

# Revolutionary Technologies and Robots



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## *Science advancement and the automated future of Robotics*



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### ***What is a Robot?***

The advances in science, engineering, and technology have led to the creation of robotics. These human inventions are programmed bodies that perform monotonous human activities with rapid efficiency. The idea of robots helping humans in construction and production has vastly expanded. Today, everything can be imagined in the form of robotic assistance. These machines range from fully human-controlled assistants to autonomous - artificially intelligent - bots. These revolutionary technologies have a huge role to play in shared advancement and sustainability. There is more to be learned about them so let us discover some relevant features of robots.

### ***Robotics or Artificial intelligence?***

At first, we have to distinguish the difference between robots and AI. Often people toss in these two words interchangeably. Although they are highly related, they are not the same.

Robots do not necessarily require intelligence to perform tasks. Often, factories that have huge production rates incorporate monotonous bots to finish tasks more rapidly and with higher levels of accuracy. They simply mimic human behavior based on the input given.

On the other hand, Artificial Intelligence (AI) is a program that uses intelligence, based on the data it collects, to make a human-like decision with precision and speed. They can solve

problems involving areas of knowledge like mathematics, natural and human sciences. They are autonomous, hence, capable to perform without human dependence.

Lastly, AI does not need to be physical since it is a program. Despite the differences, robots and AI are linked as we have robots that run on AI.

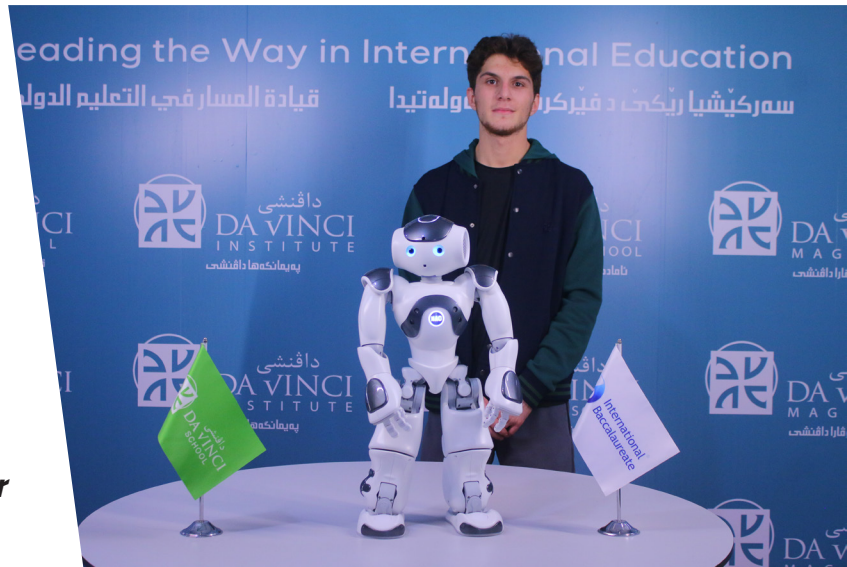
### **- Types of robots? Focus on Pepper specifically**

Robots can be as small as a 'RoboBee' or as huge as a surgical bot. In general, they are classified into five types:

**Pre-Programmed Robots.** These robots operate completely under human control and simply do monotonous tasks. The machines work according to a set of defined rules. An example would be a robotic arm.

**Humanoid Robots.** They are robots that look like humans and mimic our behavior. Some can do physical activities like holding objects or running while other robots can show facial gestures and emotions. A good example is 'Pepper'.

**Autonomous Robots.** Robots that operate independently. They have the quality of self-sufficiency (the ability to work with no human supervision). They are unique because they analyze their environment and collect information to make appropriate decisions. A prominent example is the



'Roomba Vacuum Cleaner.' Other general examples would be medical assistant bots.

**Teleoperated Robots or semi-autonomous robots.** These bots are controlled by humans from a distance using wireless communication tools. They are used in geographical investigations due to challenging land or ocean conditions.

**Augmenting Robots.** These are robots that provide support for human enhancement in terms of capability. Human health is a good area where these robots are incorporated. For instance, if someone loses his/her arm, they can attach a specific robot (Prosthetic Limb) to give the individual the ability to feel and use their hand.

Robots have many components; nevertheless, almost all have key features that are fundamental to their structure and abilities.

### **Key components of Robots**



## Control system

Similar to the human brain, robots need a central processor that controls their behavior and actions. This system is programmed. For Pepper, its CPU is located in the head. It is built out of Python scripts that control the operation, Qi-Chat controlling dialog topics, and lastly, JavaScript code hosted in the head but displayed in the tablet for additional features.

## Sensors

For a robot to react to stimuli, it needs sensors that allow it to comprehend external information and translate it to a computable form to respond. Just similar to how human nerve cells send electrical impulses to the brain and inform us about something. These components allow them to analyze their environment and then make a decision. Sensor examples would be photoresistors or microphones.

## Actuators

A robot as a physical object must be able to move. Without actuators, they cannot move. These actuators are made up of motors connected to the robot's central processor.

## Power Supply

Every machine needs an energy source. These robots run on AC power. Factory robots have direct access to energy sources; however, robots like Pepper (Humanoid form) require internal batteries.

## End Effectors

The external, physical component of a robot makes it capable to do unique things according to its function. An example is the fingers on a humanoid robot.



## Usage and applications

Robots are widely used. They are steadily becoming a critical factor in the industrial world. Their usage and implementations are inevitable, as humans aim towards a sustainable and innovative future. Here are some applications:



**Manufacturing:** placed as co-bots (co-workers) assembling products efficiently. Important in mass production. For example, the car industry.

**Transportation:** fully autonomous, self-driving cars like Tesla and Ford vehicles.

**Home:** helping with house chores like the 'Roomba' vacuum cleaner. Other examples are mowing grass bots or a home assistant like Alexa.

**Healthcare:** robots used for surgeries like the 'DaVinci Robot.' Or other examples such as the 'TUG' a nurse-like assistant.

**Scientific Exploration:** robots are used heavily in scientific investigations. A prominent example is the Mars exploration rover.

**Military:** most are teleoperated robots (4th type). They are used for surveillance, reconnaissance, and sniper detection. An example would be the killer drones.



# Natural Environment

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## **Natural Environment** **Types of the Natural Environment**

The natural environment includes all living and non-living elements that naturally exist on Earth. According to a natural system, the natural environment is characterized as functioning as a complete ecological unit without human intervention.

### **Definition of the Environment**

The environment is defined as artificial and natural elements

surrounding living things (humans, animals and plants). It is also defined as the habitat and place in which living organisms live, and it is usually all external conditions that influence and control the organisms' condition. It is also defined as a series of natural conditions surrounding humans, including water, air, plants, various living organisms, and land, including the facilities built around them.

The general concept of environment refers to the environment or framework in which a person lives and derives elements of life such as food, shelter, etc.

As for environmental factors, they are the factors that surround and control the state of living organisms, the way how they are distributed and where they live.

There are many types of environment, such as the natural environment, the political environment, and the social environment.

The term “environment” is derived from the French word “Enviro”, which means the ocean and its biological factors (or biotic factors) such as humans, plants, animals, and microorganisms and non-living things and non-biological factors (or abiotic factors) such as water, air, soil, etc.

## **Environment Components**

### **1- Lithosphere**

The lithosphere is the outer shell surrounding the Earth, mountains, rocks, soil, minerals, and other living elements.

### **2- Hydrosphere**

The hydrosphere is a part of the Earth that contains water, including lakes, rivers, oceans, groundwater, rain, and ice.

### **3- Atmosphere**

The atmosphere is a layer of air and gas that extends from Earth to several kilometres above the Earth’s surface.

### **4- Biosphere**

Biosphere refers to all living things found in the lithosphere, hydrosphere, and atmosphere.

## **Factors Affecting the Environment**

The environment is also affected by a series of factors or components, including biotic and abiotic factors.

### **1- Abiotic Factors**

Abiotic Factors include physical and chemical factors, such as temperature, salinity, pH, soil composition, sunlight, and climate.

### **2- Biotic Factors**

Biotic Factors include organisms that interact with each other and are divided into producers, consumers, and decomposers

## **Environment Elements**

### **1- Physical Elements**

They are the elements that define the ever-changing nature and the opportunities and limitations of human habitats, such as space, terrain, and bodies of water, soil, climate, rocks and minerals.

### **2- Biological elements**

They are the elements that make up the biosphere, such as plants, animals, microorganisms, and humans.

### **3- Cultural Elements**

They are the manufactured characteristics that shape his cultural environment, such as economic, social and political factors.

## **Types of Natural Environment**

### **1- Physical environment**

They are the natural conditions, such as the geographic climate, weather, or natural conditions. People are greatly affected by the climate, and here are some examples of this influence. The indigenous peoples of European countries with a cold climate are distinguished by light skin, While indigenous peoples in Asian and African countries with hot climates have dark skin, this is evidence that the human body is affected by the surrounding climatic conditions, so people try to adapt to the environment.

The efficiency of human work is also affected by the surrounding climatic conditions.

### **2- Social environment**

It includes the social, economic and political conditions of an individual in the society in which he lives. Ethical, cultural, and emotional factors influence individual behaviour. Society can be divided into two classes.

The open society greatly enhances the personal growth and development process.

A closed society does not help the growth and development of personality.

### **3- The psychological environment**

In some cases, the physical and social



environments are common factors among individuals, while the psychological environment varies from person to person. Scientist Kurt Levin describes this with the term "life space" because it represents the individual and his goals.

Through it, we can understand our personalities; for example, when a person encounters some particular pitfalls, he may face two situations, either he becomes frustrated or overcomes these pitfalls, and then continues his life. A person can change his goal to get a better psychological environment because this mechanism helps to change the way the individual adapts to his environment.

### **Environment Problems**

The environment has many problems, some of which are listed below:

#### **1- Global warming**

The definition of global warming or Greenhouse Effect refers to the increase in the number of greenhouse gases.

(Including carbon dioxide) emitted into the atmosphere that led to a warming of the Earth's surface. This phenomenon has caused many problems that plague the Earth, including the emergence of destructive rainstorms, melting glaciers and changes related to precipitation on the ground, changes in temperature from year to year, and long-term climate changes.

A study conducted by



the European Environment Agency shows that the average global temperature has risen dramatically. At the beginning of the 20th century, the temperature rose by 0.3°-0.6°C, reaching the highest average temperature in 1998, which was the highest temperature ever. Other studies have shown that the average temperature has risen from 0.87 degrees to 0.92 degrees Celsius in the past ten years. The year 2016 AD is considered the hottest year ever, with a temperature of 1.1 degrees Celsius higher than the pre-industrial temperature. Some studies indicate that some climate changes may exceed past and current limits due to global warming. Because these studies estimate that by 2100 AD, the global temperature will rise to 2.0 degrees Celsius. According to a 2015 study by the Intergovernmental Panel on Climate Change (IPCC), this means that measures must be taken to reduce global carbon dioxide emissions by 50% to 70%. 2007 AD.

#### **2- Loss of biodiversity**

All the world's environmental problems are interconnected, and some scientists predict that climate change will wipe out the planet's biodiversity. In addition to other environmental problems (such as desertification and changes in terrestrial and marine ecosystems) - World Wildlife Fund From 1970 to 2010, some studies were conducted on nearly 3,000 animal species around the world and found that the environment has lost more than 52% of the Earth's biodiversity, about 39% of its oceans and wildlife, and 76% of its freshwater wildlife, because of the population which has grown exponentially in the last 40 years.

Some studies also indicate that the rate of animal extinction in the future will accelerate dramatically, which will lead to an imbalance in the ecosystem, which will lead to many negative health effects on humans.

Man has carried out many activities such as urbanization and wrong practices when hunting or farming to cause this.

Other factors that lead to biodiversity loss are indiscriminate use of pesticides and chemicals, illegal trade in living organisms, conversion of land to modern facilities, resulting in significant losses to ecosystems, destruction of many habitats for organisms and insufficient agricultural capacity. The loss of many plant resources and different types of living organisms, and this problem has led to the emergence of many diseases and the emergence of Invasive Species.

### **3-Cross-border pollution**

As a result of the introduction of the system of free trade and globalization, the growth of a single economy led to the development of many economic sectors in the world. In addition, many countries have also shared the natural borders, harming the ecosystem through the so-called transboundary air pollution, as this polluted air affects countries other than the country of origin, and this pollution causes many Environmental problems, such as water pollution, acid rain formation, and the global hazardous waste trade.

Transboundary air pollution comes from manufacturing processes, energy production, and various modes of transportation, such as international and domestic travel.

A study conducted by the European Environment Agency shows that cross-border air pollution contributes to summer acidification and smog production.

This pollution causes harmful substances (such as radioactive elements) to be dispersed in the air and

leads to eutrophication or coagulation in the water and soil.

### **4- Destruction of the ozone layer**

The ozone layer protects the Earth from the harmful effects of the sun's ultraviolet rays, and in 1974 scientists discovered a direct link between chlorofluorocarbons (CFCs), a greenhouse gas, and the depletion of the ozone layer.

Greenhouse gases cause ozone depletion in the atmosphere, and thus ultraviolet rays reach the Earth. This leads to insufficient plant production and many human diseases, such as immunodeficiency diseases, skin cancer and cataracts.

Finally, we must preserve all the elements in the environment so as not to harm the environment. It is also recommended to recycle waste and dispose of toxic materials in the right and proper ways.

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# Early Childhood Development

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*The importance and benefits of early development at home.*



From the day you bring your child into this world, you have the obligation and responsibility to prepare the best you can for them to become responsible and intellectual adults contributing to our society. Note that some factors may influence a child's movement and ability to acquire new skills, such as:

- The child's general development.
- The child's level of experience and practice.
- The child's vision and hearing.
- The child's understanding, attention, and listening skills.

- Any genetic or medical issues or conditions.

This can easily be achieved with the correct techniques, methods, an early start, and lots of patience. When talking about early childhood development, I mean all the necessary skills your child requires to thrive in a different environment other than home.

Some of the skills mentioned above are core skills such as balance which can be divided into two sections, namely static balance, which means staying upright when standing still, and Dynamic balance, which means balancing yourself during moving activities such as walking and running.

Strength, their muscles need to be developed to such an extent that they can carry their





backpacks, water bottles, books and walk by themselves.

They need to understand their body schema and its position in space, they need to know the difference between right and left (have a sense of direction), they need to be able to coordinate both sides of their body (move your arms in the same and opposite directions) otherwise known as bilateral-coordination or integration. They need to know where their bodies are in space with different objects and people, also known as spatial awareness.

Visual skills play a significant role in a child's early development children need to recognize

and visualize (identify a red apple or describe a red apple without seeing it) Visual perception (seeing a red apple, identifying that it's a fruit, knowing you can eat it, and recalling whether you like or dislike the taste) and visual recall (remembering that the object in front of you is an apple, that it's red, that it's edible, and that you like or dislike the taste) keep in mind to develop and hold on to these skills they need to be practiced regularly at home and school. Most importantly, it would help if you were patient with the child as it is more difficult for children to acquire a new skill than for adults.

Fine motor skills are the basic set of skills you can develop within your child. They are the movements of small muscles in our hands and wrists. They help us perform simple daily tasks like eating with cutlery, dressing, reading for an object, and many more. To adults, these daily task movements may seem basic. However, it's all new to a young child and can become incredibly frustrating when they struggle to get it right or lack sufficient support or guidance.





This developmental stage is a 'make-or-break' for most children. It will determine whether the child will experience difficulty at school or not.

We must develop these skills early on as it's connected to all the rest. Luckily these skills can be developed and improved at any time during the day. Start with hand exercises to strengthen the muscles in their hands and wrists. Give them simple stationery like pencils, crayons, rulers, child-friendly scissors to hold and get familiar with so it wouldn't be anything new when they enter a pre-school. Let them scribble on paper or



play with play-dough and play-sand. Let them experience paint with both finger paint exercises or using brushes or sponges. Let them work with child-friendly scissors and glue and get some educational toys that will develop their thinking skills (puzzles, matching shapes, colors, or animals). Fine motor skills can also be developed by doing or assisting in everyday activities like packing lunch, folding clothes, cleaning, packing away dishes (plastics), and more.

Another skill that children need to develop at a young age is the essential features of handwriting. The components of handwriting skills are:

- Understanding the task - Make sure the child fully understands what is happening and why they are doing it.
- Attention and listening skills - Make sure the environment is calm and distraction-free so that the child can focus 100% on the task in front of them.



- Visual perception skills - As mentioned earlier in the article, they need to know and understand all the tools they are using.
- Eye-hand coordination - Here is where the sense of direction comes in. If these skills do not develop early on, handwriting will prove more difficult for the child.
- Grasp and manipulation - The child needs to understand to hold a pencil in a certain way, and the pressure they place upon the pencil makes all the difference.

Overall there are countless methods and techniques that you as a parent and use to prepare your child for their school career best. You need to find the ones

that work for you and your child.

***Some critical ideas for you to remember:***

- Quality movements count to keep it short and focused.
- Regular practice short, standard practice will make a difference.
- Utilizing existing skills, each child will have a range of existing skills - allow the child to use them.
- Teach new skills to the child and be specific about what you want the child to learn.
- Minimize frustrations and develop coping as the child is learning and practicing new skills; support them with some coping strategies until they have mastered the new skills.



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# *Pets Care and Safety*

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*If you are a new pet-owner, here is what you need to know!*



When you are a new pet owner, you simply want the best for your baby. How can you make your home as welcoming as possible when everything is new for both you and your pet? What can you do to assist your kitty & puppy feel safe, healthy, and happy? Every first-time pet owner checklist should include pet scratchers, extra litter boxes, and plenty of playtimes.

Here are great tips that every new pet owner should know.

***• Help your pet feel safe and secure***

Your pet is going to be shy initially, so try and make your home as welcoming as possible. It's perfectly normal if your pet feels nervous and hides from you. Pets don't generally like change, and they may have time to get accustomed to all the new smells and sounds in your home. Put calming diffusers around the house, ideally plugging one into an outlet in each room where your cat will spend time. These diffusers release a drug-free, odourless vapor that mimics the pheromones a cat releases.



## ***Visit the vet***

Find your pet a good veterinarian, schedule a check-up, and make sure that his vaccines are up-to-date. Consider getting him a microchip too. Keep the microchip number and a photograph of your new pet on your phone just in case he escapes. You will be glad you did.

### ***· Introduce your pet to other pets slowly***

When you bring home a new cat, slowly introduce her to your other pets, like your dog. Keep your new cat in a separate room and feed your pets on either side of a closed door. Put each pet's blanket within the other pet's room and swap rooms sometimes so that they get used to each other's smells. Watch their interaction each step of the way so you'll separate them if needed.

### ***· Try different kinds of litter and boxes***

It's typically a good idea to have one litter box per pet, plus an additional box. Your pet can get territorial about their litter boxes, so ensure your new pet has enough space. Keep the litter boxes away from heavy traffic or loud noises. Remember to clean your pet's litter each day and do a deeper clean once per week. If your new kitty isn't burying her poop, try these steps to encourage that behavior.

### ***· Use high-quality food and keep your pet off from anything dangerous***

Pets thrive on high-quality food. Wet and dry food for pets may be a great spot to start. You will find lots of flavors to choose from. Avoid human foods that are toxic to cats, and only keep house plants that are safe for pets. Pets are specialized at going in everything, so lock up anything which may harm your fur baby, like cleaning products.

### ***· Get creative with food and water bowls***

If you have dogs, they generally wish to get into the cat's food. Think about using a food bowl for your cat that is attached to a window. You'll be able to keep it up high,



where your dog can't reach. Cats tend to drink less water than they need. Place water bowls in several corners of your home and think about employing filtered bowls.

### ***· Create a tasty indoor environment***

#### ***· Although cats tend to be safer when they're indoors, they'll also get bored***

Create an attractive indoor environment for your new pet. Place condos and cat trees so your pet can climb.

### ***· Set up pet scratchers***

They need scratchers to get rid of the dead outer layers of their claws, to stretch their bodies, and to mark their territory. Scratching also can be a way of showing happiness or easing stress. If you do not provide scratchers, your cat will use your carpet or furniture. It's better to supply many pet scratchers.

### ***· Enjoy a bit of outdoor fun***

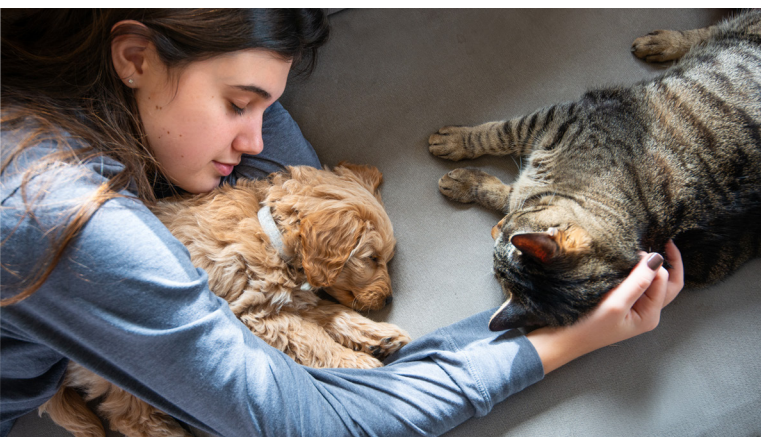
Even if you are not comfortable letting your cat roam outside, you'll have safe outdoor adventures together. You can put your pet on a secure harness and take him outside for a brief time in the backyard on a leash. Your pet will have to get to the harness indoors first. In some cases, they won't move for a few minutes while they get accustomed to it. Most of all, they will learn to like it with time, especially once they realize that putting on the harness means going outside.

### ***· Play along with your pet***

Spend plenty of time with your new pet. This keeps his brain engaged and helps him develop good social skills.

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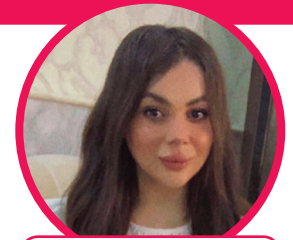
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# Reading Foreign Languages

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## What role does reading play in English language learning?



this vocabulary quickly. They may not even need a dictionary because the rest of the text will be enough to learn new words and perceive them in context.

### **A Model for Writing**

This strategy brings readers an excellent literary sample while reading. Reading texts shows reader patterns and expressions

that may apply in writing.

Reading English that is "Correctly Structured" Individuals frequently write in "correct" English with a precise grammatical structure. As a result, reading allows one to see and acquire grammatical English naturally.

### **Personal Interest**

It may be thrilling and fun if the reader selects something they love reading. Why not read about football in English if they want to learn about football in their language? They will gain football knowledge while also improving their English.

### **Tips for Reading**

#### **Tip #1**

Make an effort to read at the appropriate level. Read anything that you can grasp. If it's not appealing or easy to understand you will quickly become discouraged.

#### **Tip #2**

Create a list of any new words. Create a vocabulary notebook with four or five new terms on every page. However, attempt to guess their meaning

More learners are currently reading in English. The reading indicates that learners are actively utilizing their intellect. The writer spends much effort; however, the reader should also give in the effort. While reading texts, one must perform some or all of the following:

- visualize a situation in the reader's mind
- comprehend the author's point of view
- agree or disagree with the author

### **The Benefits of Reading**

Listening, speaking, and writing are all vital while learning a new language.

There are several benefits to reading, which include:

#### **Contextual Vocabulary Learning**

When an individual reads, they will always come across new terms. If they find learning too many new terms, the level is too high; they should read easier. However, if there are only five new terms on every page, readers will master

as you read, make a note of them with a pen, then return when you've completed the book and look it up in a dictionary and add it to the vocabulary list.

### **Tip #3**

Read regularly. A daily commitment of fifteen minutes is preferable to a weekly commitment of two hours. Schedule reading time and stick to it.

### **Tip #4**

Read what you find interesting. Look for a suitable magazine or book about a topic that interests you.

## **Things to Read** **Newspapers**

English-language newspapers are available in all major cities across the world. Magazines are fascinating because they cover real-life and current events; They're difficult to read. If your English level is intermediate or higher, try reading newspapers.

## **Magazines**

Many cities across the world have English-language publications. You may get a magazine for delivery if you cannot locate it in your location. Many periodicals include illustrations to aid comprehension. The majority of periodicals require an intermediate level.

## **Books**

- Non-fiction books (history, biography, travel, cooking, etc.)
- A fictional book (stories and novels)

Some novels are more straightforward than others to read. It is frequently dependent on the author. For example, Agatha Christie used the most approachable language and vocabulary than Stephen King. Books can be purchased /borrowed globally at any bookshop or library.

## **Short Stories**

Because they are brief, short tales can be an effective



way to learn a language. You get all the thrills of a book without having to read more than 5,000 or 10,000 words. Short tales can be found in publications, short story collections, and online.

## **Readers**

Readers are novels designed to be skimmed. They are brief and have a straightforward vocabulary. They are usually available at various levels, so you'll need to figure out which one is suitable for you. Many people like reading short stories by well-known writers. This is a fantastic approach to begin practicing your reading skills.

## **Cornflakes Packets**

By "Cornflakes Packets," we mean any product having English writing on or included with, such as flight tickets, packages, bottles ...etc. Why not try to read the descriptions in English.

## **Poems**

Start by reading some English-language poems if you enjoy poems. Because of the style and language, they may be complicated to understand. However, if you put in the effort, you can generally understand the overall context.

## **Translation**

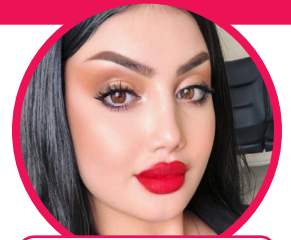
- Translating across languages can highlight significant variations and any similarity, such as vocabulary or word order.
- The translation approach is excellent for guiding learners to understand how various languages may deliver a concept in various way.
- The translation engages "both areas of your brain, your native and target languages." It causes you to acquire accustomed to switching between languages on the fly, which improves your linguistic talents.





# Bullying Among Children

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*Bullying and the effects of bullying on child development .*



The effects of bullying on children's mental health and how to deal with it properly. Bullying has recently spread among children after reaching a peak among adolescents. To reassure your

child whether he is being bullied or being bullied, you must learn the signs that indicate this, as well as the impact of bullying on children's psychological health. In all cases, you must learn the strategies that will enable you to deal with your child until you get him/her to safety and reduce the negative effects he/she is exposed to.



## ***What is bullying?***

Although you may be aware of the numerous impacts of bullying, whether physical or psychological, we will discuss them later. The most important thing is that you understand what bullying is first. He uses derogatory



language to degrade him in front of others, making the person who is clicking on him feel embarrassed for doing something he shouldn't. This person is unable to respond to abusive interactions or bullying. Bullying is not limited to hurting people with words; it may also include objects being taken or assaulted, or it can be electronic, as we shall explain later. Have you ever thought about the reasons why a child might assume the character of a bully?

**Causes of bullying:** Everyone talks about the impact of bullying on children's psychological health, but mothers rarely try to figure out what motivates their children to put on the bully mask. For this reason, we'll show you how it happens so you can deal with the situation, whether your child is a bully or has been bullied.

**1-** The bully has psychological problems: Studies have shown that the bully uses bullying to reflect his problems on the victim, as he may be unsure of himself or dissatisfied with himself. He expresses this by disturbing and ruining the lives of those around him. He makes others believe that some are less than him so that he can enjoy peace and comfort. Other people are suffering from the same problems he does.



**2-** The bully has been bullied before: Many bullies have been bullied before and then have become bullies. They were outraged at their inability to respond to the abuse and decided to bully others.

**3-** Bully exposure to domestic violence: One of the causes of bullying could be exposure to numerous family difficulties. When a child is exposed to physical, verbal, sexual, or emotional violence, he will bully a weaker child to deal with his rage.

**4-** Belonging to bad friends: If a child gets to know a group of bullying friends, you'll notice that he begins to act like them. He knows that if he bullies someone, someone will protect him, and some groups require that the newly joined child bully others as proof of his loyalty.



### ***What are the psychological effects of bullying on a child?***

What are the consequences of bullying? Many parents who expose their children to bullying ask this question, and to answer it, you must first understand that every form of bullying has a bad impact on your child, but the psychological impacts of bullying are as follows;

**1-** Low academic achievement: One of the indicators that your

child is being bullied is his low academic level. If he is constantly bullied, his focus will deteriorate significantly, affecting his schoolwork as a result of his attention being drawn to the abuse he is subjected to. According to studies carried out at the American University of Virginia, children in schools with hostile conditions have worse test results than children in schools with anti-bullying initiatives.

**2-** Hardship in making new friends or maintaining healthy connections: He finds it difficult to make new friends or maintain healthy relationships. He will strive to limit social engagements as much as possible; he does not trust others, and therefore his social ties are harmed.

**3-** Exposure to psychological issues: So, how can bullying affect a child's mental health? If your child is subjected to bullying, the



likelihood of him developing mental diseases increases, as he may develop one or more of the following:

- **Social phobia:** This is a disorder in which a child becomes excessively anxious while interacting with others in social circumstances, which has a detrimental influence on daily activities at school or anywhere else where interaction with people is required. This decision makes me nervous.
- **Depression:** One of the negative effects of bullying on children's mental health is depression. Studies have shown that bullying is responsible for one-third of all depression cases in adolescence, and other studies have shown that children who were bullied at the age of 13 have a higher risk of depression at the age of eighteen.





**Suicidal ideation:** Suicide is one of the most common causes of death, with statistics indicating that 800,000 people commit suicide each year. This could pose a serious threat to your child, as many children have chosen to die as a result of being bullied. The most vulnerable people are the vulnerable group, and the idea of suicide is linked to diseases. Depression, anxiety, sleep difficulties, and psychological trauma are examples of psychological symptoms.

**How to deal with bullying:**

- Instilling self-confidence in your child: One of the most important lessons you can teach your child is to have confidence in himself first. It will enable him to overcome his fear and respond courageously to bullies and abusers.



- Communicate with your child: Most youngsters do not inform their parents about bullying they have experienced at school. Your job is to watch your child's behavior and look for signals that he's being bullied.
- Describe bullying clearly: With a lack of understanding of the notion, your child may not realize he is being bullied. Thus, it is essential to explain it to him so that he may tell you or his teachers what he is going through.
- Keep an eye on your child while he's on the Internet: We don't recommend that you prevent your child from using the Internet entirely, but we do recommend that you do so on the condition that you keep an eye on him from afar so that you can see if he's being bullied online. If he trusts the wrong people, or if he visits sites he shouldn't visit, teach your child what sites he can visit.





# Who has the best economy in the world?

Wassim Georges Eid – Lebanon / Teacher at Da Vinci School



*The impacts of climate change are rising sea levels, melting ice, torrential downpours, powerful storms, hurricanes and typhoons, heatwaves, droughts, and lastly changing ecosystems.*

## What Is an Economy?

The economy is the large set of inter-related production, consumption, and exchange activities that determine how scarce resources are allocated. The production, consumption, and distribution of goods and services are used to fulfill the needs of those living and operating within the economy or economic system.



## Understanding Economies

An economy encompasses all activity related to the production, consumption, and trade of goods and services in an area. These decisions are made through some combination of market transactions and collective or hierarchical decision-making. Everyone from individuals to entities such as families, corporations, and governments participate in this process. The economy of a particular region or country is governed by its culture, laws, history, and geography, among other factors, and it evolves due to the choices and actions of the participants. For this reason, no two economies are identical.

## Types of Economy

- There are four types of economic systems

### 1. Traditional Economic System

A traditional economic system is most likely found in rural settings or in developing nations where farming is predominant. Such settings usually have very few resources to share.

### 2. Command Economic System

Command or Socialist economic system has a dominant centralized authority in the form of government. The government controls the economy in such a country. It is the sole decision-making authority for determining



production and allocation.

Ideally, the command system takes into consideration the best interest of its populace.

### 3. Market Economic System

The market economic system or capitalist economy involves significantly less government interference and incorporates the free-market principles. There is a scant exercise of control over resources. Market forces regulate demand and supply.

However, some degree of government intervention in regulations against monopoly and favor of fair trade exists.

### 4. Mixed Economic System

A mixed economic system combines the features of both socialist and free-market economic systems. It is also known as a dual system. Most of the countries today have a mixed economic system with the existence of both public services and private industries.

### Gross Domestic Product (GDP)

The Gross Domestic Product measures the value of economic activity within a country. Strictly defined, GDP is the sum of the market values, or prices, of all final goods and services produced in an economy during a period.

### Why we need the GDP:

GDP is important because it gives information about the size of the economy and how an economy is performing. The growth rate of real GDP is often used as an indicator of the economy's general health.

United States: USD 23.5 trillion in 2022

While in 2000, the U.S. economy was around four times the combined size of the BRIC economies (Brazil, Russia, India, and China), the BRICs will be over 10% larger than the U.S. in 2022.

Focus Economics panelists see the U.S. retaining its title as the world's largest economy, with a forecasted nominal GDP of USD 23.5 trillion in 2022. Healthy private consumption and fixed investment, still relatively favorable demographics, and a loose fiscal stance under Biden will all support activity. However, soaring public debt and a possible resurgence in inflation due to stimulus measures are risks.



China: USD 18.6 trillion in 2022

Chinese GDP is at USD 20.6 trillion, or roughly 81% of U.S. GDP, in 2022. In 2018, the corresponding figure was around 65%. China's firm handling of the Covid-19 crisis has supported domestic activity and the value of the Yuan: these factors will boost the size of the Chinese economy in USD terms over the forecast horizon. Moreover, solid private consumption will be a crucial growth driver in the coming years, with the government focusing on strengthening domestic activity as part of its "dual circulation" strategy.

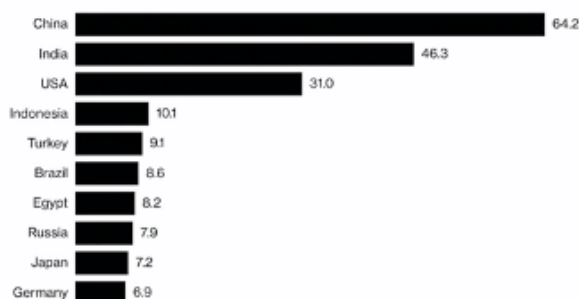
We can see the top 5 most significant economies in 2022 U.S., China, Japan, Germany, and India.

ANIMATION: THE BIGGEST ECONOMIES IN 2030

By 2030, India is expected to overtake the U.S. as the second-largest economy on the planet. At that time, China was also supposed to be the biggest economy globally regarding nominal GDP, a record still held by the U.S.

### These could be the world's biggest economies by 2030

Top 10 countries by nominal GDP using PPP exchange rates by the year 2030



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