



המצאות ישראליות Israeli Inventions

"All the deeds of mankind were once dreams;
And later became dreams again."
(Theodore Herzl)

Subject: Israeli inventions

Age Group: teenagers and older

Objectives:

- The participants will learn about Israeli inventions.
- The participants will strengthen their connection with Israel by learning about the innovations taking place in Israel.
- The participants will complete the program with an enhanced desire to dream big, to be entrepreneurs, to be inventors, and to change the world.

Activity Length: approximately 95 minutes

Equipment:

- Letters from the slogan: ISRAEL – THE START UP NATION
- Assignment cards and riddles
- Writing instruments
- Cards for signatures
- Food- cherry tomatoes, *ptitim* (Israeli couscous), bamba, soup croutons, oil, lemon, spices and other vegetables
- Bowls, Cutting knives, silverware, plates

The Activity:

Stage one: introduction, assignments, and riddles (75 minutes)

Stage two: Determining the winning team, and discovering the slogan (5 minutes)

Stage three: Summarizing the activity (10 minutes)

Explanation:

We divide the participants into groups of four. Each group receives a card with a riddle or assignment. They solve the riddles by searching for relevant information on Google. All the groups receive identical cards. The group that completes their assignment in the best possible way, or that answers their riddle first, receives a letter which composes part of the slogan "ISRAEL – THE START UP NATION." The participants must not be told, at this stage, what words will be formed from the letters they receive. They will have to discover this for themselves at the end of the activity.

The group with the most letters wins the game.

At the end of this activity, the participants stand in a row and hold the letters so the slogan can be read, and a photo taken.

Stage One: Introduction, Assignments, and Riddles (75 minutes)**Introduction**

Israel received the nickname 'the start-up nation' following the success of numerous Israeli start-up companies. These have solidified their standing as global innovators in a variety of fields: media, internet, medical systems, agriculture, biotechnology, security, water desalinization, digital printing, and more. The quality human resources, the technological abilities, the entrepreneurial and daring innovation, together with governmental commitment to support innovative research and development, make Israel a world leader in technological innovations" (from the Israel Innovation Authority website, Hebrew).

Throughout human history, people of vision have conceived many inventions, enabling humanity to carry out tasks formerly beyond their ability. There are many examples of inventions that have changed the world, benefiting both the individual and society. These include: the printing press, the steam engine, the telephone, the radio, the television, the car, and the computer.

Many inventions have been discovered in Israel since the state's founding. Some of these are of global significance, and it is difficult for us to imagine our lives without them.

According to the data, Israel is among the leading nations in the world in the number of requests to file for a patent, in proportion to the population size. In fact, Israel is considered a technological superpower, and is a global center in searching for and examining new inventions. Israel ranks highly with respect to the number of scientists per capita; cooperation between the academy and the industry; academic education; and entrepreneurship. Additionally, Israel leads in spending on research and development. In light of all this, it is hardly surprising that Israel produces new innovations that are useful in all areas of life and all branches of the economy, from daily life to the high-tech industry and the most advanced technology.

"Israel is the innovation nation. It is the place for cutting-edge technology in agriculture, in water, in cyber-security, in medicine, in autonomous vehicles. You name it, we've got it.... Theodore Herzl was our modern Moses, and his dream has come true. We've returned to the Promised Land, revived our language, ingathered our exiles, and built a modern, thriving democracy (excerpt from Prime Minister Benjamin Netanyahu's speech at the UN, September 2017).

Assignments and Riddles:

At the end of each riddle, after one of the groups has handed in its answer, the facilitator will reveal the correct answer.

- The participants will watch a short movie about Israeli inventors. They will have to recognize as many inventions as possible and make a list.
- A. Which invention is hidden in the following letters: NIEKYDKSO?
B. What does this invention contribute, and which company invented it?
- A. ICQ is the first program in that enabled sending messages online in 1996. Open WhatsApp on your cell-phones, and send each other the following emojis which can also be found on ICQ:



- B. What company developed this program, and what was its purpose?
- A. You can use me to build a website for free and without any prior knowledge. Who am I?
B. Send the facilitator Two examples of websites built this way using WhatsApp.
Did you know? This platform connects more than 110 million users in over 190 countries.
- I was one of the most significant technological innovations in our industry since the invention of the printing press, over a hundred years ago. Who am I?
Hint: search for the name 'Benny Landa' online.
- A. Check with the Waze app. Which one of you will get home first in a taxi, if you leave now.
B. Get the signatures of five participants whose parents, or they themselves, use Waze.
- A. Thanks to me, the small intestine can be photographed in a simple, precise, and comfortable manner. There is only a very low risk of complications. Who am I?
B. Think of a creative slogan for this invention.

- A. Thanks to this invention, some disabled people can get up, walk, and even forgo their wheelchair. What is the invention?
B. Find a picture of this invention and send it to the facilitator.
- A. I am sterile, am meant for battle fields and disaster areas, weigh less than 100 kilograms, and can be built quickly. Who am I?
Hint: the company's name is composed of two words made from the following letters: SSY - OLICHTNEGSEO
B. Which virus did I help fight?
- In 2017, I helped provide water to thousands of people left without drinking water after the hurricanes in Houston and Miami. Who am I?
Hint: Arye Kohavi, the company's founder, was chosen as one of the 100 Leading Global Thinkers and one of the world's top innovators.
Did you know? In April 2018, as part of the celebrations marking seventy years of Israeli Independence, this technology was chosen as one of the nine most significant inventions and technologies in Israel since the establishment of the state.
- One of Israel's most well-known innovations is its drip irrigation system. In what department has this system caused a global revolution, and why?
Did you know? On Israel's fiftieth Independence Day, the Netafim drip irrigation system was named 'the invention of half a century.'
- A. Why did Israel invent cherry tomatoes?
B. Take an artistic picture with cherry tomatoes and send to the facilitator.
C. **Note to the facilitator** – This activity requires the facilitator to get all of the necessary ingredients for this challenge and for their to be enough time available to the group in order to prepare the food.
Cherry tomatoes, ptitim, bamba, and shkedei marak (soup croutons) were invented in Israel. These ingredients will be placed on your table, next to oil, a lemon, spices, and additional vegetables. Each group needs to make a tasty salad that contains at least two of these Israeli inventions. The winning group is the one that makes the tastiest salad.
- A. Which kibbutz creates biological pest control?
1. Yavne
2. Ma'agan Micha'el
3. Ramat Rachel
4. Sde Eliyahu
B. What are the advantages of this pest control?
- A. Which countries are mentioned in the Aqua Maof Group website?
<http://aquamaof.com/default.asp>
B. What did this company invent, and what are the invention's advantages?
- Sign up as many participants as you can find who have the Mobileye system installed in their family car.
Did you know? In March 2017, the Mobileye Company was sold to Intel for 15.3 billion dollars. This was the largest transaction in Israel's economy.
- A. Who has played on an Xbox One or an Xbox 360? Sign least three participants who have played these games.
B. Which company invented the Kinect camera technology? Explain how this technology works.
- Israeli games:
A. Which colors are used in the game Rummikub, and how many jokers does it have?
B. How do you win in Rummikub? _____
Did you know? Rummikub was voted 'Game of the Year' in Germany in 1980 and in Holland in 1983. Its sales were estimated at more than thirty million games.
C. The name of this game is the word for 'waterfall' in Japanese. The card with this name allows the player to put down all the cards from the same color. What game is this?
- In what year was Itzhak Zaksenberg's citrus juicer invented, and what are its advantages?
- Solar water heaters, an Israeli innovation by Dr. Zvi Tabor, are considered one of the most significant inventions in the solar energy field. What is solar energy?
1. Energy originating from the sun's radiation.
2. Energy created from voice waves.
3. Energy created from movement.

20. A. Get as many signatures as you can of participants who have 'Source [Shoresh]' sandals.
 B. What other products does the Source company develop and market?
21. 1. What is the primary function of the unmanned aerial vehicle (UAV)?
 A. Spying missions and gathering information in enemy territory.
 B. Dropping bombs during war.
 C. Taking aerial photographs for map making purposes.
2. Israel develops and produces a tank that is considered one of the best in the world. What is the name of this tank?
 A. Lion
 B. Merkava
 C. Netanyahu
3. I was chosen as the top invention by the public when marking seventy years of Israeli Independence. Who am I?
22. A. On one side of me there is a Star of David and, on the other side, a map of Israel. Under the map KKL is written. When I started, the money that was collected in me helped redeem plots of land in Israel. Who am I?
 B. Get the signatures of as many participants as possible, whose families, or themselves, have donated to KKL using the _____ .
- Did you know?** In many homes and schools there was a weekly ceremony, which educators and parents took part in, where children were encouraged to donate some of their pocket money into the _____ .
23. I am called 'Biofilter.' What am I?
 1. A special coffee making machine.
 2. A special machine for grinding coffee beans.
 3. A system for purifying water which don't seep into to the ground to use them for different purposes.
24. Get the signatures as many participants as possible who have family members who love bamba, soup croutons, and *ptitim*.

Stage Two: Determining the Winning Team, and Discovering the Slogan (5 minutes)

Count how many letters each group has; the group with the most letters is the winning team.

All these letters, put together in the right order, comprise a slogan that is relevant to the theme of this activity. They have a minute and a half to discover this slogan.

Note to facilitator: The slogan is: **ISRAEL - THE START UP NATION.**

Stage Three: Summarizing the Activity (10 minutes)

Throughout this activity, you have discovered original, cutting edge Israeli inventions. Each inventor had a long way to go before their dream came true. They fell down and got back on their feet, made mistakes, sometimes repeatedly, until they succeeded in implementing their invention, and making a difference. You, too, have the power to dream, to initiate, to invent, and eventually – to change the world. It could very well be that in fifteen, perhaps twenty years, we will hear about you...

Now, stand in a row. Hold the letters in the correct order, and smile for the picture. Good luck! 😊

