

# Adaptive Athletes

A Reading A-Z Level Z Leveled Book  
Word Count: 1,527

## Connections

### Writing

Research a sport that is included in both the Paralympics and Olympics. Write a paragraph comparing and contrasting how athletes in both compete.

### Social Studies

Using a world map, indicate the locations of the Olympics and Paralympics since 1980. Label the map with each city and year.

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# ADAPTIVE ATHLETES



**Multi  
level  
Z<sup>1</sup>•Z<sup>2</sup>**

Written by David Dreier

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## Glossary

<b>ability</b> ( <i>n.</i> )	a skill or talent; the power to do something (p. 4)
<b>adaptive</b> ( <i>adj.</i> )	able to change to fit a new or specific situation or environment (p. 4)
<b>amputated</b> ( <i>v.</i> )	cut off; severed (p. 9)
<b>competitive</b> ( <i>adj.</i> )	of or relating to a rivalry between individuals, teams, or businesses (p. 9)
<b>disability</b> ( <i>n.</i> )	a physical or mental condition that limits a person's ability to do something (p. 4)
<b>mobility</b> ( <i>n.</i> )	the ability to move from place to place (p. 14)
<b>paraplegia</b> ( <i>n.</i> )	a condition caused by illness or injury in which the lower half of the body, including both legs, is left paralyzed (p. 14)
<b>prestigious</b> ( <i>adj.</i> )	having honor, respect, or high standing (p. 5)
<b>prosthetic</b> ( <i>adj.</i> )	of or relating to an artificial replacement of a body part that is missing (p. 10)
<b>rehabilitate</b> ( <i>v.</i> )	to restore to health or normal activity (p. 5)
<b>striving</b> ( <i>v.</i> )	making a serious effort to achieve something (p. 15)
<b>venues</b> ( <i>n.</i> )	places where organized events are held (p. 8)

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## Focus Question

In what ways are adaptive athletes great competitors?

## Words to Know

ability	paraplegia
adaptive	prestigious
amputated	prosthetic
competitive	rehabilitate
disability	striving
mobility	venues

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Front cover: Basketball teams from Brazil and Australia face off at the 2008 Paralympic Games in Beijing, China.

Title page: China's Hu Daoliang (left) fences with the United States' Scott Rodgers during a match at the 2008 Paralympic Games.

Table of contents: The logo design of the 2012 Paralympic Games in London (main); One of the special coins designed to honor all the sports to be contested in the 2012 Olympics and Paralympics in London (inset).

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Level Z Leveled Book  
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### Correlation

LEVEL Z	
Fountas & Pinnell	U-V
Reading Recovery	N/A
DRA	50

## Achieving Excellence

From its simple beginnings in 1948, the Paralympics have grown to match the Olympics in scale. Both games offer an inspiring look at the human spirit by showing top athletes **striving** to achieve excellence in sports.

Paralympic athletes are great examples of competitors who have made the most of their abilities. Those abilities will shine at the Paralympic Games for years to come.



The British tandem cycling pair of Aileen McGlynn (left) and sighted pilot Ellen Hunter pedaled for gold at the 2008 Paralympics in Beijing.



## Exoskeletons

A device called an “exoskeleton” could help improve **mobility** for many people with disabilities. It might someday play a part in the Paralympics as well. An exoskeleton is a powered metal framework that fits around all or part of the body. It runs on a small engine or a battery pack.

Full-body exoskeletons help the wearer carry heavy loads while running or climbing. Exoskeletons have other possible uses as well, such as helping rescue workers lift heavy debris in their search for victims.

Some exoskeletons are designed for the lower part of the body. These robotic legs make it possible for people with **paraplegia** to walk. Perhaps robotic legs will someday be used at the Paralympics.



This lower-body exoskeleton, named eLEGS, is a bionic device that helps people with paraplegia stand and walk.

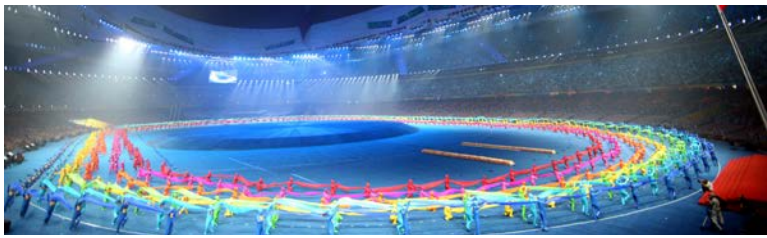
### Critical Thinking

What do you think would be the pros and cons of allowing athletes with robotic legs to compete in future Paralympic competitions?



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Young dancers perform for the crowd during the Opening Ceremony of the 2008 Paralympic Games in Beijing, China.

## Introduction

People have always admired athletes, especially those who excel at their sport. We admire natural talent and the **ability** to perform under pressure. Yet even the most gifted athletes must sharpen their skills with practice. The best athletes usually spend years working to be better, with the goal of becoming the best.

Many people who have a physical or mental **disability** are athletes as well. For years, though, rules kept disabled athletes from Olympic competition. But not anymore. Today, the Paralympic Games bring them to center stage!

Since 1960, athletes with physical disabilities have competed in the Parallel Olympics, or Paralympics. These competitors are known as **adaptive** athletes. Some of them are missing arms or legs. Others use wheelchairs. Still others are blind. Yet all these top athletes have shown that with desire and hard training, almost any disability can be overcome.



Australia's (yellow/green) Kieran Modra and his pilot, Tyson Lawrence (front), broke the world record and won the gold medal in the Men's Individual Pursuit event of the 2008 Paralympic Games.

In cycling events, visually impaired athletes use a two-seat bicycle. A pilot sits in the front seat. The athlete pedals the bike and the pilot guides it.

Guides are also used in another Paralympic sport—five-on-a-side soccer. Each soccer team is allowed one guide, who shouts instructions to the players from the sidelines. Just as in goalball, the soccer ball makes noise so the players can hear where it is.

Swimming events use people called “tappers,” who stand at both ends of the swim lanes holding a long pole. They use the pole to tap the swimmers as they get near the pool's wall. The taps help swimmers know when to turn. All swimmers must wear blackened goggles. Doing so keeps partially sighted swimmers from having an advantage over swimmers who are completely blind.

## Blind Athletes

Athletes who are partially sighted or blind participate in several Paralympic sports. The top sport for these Paralympians is goalball.



Japan's Akiko Adachi saves the ball during a women's goalball match against Sweden at the 2008 Paralympic Games.

It is the only sport in the Paralympics that is just for athletes with limited eyesight.

Each goalball team consists of three players. They stay within a marked area and try to throw a large rubber ball into the

other team's goal. Jangling bells inside the ball let the players know where it is. All competitors must wear blackout masks so they cannot see at all. Wearing masks makes the game fair for all players.

Sound is also used for track and field athletes who are blind or partially sighted. Spoken information, clapping, and electronic signals guide them. Runners also have guide runners who run in a lane next to them. The two runners are usually connected by a strap connected to their wrists. In track events longer than 400 meters, a runner can have two guides who take turns. Runners also may be helped by spoken cues from their guide runner.

## History of the Paralympics

The idea of the Olympic Games came from ancient Greece, where athletic contests were held every four years. The games were stopped in AD 393 but were brought back more than 1,500 years later. Two hundred forty-one athletes from fourteen countries met in Athens, Greece, to compete in forty-three events.

The first Paralympics began about fifty years later. The games grew out of a program in Great Britain started by a doctor named Sir Ludwig Guttman. The program was designed to **rehabilitate** World War II combat veterans with spinal injuries.

Guttman's goal was to turn his games into a **prestigious** competition like the Olympics, and that is exactly what happened. Nations around the world joined the Paralympic movement.



Dr. Ludwig Guttman addresses the competitors at the Opening Ceremony of the 1964 games in Tokyo, Japan.

The first official Paralympic Games were held in 1960 in Italy, just after the Rome Summer Olympics. The 1960 games included about four hundred athletes from twenty-three nations.



The Paralympic movement grew from there. Summer and Winter Paralympic Games have since been held every four years.

In 1989, the International Paralympic Committee (IPC) was founded in Germany. Its job is to direct the Paralympic movement and organize the games. The IPC mission is “to enable Paralympic athletes to achieve sporting excellence and inspire and excite the world.”

In 2001, the IPC and the International Olympic Committee (IOC) agreed that the city hosting the Olympics would also host the Paralympics.

The Paralympics first had six participation categories: amputee, cerebral palsy, intellectual disability, wheelchair, visual impairment, and *les autres*. The term *les autres* is French for “the others.” This category included athletes with disabilities that do not fall into the other five groups. Today, there are ten categories covering a range of limitations.

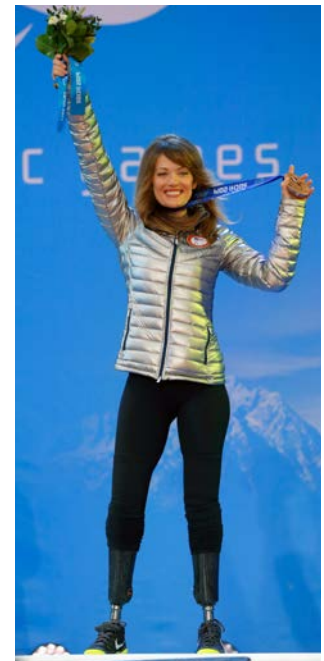


Athletes from the United States and Israel compete in wheelchair basketball at the 1960 games held in Rome, Italy.

More than anything, Amy wanted to excel in her sport. Her new legs and feet, however, made it hard for her to snowboard. That didn’t stop Amy. The determined double-amputee decided to design and build her own. Within a year, she was winning medals at national snowboarding competitions.

Amy’s success inspired her to help others like herself. In 2005, she cofounded an organization called Adaptive Action Sports. The organization introduces people with physical challenges to sports like snowboarding. Amy also worked hard to have adaptive snowboarding included in the Winter Paralympics.

In 2014, Amy’s hard work paid off. Adaptive snowboarding was added as a Paralympic event in Sochi, Russia. Amy not only won the battle to include snowboarding in the Paralympics, but she also won a bronze medal competing at those games.



Amy Purdy celebrates on the medal stand at the 2014 Winter Paralympics in Sochi.

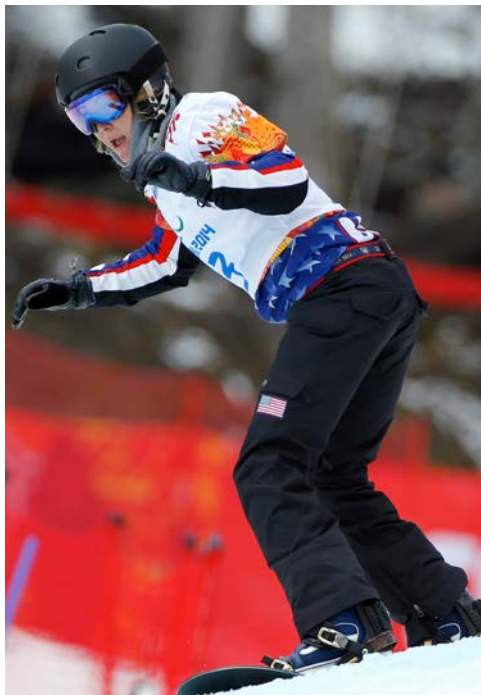


## Amy Purdy

Some Paralympians have been disabled for most of their lives. Others, like Tom Aggar and Natalie du Toit, have had to adapt to changes in their abilities later in life. One athlete who had an especially difficult change to get used to is Amy Purdy.

Amy began snowboarding when she was 15 years old. When she was 19, she got sick. Her symptoms suggested that she had the flu. What Amy really had was a deadly infection that spread quickly throughout her body. Amy's organs failed and the blood flow to her legs stopped. Doctors had to amputate both of her legs below the knee.

While recovering, Amy set her mind to making the most of her abilities. Just seven months after receiving **prosthetic** legs, Amy began snowboarding again.



Amy Purdy

## The Events

Athletes at the London Paralympic Games competed in 503 events in 21 sports.

Archery	Soccer, 7-on-a-side	Table Tennis
Athletics	Goalball	Sitting Volleyball
Boccia (lawn bowling)	Judo	Wheelchair Basketball
Cycling – Road	Powerlifting	Wheelchair Fencing
Cycling – Track	Rowing	Wheelchair Rugby
Equestrian	Sailing	Wheelchair Tennis
Soccer, 5-on-a-side	Shooting	
	Swimming	

A few Paralympic athletes stand out. Trischa Zorn, a blind American swimmer, is the most decorated Paralympian in history. From 1980 to 2004, she won 55 medals, 41 of them gold. The most decorated athlete in the Winter Games is polio survivor Ragnhild Myklebust of Norway. She competed in cross-country races, relays,



Trischa Zorn

biathlon, and ice sledge racing from 1988 through 2002. During that time, she won 27 medals, 22 of them gold.

## The 2012 Summer Olympics and Paralympics in London

More than 4,000 athletes from at least 150 countries took part in the 2012 London Paralympic Games. Athletes competed in 503 events in 21 sports.

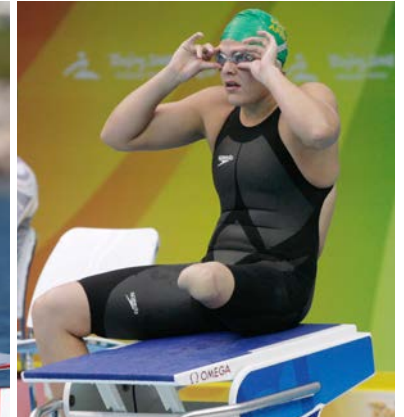
Bringing the Olympics and Paralympics to London was quite a competition in itself. In a long bidding process, nine rival cities were reduced to five finalists. In July 2005, London received the most votes in the final ballot. This was the third Olympics for London but its first time hosting the Paralympics.

The Olympic and Paralympic Games used the same **venues**. The heart of both games was the new Olympic Stadium located in Olympic Park. Other new facilities in the Olympic Park included an aquatics center, a basketball arena, and a water polo arena.

The 2.5-square-kilometer (almost 1 sq. mi.) Olympic Park was once an industrial area with polluted soil. It was cleaned up and turned into a green setting for many of the Olympic and Paralympic events.



Tom Aggar



Natalie du Toit

### At the Top of Their Game

Many inspiring stories can be told about the athletes who participated in the 2012 London Paralympics. Here are two of them:

In 2005, TOM AGGAR of Great Britain had a spinal injury and took up **competitive** rowing as part of his therapy. He won gold medals in 2007, 2009, 2010, and 2011 world championship events. He also won a gold medal at the 2008 Beijing Paralympics and won the World Cup in 2013.

NATALIE DU TOIT of South Africa began competitive swimming at age 14. When she was 17, her left leg was **amputated** at the knee after she was hit by a car. Du Toit competed at the 2004 Athens and 2008 Beijing Paralympics, winning 11 medals, 10 of them gold. Du Toit won one silver and three gold medals at the London Paralympics.