Learning Tool Code	Title
SDG17-SDGfP	**Unity makes strength**

Objectives

- The effectiveness of the team organization is determined by its importance for the socialization of participants, the formation of skills for teamwork, the education of personal qualities: tolerance, empathy, tolerance, respect and esteem of the teammate - his personality and position. The social function of the team organization of the training is expressed in the assimilation by the children of experience for full personal-individual expression within the group, and hence in the society.
- Students realize that when everyone acts together, the goal is achieved and success is a must.

Activity details

- **Materials** - The students prepared materials for each purpose.
- **Duration** – 90 minutes
- **Number of groups** - several groups of students
  - (5 grade, ages 11-12)

Instructions

The motto "Unity makes strength", inscribed on the state coat of arms and on the facade of the National Assembly building, as well as the wreath of flowers around the denomination of the first Bulgarian coins, are cut on all coin issues from 1881 - copper, copper-nickel, zinc , aluminum and iron. An exception is made only when, instead of the state coat of arms, the images of Prince / Tsar Ferdinand I, Tsar Boris III, the Madara Horseman and the so -called small coat of arms are cut on the pennies (denominations 1, 2, 2 ½, 5, 10 and 20).

We all know the ancient legend of Khan Kubrat and the will to his sons. Kubrat ordered a bundle of sticks to be brought. When the sticks were in a bundle, none of his sons were able to break the bundle. But when they scattered the sticks, they broke very easily one by one. Thus the khan bequeathed to them always to be together and never to divide, so that they would be strong and invincible, because otherwise they would be weak individually and any enemy could break them.

Today, all of you have been tasked with finding interesting facts to introduce us to any global goal of sustainable development.
16 students present the synthesized information to the class.

Goal 1- No poverty

Did you know that:
• 1,345 million people worldwide live on less than $ 1 a day? And that in the 21st century there are countries where people are dying of hunger or lack of drinking water! See the shocking facts of world poverty and remember them the next time your life seems difficult!
• 80% of the world's population lives on less than $ 10 a day.
• 5.6 billion people worldwide handle less than $ 10 a day.
• 1 in 7 people in the United States live below the poverty line. Poverty is not limited to Africa. Even in the United States, the gap between rich and poor is widening and more and more people are living on the streets. Poverty is not limited to Africa. Even in the United States, the gap between rich and poor is widening and more and more people are living on the streets. Even in a developed country like the United States, as many as 47 million people rely on livelihoods.

10 of the poorest countries in the world
Determining the level of income of a country involved in experts from the World Bank. They collect data on per capita GNI and the rate of GDP growth, government revenue, imports and exports - see, the result is as objective as possible. Of course, the level of unemployment in these countries is also an excluded scale, as, accordingly, the level of crime.
Madagascar - GDP per capita: $ 950
In the last ten years, the population of Madagascar has been in a very unpleasant situation. The financial crisis has put much of the population on the brink of the current famine. Maybe on the island it looks fantastic - but this tale is quite grim.
Togo - GDP per capita: $ 900

A small country in West Africa is unable to cope with the crisis. The government, in recognition of it, is trying to do everything possible to lift people out of poverty - free education and medicine a little brighter local life.

Malawi - GDP per capita: $ 850

And here is the problem with medicine. Across the country it falls on the strength of five hospitals to get an appointment with a doctor - almost unrealistic. Life in Malawi does not seem to have developed in the last few centuries: huts, hunting and gathering, poverty and early death.

Central Africa - GDP per capita: $ 700

People spend all their time at work - and that's still not enough to feed their families. In general, local people are engaged in agriculture, but the climate is not the most suitable for agriculture in Africa.

Nigeria - GDP per capita: $ 600

Overall, the Nigerian government is showing a very good side: the standard of living of the local population is growing - albeit quite slowly.

Zimbabwe - GDP per capita: $ 550

Almost the entire territory of Zimbabwe is occupied by small villages, people are trying to live in agriculture because they are almost there for other work. Unemployment is about 90%.

Burundi - GDP per capita: $ 500

The world's largest economies, such as the United States and Britain, spend billions of dollars each year to support Burundi. Unfortunately, at the moment the result is almost imperceptible: Burundians are still on the brink of poverty.

Eritrea - GDP per capita: $ 400

Surprisingly, Eritrea's natural resources are so impressive that the country may even be interested in the United States with its desire to spread democracy in oil-rich areas. But local people have failed to raise their standard of living.

Congo - GDP per capita: $ 350

Congo's independence was the last straw: poverty, looting, early death - people have long since stopped hoping for a better life.*Liberia - GDP per capita: $ 300* If not to provide for more developed countries, local simply can not be maintained.

And here - the poorest country in the world. Tens of thousands of people are killed here every year, from the usual malnutrition. Financial resources and the amount of food is so low that experts have called for the inevitable collapse of the whole country.

Goal 2- Zero hunger

Did you know that:

- One-eighth of the world is starving
- There is a shortage of food for about a billion people on Earth. That is why many fall asleep hungry. 70% of the population of South Sudan knows what food shortages are. In second place in terms of hunger is Kenya, with 51% of starving people. At the same time, in order to feed all the poor countries of Africa, it is enough to collect all the food thrown away by the inhabitants of developed countries around the world.
- A person can live without food for 40 days. If you do not experience strenuous exercise, a person can live without food for 40 days. It has been proven that after the third day of starvation, the body begins to strengthen its immune system. The reason is the powerful secretion of stem cells during starvation. During this period, the body also reduces the concentration of the enzyme responsible for aging and the hormone that stimulates the growth of cancerous tumors.
- Fasting is the most dangerous method of losing weight. Eating practically nothing is the most ineffective way to lose weight. Lack of fuel in the body drastically reduces the amount of glucose in the blood and consequently reduces the amount of insulin responsible for burning fat in the cells. Thus, during complete starvation, acetone bodies accumulate in the body, which increases the acidity in the blood, and this poisons the whole body. After the end of hunger, the body not only regains its weight, but also stores it for the future.
- Cannibalism - There are still places in the world where you can come across cannibals. This is possible in southeastern Papua New Guinea, India, Cambodia, Fiji, Brazil, West Africa and the Congo. It is best not to fall before the eyes of the starving there.

Malnutrition - A major socio-economic and health problem in developing countries and for part of the population of developed countries is malnutrition. Severe malnutrition (hunger or malnutrition) is widespread in large geographical regions. Malnutrition is

particularly detrimental to children, whose energy and nutrient needs are higher than those of adults. Early infant mortality, physical and neuropsychological disorders, weight loss, higher incidence and more severe infectious diseases are consequences of malnutrition in both mothers during pregnancy and children after birth. According to the WHO, about 10-15% of the population of our planet is starving, and partial malnutrition affects about 50%. There is currently a sharp increase in population, which is not accompanied by a parallel increase in food production. It is estimated that the population of developing countries with their daily diet receives 1/3 to 1/2 less energy, almost twice less protein and five times less animal protein than the population of developed countries. Most people in Africa, Asia and Latin America consume only 6 - 15 g of animal protein per day, at an optimal rate of 50 - 60 g. As a result of malnutrition, millions of people around the world suffer from cachexia, insanity, hypo- and avitaminosis, anemia, infectious and parasitic diseases. Malnutrition associated with protein deficiency is the cause of high morbidity and mortality due to low immune protection of the population. There are more frequent and more severe illnesses than a number of infectious and non-infectious diseases.

Goal 3- Good health

Did you know that:
• 90% of malaria deaths are in Africa. 80% of the dead are children
• It is even sadder when you remember that malaria is curable, but in these parts of the world people do not have access to health care and medicines. Countries in the world with the lowest life expectancy:
Swaziland - 31.9 years
The kingdom is small - no more than 200 square kilometers.
More than two-thirds of the population find it difficult to meet even basic needs such as food and shelter. AIDS here spreads uncontrollably.
Angola - 38.3 years
Located in South Africa. It borders the Democratic Republic of the Congo, Namibia and Zambia. The capital is Lunda. After almost three decades of civil war and enormous poverty, the average life expectancy is 38.2 years.
Zambia - 38.6 years
Located in South Africa. It borders the Congo, Tanzania, Malawi, Botswana, Namibia and Zimbabwe. Lusaka is the largest city. 64% of the country's population lives on less than $ 1 a day.

Lesotho - 40.4 years
Just over 2 million people live here.The largest city is Maseru. About 40% of the population lives below the poverty line.
Mozambique - 41.1 years
The country borders the Indian Ocean to the east, Tanzania to the north, Zimbabwe to the west. The capital and largest city is Maputo. 24 million people live here. Poverty and lack of access to medical services are the reason for the low life expectancy.
Sierra Leone - 41.2 years
Located in West Africa. It is a constitutional republic.The average citizen does not live much longer than 40 years here.
Liberia - 41.8 years
Located in West Africa. It has an area of 111,369 square kilometers and a population of 3.7 million people. English is the official language here. Another 30 types of local dialects are spoken.
Djibouti - 43.4 years
It is located between Eritrea and Ethiopia. It has a population of 790,000 people. The country suffers from poor health care and lack of health care in general in entire regions.
Malawi - 43.8 years
It is a small country in Southeast Africa. It borders Tanzania, Zambia, Mozambique. A population of 14.9 million people lives on 118,000 square kilometers. Extreme poverty and high crime contribute to low life expectancy.
CHAD - 44.5 years
The population is 4.4 million people. Chad's neighbors are Sudan, the Democratic Republic of the Congo, the Republic of the Congo and Cameroon.

Goal 4- Quality education

Did you know that:

• 17% of the world's population cannot read or write.

• $ 6 billion would be enough to provide education for all. This is the revenue of a large company for the year.

• Educational systems, which strive for high efficiency of the educational process, define as their main goal the provision of equal access to education. Equal access means providing equal opportunities for quality education to all students, regardless of their gender, family background, socio-economic or cultural status. Equality in education means removing obstacles and limitations that prevent students from fully developing

their abilities and developing their potential, and creating conditions for limiting the discriminatory influence of the social and family environment on their achievements.

What does education lead to?

• Sustainable development begins with education.
• Education is the main way to overcome poverty.
• Education gives parents knowledge about their children's health and hygiene
• Education teaches children how to protect their health
• Education can help develop sustainable agriculture
• Education can help stop world hunger
• Education can help improve nutrition in the future
• Mother's education has saved millions of children's lives around the world
• Education helps women find work
• Education gives women a voice
• Educated women are less likely to marry and have children at an early age
• Quality education is key to economic and sustainable growth

Goal 5- Gender equality

Did you know that:

• 17% of the world's population cannot read or write. About 2/3 of them are women.

18 facts to share on International Women's Day

International Women's Day - March 8, is a real holiday - and the origin of the holiday is very interesting. Unfortunately, International Women's Day does not always get t he coverage it deserves, like the struggle for gender equality itself. So, if you, like me, have a lot more questions about the holiday than you'd like to admit, don't feel too bad. Instead, start your celebration of this super feminist holiday by reading all the facts you need to know on International Women's Day.

1. International Women's Day was born on March 8, 1908, when 15,000 women marched through the streets of New York to demand shorter hours, better pay, and the right to vote. The first event of International Women's Day was held only in 1911 and only then in

Austria, Denmark, Germany and Switzerland. The UN did not recognize it as a holiday until 1975.

2. It was not until 2011, to commemorate the centenary of the first event of International Women's Day, that US President Barack Obama declared the entire month of March "Women's History Month" in the United States.

3. The 2015 UN report on women showed that despite women working longer than men, given both paid and unpaid work, women still earn on average 24% less than men worldwide . This pay gap is the worst in South Asia, where women earn 33% less than men.

4. 58% of college graduates are women, and this increased percentage of educated women is directly related to global economic growth - and faster economic growth. Among the 34 countries participating in the Organization for Economic Co-operation and Development (OECD), more education for women and girls has accounted for 50% of their economic growth over the past 50 years.

5. This is probably no surprise, but women still spend more time on housework and childcare than men. The UN reports that women spend one to three hours more on housework than men, two to 10 times more time spent on children and the elderly, and one to four hours less per day on economic market activities. In fact, in the European Union, 25% of women say this is the reason they are not active in the workforce, while only three% of men can say the same.

6. Only 22 of the 197 countries on Earth can say that they have women who serve as heads of state.

7. As of 2014, there were 16 million women living with HIV (AIDS), which means that 50% of all adults with HIV are women. It is not uncommon for women living with HIV to experience violence simply because of their HIV status. The UN says at least 14 countries are forcing HIV- positive women to have involuntary abortions and sterilizations.

8. According to a long-term 2010 study conducted in South Africa, intimate partner violence increases the chances of women and girls becoming infected with HIV by 13.9%, and gender inequality increases the risk by 11.9%.

9. Despite the UN Declaration on the Elimination of Violence against Women in 1993, currently 1 in 3 women in the world are victims of physical or sexual violence - and it is usually in the hands of an intimate partner.

10. Despite the fact that women are ahead of men in both secondary and higher education, the unemployment rate disproportionately affects women around the world. As of 2013, the global employment rate relative to the population is only 47.1%. Conversely, for men this percentage is 72.2.
11. Last year, UNICEF reported that more than 500 million women and girls worldwide did not have access to a private, sanitary space where they could have menstrual hygiene. These are half a billion women and girls around the world who do not have the basic need for a clean and safe space to cope with their periods.
12. Only 14% of the top executives in Fortune 500 companies are held by women. Only 24 of these companies have female CEOs.
13. While the percentage of married women before the age of 18 has decreased in North Africa and the Middle East by about 50% in the last 30 years, one in four women living in the world today are bridesmaids.
14. Although we have seen progress on female genital mutilation (FGM) (Nigeria banned the practice in May 2015), the fact remains that today 200 million women and girls have experienced FGM; some during early childhood, but almost all up to 15 years of age.
15. Since 2013, child marriage is more likely to kill girls in the developing world than war, AIDS, tuberculosis or any other cause of death. In fact, complications of pregnancy and childbirth are the number one killer among girls aged 15 to 19 in the developing world.
16. A woman in Africa faces a 1 in 31 chance of dying from complications during pregnancy or childbirth.
17. According to UNICEF, approximately 31 million girls in primary school age and 32 million girls in primary school in 2013 did not attend school. This means that approximately 63 million young girls worldwide are out of school.
18. As of 2013, it is estimated that if child marriage continues at its current pace, then 39,000 young girls will become child brides every day. This means that 142 million girls will eventually marry too young. Lack of education for young girls and child marriage rates are also directly related. According to UNICEF, if every girl in sub-Saharan Africa and North and West Asia received her secondary education, child marriage would fall by as much as 64%.

Goal 6- Clean water and sanitation

Did you know that:

• 1 in 9 people do not have access to drinking water

• In our part of the world, there is a store every step of the way from which we casually buy bottled water. 800 million people worldwide do not have access to drinking water. Due to the polluted water they drink, diseases such as malaria, cholera and others spread.

• Millions of people around the world have to walk for hours to reach a place where they can fill water and carry it to their families.

• 90% of malaria deaths are in Africa. 80% of the dead are children. It is even sadder when you remember that malaria is treatable, but in these parts of the world, people do not have access to health care and medicines. Malaria is spread by mosquito bites or by drinking contaminated water.

Interesting facts about water

If treated, wastewater from households, industry and agriculture could be a valuable resource, not an expensive problem to solve, according to a UN report released on World Water Day. Wastewater treatment and recycling will not only reduce pollution, but can help meet growing demand for clean water and other raw materials, experts say in the report.

Here are some facts about wastewater on the occasion of today's World Water Day:

- Over 80 percent of the world's wastewater is not treated and pollutes rivers and lakes.
- On average, low-income countries process about 8 percent of industrial and domestic wastewater. High-income countries purify 70 percent.
- Pollution from human and animal waste affects almost every third river in Latin America, Asia and Africa, putting millions at risk.
- In 2012, the deaths of 842,000 people in low- and middle-income countries were linked to contaminated water and inadequate sanitation.
- In sub-Saharan Africa, more than 60 percent of the urban population lives in ghettos.
- The Nigerian city of Lagos generates 1.5 million cubic meters of wastewater every day, most of which is discharged untreated into the lagoon of Lagos.
- The discharge of untreated water into the seas gives to some extent explains the rapid growth of oxygen-free dead zones. So far, an area about the size of Britain has been affected, affecting livelihoods, fisheries and food chains.

- At least 50 countries use wastewater for agricultural irrigation, which increases the risk of pathogens infecting crops.
- Two thirds of the world's population lives in areas where there is a shortage of water for at least one month a year.
- By 2030, global water demand is expected to grow by 50 percent.
- The International Space Station has been using the same water for 17 years.
- In Israel, purified water is over 40 percent of the water used for irrigation.
- It is estimated that more than one-fifth of the world's phosphorus needs can be met by recycling human urine and faeces.

Goal 7- Renewable energy

Interesting facts about electricity.
Electricity is now an integral part of society. At that time, most people in developed countries were concerned about how to save money on electricity bills, many developing countries were working on how to produce enough energy for the country's citizens. Here are some interesting facts:

1. *20% of the comfort of the hosts*

American hosts consume 20% of electricity for air cooling. The amount of energy used in ordinary US households for air conditioning is about 20% of the country's electricity consumption.

2. Prisoners benefit

Bicycle ergometers in prisons generate electricity for nearby villages. In Brazil, there are prisons where prisoners pedal on ergometers, which produce energy for the surrounding villages. In this way, they ensure a reduction in the term of imprisonment.

3. Money for garbage, garbage disposal, heat in electricity

Recycling is developed in Sweden, which is why waste is imported from Norway to the country, which is treated in their wastewater treatment plants.

4. Itaipu HPP

A quarter of Brazil's electricity is generated here. Almost a quarter of the electricity produced in Brazil is a power plant.

5. In Switzerland, everything is clean

More than half of all energy produced by hydroelectric power plants in Switzerland and the rest by nuclear power plants. As a result, the country's energy industry produces almost no CO2 emissions.

6. A power plant pumps and stores energy

Pumping and storage plants allow to preserve "green" energy for a long period of time.

7. Clean atomic energy - wind and water

In the production of nuclear energy, the level of CO2 is negligible. In the process of nuclear energy production CO2 is less than during the development of solar and geothermal energy.

8. Geothermal Iceland

Geothermal station in Iceland. Iceland produces all its energy from renewable sources. HPPs provide about two thirds of the energy needs of, and the rest is produced by geothermal power plants.

9. Soviet warheads

About half of nuclear energy is produced by old Soviet warheads in the United States.

10. Water energy of Norway

99% of Norway's energy comes from hydroelectric power plants. This is more than in any other country on Earth.

11. The wind, the wind you are mighty.

While wind power generation and wind farms have been around for a long time, not many people are aware of this technology or know where it comes from. Wind energy has been around for much longer than most people know. The following are some interesting facts about wind power generation that most people are not aware of.

12. Reactors with liquid thorium fluoride

7,000 tons of thorium - the annual consumption of electricity by the population of the Earth. Reactors with liquid fluoride thorium could meet the demand for annual energy worldwide, using a total of about 7,000 tons of thorium.

13. Nuclear France

France produces electricity in abundance. France produces as much electricity from nuclear energy as it exports.

14. State current

In 1963, Quebec nationalized electricity. This has led to the fact that 96% of Quebec's energy is now generated by hydroelectric sources. Also, in the Canadian province some of the cheapest prices on the continent.

15. Termites - bioreactor

The US Department of Energy is considering using termites as a source of renewable energy. They produce almost 2 liters of hydrogen simply by eating a piece of paper. We can say that these insects - one of the most effective bioreactors on Earth!

Goal 8- Secure operation and economic growth

Did you know that: Germany also ranks at the top of the list for the longest life expectancy for both sexes. According to recent studies, men here reach an average age of 76 years, and women in most cases live to 90. These statistics should tell you about the high standard of living in the country, which has long been talked about and which is clearly not another myth.

The COVID-19 pandemic has forced many companies to switch entirely to teleworking. We found ourselves where there is no going back. Almost immediately, all staff worked from home, connecting to corporate systems via VPN or cloud and communicating via video conferencing platforms such as Microsoft Teams, Zoom or Skype.

Traditional barriers to teleworking - from lack of software to worries about what the kitchen table will look like on screen - have been largely removed. Nobody cares where and how we work, this is a turning point.

It is unlikely that all this will disappear after the crisis. Looking ahead, we can expect that much of what is done through personal contact will be transferred to the online environment. People are already used to working this way. For many, this was a discovery that it was possible.

Working from home will keep the news

There are some valid objections to telework. Someone claims that we are currently looking at her through pink glasses. This is new, this is fresh, this happens in emergencies. They are all at home and united by a clearly defined goal of doing business. Won't all this lose its significance after the pandemic?

First, we do not know exactly when it will be possible to talk about a "post -COVID-19" situation. It can occur after a considerable time. Second, work from home is likely to

continue. Of course, most people will return to their offices when it is safe. But we can hardly doubt that almost all of us will start working more remotely. Maybe we will stop talking about the special "remote" work, which will become one of the usual ways of working.

However, the virtual world cannot completely replace the real world. Face-to-face meetings will even become more important as they will be less frequent. After all, our city centers and business districts will not go anywhere. Important business decisions and agreements will continue to require personal contact.

Overall, however, there is no doubt that the current situation will have a lasting effect on our work in the future. This would not have happened if technology had failed to solve today's problems. But they performed surprisingly well.

Technology can handle tasks

As a result, technology is only gaining more business value. Investment in hardware, software and automation can be expected to increase. Companies will have to invest even more in laptops, mobile devices and software phones. Demand for external IT services will increase

when companies realize their advantages over their own systems. The demand for cloud services will jump to provide the necessary bandwidth and processing power.

Companies need to consider every aspect of their business. Technology plays a crucial role in this. Technical firms need to meet this challenge and consider how they can help organizations adapt. Innovation must be accelerated and certainly not slowed down.

The technology sector plays a key role in the transition to a new future of work.

Goal 9 - Innovation and infrastructure

Innovation is a key factor for the economic development of modern countries. For their development and implementation significant resources are needed - labor, financial, organizational, but the solution of the respective tasks is necessary to ensure the efficiency of the country's economy. What are innovations? What are the conditions for their successful implementation?

THE ESSENCE OF INNOVATION

Innovations are usually understood as some innovations in the field of technological development, application of management decisions, organization of business processes,

which is based on the use of advanced achievements in various fields of science. Therefore, examples of innovation can be observed in a wide variety of business sectors. An important criterion for recognizing a solution as innovative is a fundamental improvement in a technological or management process during its implementation.

How will we live on Earth in the future

Let's move forward and see what's next in the big industries. In the future there will be big changes in our way of life, work and travel. But thanks to data, automation and software, the way we interact with the planet will be smarter and more efficient. Here's what will change.

We will rely more on renewable energy and batteries.

What will change: Energy consumption will shift to wind and solar energy as these sources become more cost-effective.

What this means: The energy storage industry - industrial batteries - will grow rapidly to store energy generated by these renewable sources. For example, wind turbines can only collect energy when it is windy, just as solar panels rely on sunlight to generate energy. Batteries must store this energy so that customers can still turn on the lights and not be obstructed by the weather. "Energy storage makes renewables reliable and available on demand," said Rupa Short, Honeywell's director of business development, who focuses on market trends and technological innovation to meet new energy needs.

Homes and offices will become power plants

What will change: Buildings will generate their own energy using renewable sources. This local electricity generation will provide electricity to neighboring buildings and contribute to the electricity grid.

What this means: Buildings will have zero net energy consumption, producing as much energy as they consume. They will have a variety of local opportunities for energy production and storage. They will have, for example, wind turbines on the roofs, photovoltaic facades, biogenerators, generators with traditional fuels and storage options in the home, such as batteries. The software will optimize energy sources based on how consumers want to optimize energy consumption at different times of the day. "Smart buildings will be autonomous and self-optimizing, enabling them to be independent, but still making a valuable contribution to their neighboring smart urban infrastructure," said

Deb Leroyde, director of supply management at Honeywell, who has more than 20 years of experience. with connected buildings.

We will travel by electric air taxis

What will change: With more than 150 companies working frantically on urban air mobility vehicles (UAMs), many new concepts for electrically powered air taxis will emerge in the coming years. Eventually they will be able to fly unmanned.

What this means: Urban air mobility describes a new system for air travel by electric aircraft with vertical take-offs to fly over metropolitan areas. Venture capital is pouring into the sector, and some of the leading companies are already working on their third or fourth iterations of vehicle prototypes. Most companies plan to eventually pilot these aircraft autonomously, eliminating the weight and cost of piloting. The rest of the aviation industry is re-equipping for this new era. A study commissioned by Honeywell shows that a third of companies even in avionics develop products for UAM, with more than half of these products already in flight testing.

Buildings will use energy only when needed

What will change: The buildings will meet the emotional and rational needs of the people who live in them. This means that energy will only be consumed when they are busy, thus optimizing efficiency.

What this means: Multiple sensors will use machine learning and artificial intelligence to provide intelligent and intuitive spaces. The buildings will learn from their own history of performance and maintenance so that they can be continuously optimized based on experience. All systems will be connected to create a "lake" of data to facilitate lifelong learning - lighting, elevators, fire protection and security systems. "A human-centered approach to the design, experience and management of a building will make buildings futuristic and anticipate human needs," said Manish Sharma, Chief Technology Officer of our construction technology business.

Goal 10 - Reduce inequalities

Three Yale scientists have an idea that is thought-provoking: people are not worried about economic inequality, but about injustice.

"We could not find evidence that people are concerned about economic inequality per se. On the contrary, they are concerned about other issues related to economic inequality, such as poverty, the breakdown of democratic values and, most interestingly, injustice." - write Christina Starmans, Mark Sheskin and Paul Bloom in their new study published in Nature Human Behavior. Dr. Stermans is a postdoctoral fellow in psychology, Dr. Sheskin is a postdoctoral fellow in cognitive science, and Dr. Bloom is a professor of psychology, all at Yale University.

But what is inequality and what role does it play for democracy - undermining it or stimulating it? Does inequality drive people to despair? Or is inequality a necessary evil that we must tolerate to certain levels in order to have something to strive for?

So what is inequality?

Researchers insist that we need to develop a common understanding of what inequality is. There are three different but inequality-related ideas:

1. People should have equal opportunities in society - regardless of their origin, race, gender, etc.
2. Remuneration, goods and benefits must be distributed fairly according to merit.
3. With equal achievements, equal consequences, regardless of the circumstances. Or as the experts say: "inequality of outcome" - when you receive for the same job 1000 BGN, and your colleague - 2000 BGN.

These notions are three different dimensions of inequality that we face in life and that ultimately shape in people what they feel is economic inequality. Understanding the different dimensions of this phenomenon is extremely important for drawing up a healing plan for our society.and conclusions, however, are based on relevant research. The inequality that worries us

Can you guess what Americans and Europeans think is the biggest threat the world now faces?

A recent study by the Pew Research Center found that the most common response is inequality. Not climate change, poverty, disease, war or the flow of migrants.

Although few are likely to appreciate the scale of inequality. Here is an example: Take the wealth of the eight richest people on the planet and collect it. Now do the same for the poorest 3.5 billion. The two amounts will be the same - the same, 780 billion levs or nearly 500 billion dollars. Only eight people own as much wealth as half the world's population.

And this inequality is deepening. In 1960, a CEO in the United States typically earned an average of 20 times more than a worker. Today this is more than 354 times.

Pope Francis called economic inequality "the root of social evil." The gap between rich and poor in the world seems never to have been so deep, and it worries and outrages people. And the idea that inequality needs to be reduced is almost taken for granted.
But despite this outrage, people do not see inequality as fundamentally wrong, but as the result of injustice. There is no consensus on what a perfectly fair world would look like, but for most of us, the goods in it will not be evenly distributed.
The three Yale researchers suggest that these two phenomena (outrage at the gap between rich and poor and the notion that inequality must exist) be reconciled. They find no evidence that people are concerned about economic inequality itself, but in fact economic inequality is often confused with injustice.

Natural intolerance of inequality

If you look for evidence that people are naturally intolerant of inequality, you will find numerous laboratory tests that confirm this. Studies have found "universal desire for equal pay", "egalitarian motives in people", "egalitarianism in children" and "equality is achieved by reciprocity".
When laboratory participants are asked to share resources between unrelated individuals, they tend to share them equally. If a previous situation has led to inequality, people will divide future resources unevenly to correct or minimize inequality among other people. This bias is so strong that participants sometimes prefer equal results where everyone gets less than unequal results where everyone gets more, says The Guardian.
Studies of children between the ages of three and eight find a similar bias toward equality. Three-year-olds share resources equally with third parties, and six-year-olds show an even stronger desire for an even distribution, insisting that additional resources be discarded instead of being unevenly distributed between two absent third parties.

The problem is poverty and injustice

Harry Frankfurt is an honorary professor of philosophy at Princeton University. In his book On Inequality, he argues that our moral duty must be to eradicate poverty, not to achieve equality. It is necessary to ensure that everyone has the means to live a normal life.
"I am convinced that people will react with far greater sympathy to the suffering of those who live in poverty than to those who are simply unjustly (from their point of view) not rich

enough," Frankfurt said. - "People are likely to support changes in legislation aimed at alleviating the situation of the poor."

Goal 11- Sustainable cities and communities

Africa and Asia are home to nearly 90 percent of the world's rural population.
It is estimated that 70% of people will soon live in cities.
The challenge for large urban centers is not to provide shelter for more people, but to make it a sustainable model. Based on the social, environmental and economic aspects of cities, the Sustainable Cities Index (SCI) is compiled annually.
1. *London, Great Britain* - balance between social and economic development
The British capital stands out with its high rating for the well-being of citizens (health, education, low crime rate), working life (working hours) and urban life (transport accessibility and connectivity).London is one of the most successful cities in terms of air quality and waste management.
2. Stockholm, Sweden - the greenest city in Sweden
The capital of Sweden tops the environmental management rankings thanks to its investments in sustainable infrastructure, low emissions and good air quality.Both Stockholm and Frankfurt have successfully combined economic development with demanding environmental standards, making the quality of life of their communities among the highest in the world.
3. Edinburgh, UK - puts citizens first
While Stockholm relies on environmental strategies, Edinburgh is more committed to the social development of its citizens, which is why it ranks first in social development. Edinburgh is a leader in the sub-index "developed population", which is determined by the health of the city, accessibility to public transport, financial opportunities for citizens to enjoy the pleasures of the city and more.
4. Singapore - Economy and capital for employment
The island city-state is in the top five thanks to its undisputed leadership in one of the components of a sustainable city, namely the economic one. Designed as one of the easiest cities to set up and run your own business, Singapore is full of innovators and entrepreneurs. It also has an extremely high employment rate, which brings high levels of production capacity.

5. Vienna, Austria - A smart and ecological metropolis

Mercer, a consulting firm, ranked Vienna as the best city to live in its quality of life survey, and the United Nations named it the most prosperous city center. In addition to its cultural activities and economy based on science and technology, the Vienna City Council has launched a program to transform the city into a smart city by 2050 in order to reduce the carbon footprint from 3.1 tons to 1 ton per person.

Goal 12- Responsible consumption

If you throw a garbage in the general garbage, it will reach a landfill and begin to rot for years. As it decomposes, it will emit landfill gas, toxic limestone and methane. Just for example - clothes made of materials that are not biodegradable can stay in the landfill for more than 200 years, old shoes decompose in almost 10 years, and their rubber soles - between 50 and 80 years.

Synthetic fibers do not decompose, and wool fibers produce methane, which is a major culprit for global warming. To this picture we can add dyes and chemicals embedded in textiles, which contaminate the soil with highly toxic or dangerous chemical compounds. At the same time, there is a real possibility that naturally, following the path of the food chain, they can enter the body of humans and animals.

In Bulgaria, almost 100,000 tons of waste from old clothes and shoes are "produced" annually. At the same time, the latest statistics for EU countries show that between 30 and 50% of new clothes purchased are collected separately, the rest goes to landfill. The percentage of separately collected clothes and shoes in Bulgaria is close to zero. A 2015 Greenpeace-Germany study found that about 40% of our clothing is rarely or never worn.

A few more facts - for the production of a kilogram of cotton requires between 10,000 and 20,000 liters of water; ¼ of global pesticide consumption falls on cotton producers; about 20% of industrial water pollution is related to dyeing and textile processing.

Were we able to convince you not to throw away unnecessary clothes in the general garbage? They can live a new life - be worn by another person or be processed into a new raw material.

Textile products that cannot be reused get a new chance as textile threads or are used for the production of other products for the construction, furniture and clothing industry,

as well as for the home - various types of waterproofing, shoe insoles, cotton wool for the clothing industry , insulating materials in the automotive industry and many others.
Special points are our alternative to all this shocking data! Here you can leave the clothes that you will not wear, that you do not like, do not fit you, you consider worn out. Here is the place of the lonely sock and boots from last winter. And the children's clothes that you can't feel sorry for!
We are flooded with information from all sides about how important it is to recycle and how we save the world in this way. Surprisingly for militant environmentalists, however, it turns out that recycling not only brings benefits, but also has significant disadvantages.

Benefits:

Environmental protection

By recycling paper, we save millions of trees. If we give up plastic bags or hand them over for recycling, we will save the lives of thousands of marine life and birds.

Reduces energy consumption

The largest amount of energy is used in the processing of raw materials during production. Recycled materials are crucial in the industry because they make the production process far more cost-effective than conventional ones.

Reduces global warming

Recycling reduces the adverse effects of global warming. Bulky waste such as paper, plastic, car tires is often incinerated and thus harmful emissions and greenhouse gases are released into the atmosphere. Recycling ensures that the combustion process is minimized and all waste is regenerated as useful products, with no or minimal impact on the environment.

Sustainable use of resources

Recycling encourages the rational use of resources. The waste recycling process preserves valuable resources for future generations without compromising current consumption.

Disadvantages:

Recycling is not always cost effective

In order for the materials to be used more than once, it is necessary to build factories, which involves large investments. The very creation of waste treatment plants is associated with air pollution and emissions.

Recycled products are often of poor quality

Products made from recycled materials are not always sustainable over time. Often, items created from recycled waste are more fragile than new ones and therefore cheaper than them.

Landfills for recycling are not hygienic

Waste collection and recycling sites are not always safe. There are various chemicals on such sites that can be very dangerous if inadvertent. Waste storage is associated with large amounts

of dirt and decomposing materials, which can be dangerous to the health of employees and those living near landfills.

Not widespread enough

Widespread recycling is important for achieving long-term goals for nature and resource conservation. Unfortunately, in many parts of the world, garbage is dumped in unregulated landfills and landfills, which makes recycling largely meaningless.

Facts about the waste we dispose of:

For the paper:

1. Air pollution is reduced by 70 percent if new paper is produced from recycled materials.
2. If the paper used by the New York Times a day is recycled, 75,000 trees will be saved.
3. Half a million trees must be cut down for the production of all the Sunday newspapers in the world.
4. If the paper from all the newspapers in the world is recycled, 250 million trees will be saved in a year.
5. For the paper used by the average American, 7 trees are cut down annually.

For aluminum:

1. It takes more than 500 years to break down an aluminum jug of soft drink or beer.
2. More than 80 billion aluminum cans are used each year for soft drinks and beer.
3. Recycling a jug saves energy, which is equivalent to a TV turned on for 3 hours.
4. Aluminum can be recycled an unlimited number of times.

For glass and plastic:

1. It takes more than 4,000 years to decompose 1 glass bottle.
2. Glass is a 100% recyclable material.
3. Recycling 1 glass bottle saves energy to power a 100 W bulb for 4 hours.
4. Plastic bags that are dumped into the oceans and seas kill more than 1 million marine life each year.
5. Recycling 1 ton of plastic saves up to 2,000 liters of gasoline.
6. Over 60% of the garbage that is thrown in the bin can be recycled.

Goal 13 - Combat climate change

Scientists are not unanimous on the causes of global warming

There is a widespread perception that there is a lack of consensus in the scientific community on climate change. In fact, this is not the case at all. More than 90% of experts researching this topic agree that human activity is the main cause of global warming. "We're more confident that people are influencing the climate than that cigarettes are causing cancer," said NASA climatologist Kate Marvel. However, a recent poll in the United States found that only 1 in 5 people in the country is aware of this fact.

Climate change is a natural thing

There is hardly a self-respecting scientist who would deny that climate change can be a natural process and not uncommon. What makes the current situation unique is the speed of change. "The rate at which carbon dioxide is being released into the atmosphere today is unprecedented for the last 66 million years," said a study published in 2016. The facts are more than eloquent

- no natural phenomenon can explain warming , which began with the industrial revolution. At the same time, scientists note that the main reason for this worrying trend is the greenhouse gases that capture the heat that is released during the combustion of fossil fuels. "Natural factors, such as volcanic eruptions and changes in solar activity, could have much milder consequences, especially if we look at what's been happening for the past 50 years," said climatologist Zeke Hausfader.

The sun is to blame

Solar activity can undoubtedly cause long-term climate change - such as ice ages. However, it cannot be an explanation for the warming we are witnessing at the moment. Over the last 800,000 years, our planet has gone through several cycles of ice ages and

warming. Such a cycle lasts an average of about 100,000 years, and the reason for it is the Earth's orbit and the inclination of the Earth's axis (the changing distance between the Earth and the Sun leads to peaks and troughs in the amount of solar energy we receive). Nowadays, we are seeing an extremely rapid rise in temperatures, which began about 150 years ago. This process has become particularly intense in the last few decades. At the same time, the solar cycle is about to reach its lowest levels since 1750, according to NASA. This means that in practice the Earth receives a decreasing amount of so lar energy (it should be noted here that the difference is insignificant - only about 0.1% less solar energy reaches our planet than in 1750).

The amount of carbon dioxide in the atmosphere is too small and cannot cause climate change.

Part of this statement is, in fact, true. Carbon dioxide represents only 0.1% of the atmosphere. But this seemingly insignificant amount can have a huge impact. Carbon dioxide has the ability to retain heat and is key to the Earth's climate. If for some reason it disappears, t he temperature of our planet will almost immediately fall below 0 degrees Celsius. It is no coincidence that the current increase in its quantity worries scientists. They note that for thousands of years, the levels of carbon dioxide in the atmosphere have been around 280 parts per million. In the last 150 years, however, this amount has increased by nearly 50% and is now 415 parts per million.

Scientists often draw attention to the fact that the growth of cities leads to a warming of the local atmosphere. Among the reasons for this are the felling of trees, the concentration of dark surfaces and buildings, as well as the increased emission of greenhouse gases. This leads some people to doubt the reliability of the data obtained in the areas of large cities. In fact, research is being done in various parts of the world - including those that are very far from populated areas. The results of the measurements there are similar to those in the cities, which proves that the rise in temperatures is a global, not a regional phenomenon.

British climatologists from the Cambridge Center for Climate Recovery have proposed an advanced solution against climate change - the restoration of melting Arctic ice sheets. Climate change is already so severe that reducing greenhouse gas emissions is not enough to improve the situation, scientists say, quoted by Metro. Therefore, there is a need for additional and more radical solutions, they added.

"We are proposing an initiative we call sea cloud enlightenment. We will build special sprayers that will disperse seawater droplets in the air under high pressure. This will stimulate the formation of vapors with salt crystals, which will rise in the sky due to air convection. Salt will encourage the formation of new clouds that will protect Arctic ice from intense solar radiation, "explains David King, head of the research group.

Goal 14- Life under water

Life in the water faces serious threats

Life in freshwater bodies and regional seas in Europe is not in good shape. The poor state of ecosystems has a direct impact on many animals and plants inhabiting the aquatic environment and affects other species, as well as humans, which depend on the availability of clean water. The state of Europe's seas is very difficult, mainly due to overfishing and climate change, while freshwater bodies suffer from overloads of nutrients and habitat changes. Chemical pollution has a negative impact on both freshwater and marine ecosystems.

Did you know that: One third of the Dead Sea has disappeared from 1960 until today. The water recedes irreversibly, and the coast turns into a lunar landscape filled with craters, BNT reports. One reason is that for years, Israelis, Palestinians and Jordanians have diverted river water from one of the saltiest bodies of water on Earth.

In the 1960s, spa tourism flourished on the Israeli shores of the Dead Sea. At that time, the resort of Ain Gedi was on the waterfront. Today it is a ghostly place, the water has receded 3 kilometers, and the beach looks like a desert hit by meteor showers.

Every year, the Dead Sea shrinks by one meter, leaving behind craters up to 10 meters. Without water, the earth sinks.

Endangered species:

Hawk-headed sea turtle - It gets its name from a feature of the body - its elongated, pointed head, ending in a beak. Another distinctive feature is that the edges of its shell are jagged. The species is found in the oceans and mainly in coral reefs. Sea turtles are living representatives of a group of reptiles that have existed on Earth and in the seas for the past 100 million years.

Smooth-backed Guinea Pig - Intensified gillnet fishing in its habitat has led to the reduction or complete extinction of the species. It is known for its level of intelligence comparable to that of gorillas. To survive, the species needs a large amount of food. One of the reasons for the extinction of another species of river dolphin - the Chinese river dolphin Baiji, is precisely the inability to find food. Other factors are water pollution and ship traffic. Today there are between 1000 - 1800 specimens left.

California Guinea Pig - This is the rarest marine mammal in the world that is on the verge of extinction. It was not discovered until 1958 and half a century later we have almost lost it. The animal is often caught in illegal fishing nets in sheltered waters of the Gulf of Mexico in California. Only 18 specimens of the species remain. It is believed that if no steps are taken to protect the species, it will become extinct by 2021.

The crisis with the extinction of marine species is not as widely perceived as the crises in tropical forests and other terrestrial biomes. We do not know how many species are in the ocean, as most marine species have not been found. That is why we do not know how many have disappeared or how much they are in danger of disappearing. We know that overfishing is a major threat worldwide. Current estimates cover only 20% of the world's fish stocks, so the true state of most of the world's fish populations is unclear. However, recent findings show that these unobserved stocks are declining and almost three quarters of the world's stocks sold in the commercial sector are overloaded and at risk.

Goal 15- Life on Earth

• Nine percent of the world's forests are located in Canada.

• The red cell is the most common bird on Earth.

• There are only 4 countries in the world where there are no forests, according to the definition of the World Bank. And these are San Marino, Qatar, Greenland and Oman.

SPECIES AROUND THE WORLD ARE DECREASING

The world is facing mass extinction of species. All species of mammals, birds, reptiles, amphibians, arthropods (insects and arachnids), fish, crustaceans, corals and other animals and plants have declined in many cases in much of their range. Human civilization has a negative impact on most living beings with their daily activities, waste and unsustainable use of natural resources, pollution and more.

Fact # 1 We are at the beginning of the largest period of species ext inction in the last 60 million years. Usually between 1 and 5 species disappear each year. However, scientists estimate that we are now losing species 1,000 to 10,000 times faster than normal. Many species will become extinct before we learn about them or the benefits they bring to our planet.

Fact # 2 A new study shows that insects in Germany have dropped by more than 75% in the last 28 years. This is very worrying: 80% of wild plants rely on bees and other insects for pollination, and 60% of bird species rely on insects for food. Man is completely dependent on plants for his food - directly or as food for the animals he feeds on.

Fact # 3 Habitat destruction, exploitation and climate change are the cause of the loss of half of the world's wildlife population.

Fact # 4 Primates, our closest related animals, are under extreme threat. Nearly 60% of the world's 504 primate species are threatened with extinction, and 75% of primate species are in severe population decline.

Fact # 5 Worldwide, more than 650,000 marine mammals are caught or seriously injured by fishing gear each year.

Fact # 6 Over the last 20 years, about 75% of all toothed whale species, such as dolphins, guinea pigs, killer whales and 65% of plankton-eating whales, humpback whales, blue whales, sperm whales and 65% of seal species have been affected. due to overfishing in fishing operations worldwide.

Fact # 7 40% of the world's bird species are in decline, and one in eight species is threatened with global extinction.

Fact # 8 Our big cats, including tigers, leopards and cheetahs, are in critical decline and many will be extinct in the next decade. The cats of the world are exploited for different parts of their body and skin. China remains the world's largest market for these critically endangered species, along with the black and white rhino and other species.

F*act # 9* Lizard populations are particularly vulnerable to climate change. A recent study predicts that if the current decline in lizard populations continues, 40% of all lizard species will disappear by 2080.

Fact # 10 The American bison once numbered millions of individuals and traveled from Alaska to Mexico. They now occupy less than one percent of their original habitat. Their

existing habitats are so small and strictly controlled that the surviving bison today are much smaller than the cattle.

WHAT HAPPENS TO OUR SPECIES AND THEIR HABITATS?

There is no doubt that a large number of animals and plants have disappeared in recent centuries due to human activity, especially after the Industrial Revolution. The number of individuals in plants and animals has also declined - in many cases severely - affecting genetic variation, biodiversity and ecosystems. All over the world, areas where people are using natural resources or developing are having the same result: a deteriorating natural environment. As a result of human actions, ecosystems face threats such as impaired reproduction and consumption; in today's interconnected world, it doesn't take much to understand these unstable forces. This is a trend that cannot continue. If ecosystems are too depleted and depleted, their ability to survive, sustain biosphere processes and our species, and meet human needs is drastically compromised. Many of us have seen images of wild prairies covered with huge flocks of bison that no longer exist, thousands of flocks of birds gathered in swamps and lagoons that have drastically declined, or beautiful and imposing animals such as elephants, giraffes and whales that in many cases are in danger of disappearing.

Other people have retained memories of less imposing animals that still carry deep emotions, such as the sound of thousands of frogs croaking at midnight, birds visiting a yard feeder year after year, or millions of bats flying to their resting place in the evening. . Others may remember that when they drive through the countryside, the windshield of their car is covered with hundreds of dead insects - a signal of abundance, which unfortunately is now almost non- existent. In recent decades, we have learned countless stories about new species of plants or animals found in tropical forests around the world, which gives us a sense of wonder and opportunity. At the same time, millions of hectares of natural forests are destroyed every year.

Goal 16 - Peace and justice

Did you know that:

Adolf Hitler was nominated for the Nobel Peace Prize

Don't worry, the Swedish politician who sent the nomination letter in 1939 - ironically, of course, withdrew his nomination. In an even more ironic twist, Hitler forbade Germans to accept the award for four years before his own name was offered.

September 21 - International Day of Peace and Roadless Day

The International Day of Peace was confirmed by a UN resolution in 1981 with a message of non-violence and a ceasefire in all parts of the world.

The young people from the International Center have prepared a rich program, which includes the following topics: "What is peace for children" - drawings on asphalt; expressing messages of peace from young people and citizens on the occasion of the International Day of Peace on white paper pigeons; presentation of interesting facts related to wars, military actions and their consequences; games for recognizing Nobel Peace Prize winners; video interviews with messages from citizens; promotion of the Center's activities.

On September 21, the First European Day of the Dead is held on the territory of Europe. The initiative is supported by the European Commissioner for Transport Violeta Bulz, the European Transport Safety Council and the traffic police services of the 30 TISPOL member states, national governments, municipal and local authorities, non-governmental organizations.

This is the reason for the special message of Aidan Reed, President of TISPOL:

At the beginning of the decade, we achieved a significant reduction in the number of people killed and seriously injured in road accidents, but in the last two years this trend has changed. It is particularly important to refocus on the efforts needed to achieve the Europe 2020 goals of at least halving road deaths compared to 2010. We are confident in them, we are convinced that the efforts of governments can lead to to a drastic reduction in deaths and injuries. We believe that with the individual contribution of each of us we will achieve the expected great result.

No casualties on the road should be our goal every day, not just September 21st. I am convinced that Operation EDWARD can be a great success, whether or not we achieve zero mortality on this day, as the initiative is an affordable way to raise awareness on the subject.

Every day about 70 people die, another 370 are injured on the roads of Europe.

On September 21, we will monitor every hour whether we manage to fulfill our commitment. If in these 24 hours we manage to achieve zero casualties on the road, we will be able to continue. Drivers and pedestrians, think about how you drive, how you move on the road. Think about how to reduce the risks - use a seat belt, drive at a speed appropriate to the road conditions, do not use alcohol or narcotics, do not talk on the phone while behind the wheel.
Think of your loved ones and friends! Reducing road casualties remains a priority.
If each of us changes our behavior at least a little for more road safety, together we will save lives and change destinies.
Everyone's support is crucial.

At the end of the lesson, the students realized that young people must take responsibility for achieving the set 17 global goals for the protection of our planet.
The biggest lesson in the world is a joint educational project created to support the promotion of the Global Sustainable Development Goals adopted by the United Nations. The project is proof of the importance of Global Goal 17 "Partnership for Goals" and would not have been possible without the help of all partners working with us and with each other.

Tips for the facilitator

1) The teacher asks the students the question - can you cope on your own without partners in the future?
2) The teacher of the discussion can help anyone to achieve any goal.

Debriefing

Students write an essay for one of the goals..

Follow-up/Inspiration for the future

Information in social media, school's webpage.

References/Further reading

https://profit.bg/klasatsii/27-te-nay-bedni-strani-v-sveta/
https://profit.bg/svezho/10-te-strani-s-nay-golyama-prodalzhitelnost-na-zhivota/
https://dariknews.bg/novini/sviat/trevozhno-2-mlrd.-dushi-po-sveta-niamat- dostyp-do-bezopasna-pitejna-voda-2171966

https://elpro.bg/
Annex