been utilized as a station in equipment closets as well as corners of the gym where it only takes up a little room. Wii Fit Plus is one of the few games that can be adapted to the whole class in physical education. Activeplastics.com has created a non-functional reproduction of the Wii Balance board that can be purchased as a class set. This is extremely helpful when getting the whole class involved because not only does the reproduction of the Wii Balance board serve as a place marker for students, it also allows them to participate in the activities without having to be in control. When using the Wii Fit Plus for the whole class the teacher can design a workout for that class period consisting of stretches, strength building, cardio, and balance activities. Then the teacher can choose student leaders who go to the front of the class and use the Wii Balance board for one of the activities while the rest of the class follows along behind them. The Wii allows the teacher to be a demonstrator as well as a participant.

The Wii can also be helpful in educating digital natives in the classroom as well as in physical education. The Wii has games that can be used to increase vocabulary such as *Margot's Word Brain* as well as games like *Endless Ocean* that allow students to explore the ocean and the life below its surface. The Wii can also be used in the classroom as a warm-up activity to get the students thinking using games like *Big Brain Academy: Wii Degree* which requires students to solve a variety of brain teasers.

There are a multitude of games that can be integrated in to the physical education and regular classroom that get the students more involved in their learning. A few of the games are listed above in the game table, but Nintendo offers hundreds of games in a variety of different categories. The easiest way to find one to work for your class is to look in stores or online.

## Benefits and Drawbacks

Benefits	Drawbacks
Takes up minimal space.	Only four participants at a time, depending on the game.
Engages digital natives.	Expensive if budgets are low.
Puts all students in physical education on the same level.	Requires additional equipment (television, or projector and screen).
Interactive for students. They have to get up and move for most of the sports games.	Some students might have prior knowledge if they have access to a Wii at home, while other students may not have access to the Wii.
Motivates students to beat their previous scores.	Creation of Miis can be very time consuming.

## NETS Standards

The NETS standards for students and teachers are set to provide goals and benchmarks for educators to help their students achieve. The Wii would help educators achieve several different standards, both teacher and student standards

### NETS Teacher Standards

**NETS-T 2.a Teachers design or adapt relevant learning experiences that incorporate digital tools and resources to promote student learning and creativity.** The Wii helps to adapt different sports as well as regular classroom learning to incorporate digital tools. The use of games like Wii Sports Resort can adapt sports like basketball to allow students with lesser abilities to learn the skill, or games like Margot's Word Brain to help students increase vocabulary. These activities provide students with relevant learning experiences outside of normal classroom instruction and lecture.

**NETS-T 2.b Teachers develop technology-enriched learning environments that enable all students to pursue their individual curiosities and become active participants in setting their own educational goals, managing their own learning, and assessing their own progress.** The Wii allows students to monitor progress through the creation of Miis. With the Mii the student can save, update, and keep track of their progress through a variety of games and activities. Miis also give the students to customize what they do with the Wii to fit their interests. For example when using Wii Fit Plus students can create their own workout based on their interests and curiosities.

**NETS-T 4.c Teachers promote and model digital etiquette and responsible social interactions related to the use of technology and information.** Through the use of the Wii teachers can model and teach students how to use technology responsibly not just in the exploration and use of the technology, but in the care of it as well. The Wii is a fairly expensive piece of technology and teachers can emphasize the importance of storage and care of technology while using the Wii in the classroom.

## **NETS Student Standards**

**NETS-S 2.a Students interact, collaborate, and publish with peers, experts, or others employing a variety of digital environments and media.** Students can use the Wii to work into groups to achieve a common goal in many of the classroom based games like *Are You Smarter Than a 5<sup>th</sup> Grader?* The students can also interact with each other in the physical education setting by being placed on teams to work towards a common goal in a game that uses multiple players like Wii Sports baseball.

**NETS-S 5.b Students exhibit a positive attitude toward using technology that supports collaboration, learning, and productivity.** The Wii is seen as a game by student and they do not always view what they are doing as learning. The Wii also supports collaboration with other students and classes in a variety of ways. One of the ways the Wii supports collaboration with other students is putting students into groups and then having the groups compete with each other to see who can do the best. The Wii supports collaboration with other classes through the use of the Wi-Fi function allowing classrooms in the same school or across the country to connect and learn together.

## **Environmental Factors**

While the Wii can provide students with an excellent learning opportunity there are some environmental factors that could prevent students from having a positive experience. The number of students who are capable of working with the Wii at one time is limited and some students may not get the opportunity to participate. The key to a positive experience for all of the students is the cooperation and patience of the entire class. If students are paired into smaller groups it is important that the students show patience with their group members because some students may be more of digital natives than others. The socioeconomic status of a student's parents can determine their access to the Wii as well as other technologies in turn making them more of a digital immigrant than a digital native. In a class where the socioeconomic status of the students varies it is important to emphasize to the class as a whole that some people may have more experience than others and they should work together to help everyone understand. It is also important that if the Wii is used it not be used as an incentive all of the time. The students should have to behave to use the Wii, but if teachers utilize removal of the Wii from instruction or incentives it may cause students to view the technology negatively.

Funding is also a factor that needs to be considered before using the Wii. If the school's budget is lacking Wii may not be the best investment for multiple classrooms. Another option for this would be to have the students fundraise in order to purchase the Wii for the classroom or the school

## **Conclusion**

Wii offers the opportunity to put students on an equal level in the physical education classroom, the ability to use minimal equipment as part of lesson utilizing stations, and the Wii takes up minimal space. With the Wii, you are able to create a learning environment that promotes student cooperation and collaboration using technology. While the Wii has many classroom applications it is an expensive technology that requires other equipment such as a television, or projector and screen. Anyone with basic video game knowledge should be able to operate the Wii.