

ISRAELOLOGY: From the Bible to Bio-Tech

The Israel Science Question of the Week

Week One:

In what country did Motorola develop the first cell phone?

Answer: Israel

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Week Two:

Two scientists from which country won the 2004 Nobel Prize for chemistry in recognition of their groundbreaking work in cancer research?

Answer: Israel

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Week Three:

Researchers from what country worked with scientists from the United States to design a robot with artificial vision to help harvest watermelons?

Answer: Israel

(Israel produces seedless watermelons. The Hebrew word for watermelon is “avateeach.” Israelis spend more than 300 million shekels per year on watermelons.)

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Week Four:

A physicist-turned inventor from what country developed the world’s first air-conditioned motorcycle?

Answer: Israel

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Week Five:

In 1996 four young friends invented the technology that became the AOL Instant Messenger, ICQ. They were from what country?

Answer: Israel

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Week Six:

About 500 million **birds** migrate south from Europe to warmer climates each fall. These **birds** fly through the Hula Valley in Northern Israel. How many different species of **birds** do you think fly through Israel?

Answer: 540 different species of **birds** have been seen.

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Week Seven:

What is the national bird of Israel?

Answer: Hoopoe

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(In 2008 Israel voted the Hoopoe its national bird. The hoopoe is called “doo-hee-fah” in Hebrew. It has a long beak and an orange and black crown. The hoopoe is mentioned in the bible and is believed to have carried a message from King Solomon to the Queen of Sheba.)

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Week Eight:

Israel is one of the first countries in the world to produce renewable energy at its airport and the first to do so in the Middle East. In 2010, solar panels constructed at the “park and fly” parking lots of what Israeli airport will convert the sun’s energy into electricity?

Answer: Ben Gurion Airport

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Week Nine:

The TEC103, produced by Techtium, is a solar powered battery charger found inside many re-charging devices. It provides emergency solar power for mobile devices, anywhere. In what country is this innovative company located?

Answer: Israel

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Week Ten:

What is the name of the fruit which is thorny on the outside with a thick peel that must be removed to get to the sweet meaty inside? The same word is used to describe someone who was born in Israel.

Answer: Sabra

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Week Eleven:

Two engineers, a *sabra* and a new immigrant from the USA, developed a “medical glue” that closes wounds and stops bleeding. What country is a worldwide leader in bio-medical inventions?

Answer: Israel

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Week Twelve:

What is the leading selling fruit in Israel?

Answer: Bananas

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(According to 2007 data, Israel consumes over 100,000 tons of bananas per year, or an average of 10 kilos (22 lbs) of bananas per person per year. The Israeli banana industry grosses about \$35.47 million per year.)

Week Thirteen:

What fruit is pressed into oil and its waste products made into a fuel log that gives two and a half times more heat than a traditional wood fire?

Answer: Olives

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(An Israeli firm makes this “ecologically perfect” fuel. A waste product that would seep into the soil and destroy ground water is used to produce a fuel whose smoke has no negative impact on the environment. Even the ash is used as a fertilizer.)

Week Fourteen:

Professor Ada Yonath is the first Israeli woman to win which international prize? (Hint: President Obama also won a prize in a different category.)

Answer: The Nobel Prize

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(Professor Yonath of the Weizmann Institute of Science won the Nobel Prize in Chemistry for her work in the study of protein producing ribosomes in cells. A total of 9 Israelis have won Nobel Prizes. Before accepting her award, Yonath said that she hopes Israeli children will develop an interest in the sciences.)

Week Fifteen:

M-Systems, an Israeli company, developed the first USB-Flash Drive. The company was acquired by SanDisk, (founded by an Israeli!). How do you say flash drive in Hebrew?

Answer: “disk-on-key”

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Week Sixteen:

What country has more high-tech start-ups per capita than any other nation on earth and also leads the world in civilian research and development spending per capita?

Answer: Israel

(Read about the unbelievable accomplishments of Jews and Israel in “The Tel Aviv Cluster” by David Brooks in the New York Times on January 12, 2010.

<http://www.nytimes.com/2010/01/12/opinion/12brooks.html?ref=opinion>

Copies of this article are available outside the sanctuary and on our display tower.)

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Week Seventeen:

According to CNN which country has provided the **BEST** on the ground medical aid to Haiti following the January 12, 2010 earthquake?

ANSWER: Israel

(Israel's relief efforts to Haiti include: a large field hospital that can treat 500 patients per day, a Search and Rescue Team, and dozens of truckloads of medical equipment. More than 220 Israelis have been sent to Haiti to help in the relief. On Sunday, a resident of Port-au-Prince gave birth to a boy at the Israeli field hospital. In appreciation, his mother named her son "Israel" in honor of the country that helped her.)

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Week Eighteen:

Modern drip-irrigation technology was invented by *Netafim*, a company that continues to lead in this field. In what country are they located?

Answer: Israel

(Israel has serious water shortages. Israeli scientists have developed a revolutionary drip irrigation system to minimize the amount of water needed to grow crops.)

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Week Nineteen:

What is the only country in the world to begin the 21st Century with more trees than in the past?

Answer: Israel

(Since 1901, 240 million trees have been planted in Israel. The Jewish National Fund will plant 7 million trees in the next 10 years to fight global warming and absorb carbon dioxide. A recent survey shows that 71% of Israelis have planted at least one tree in their homeland.)

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Week Twenty:

Project Better Place, a California venture firm working in Israel, is building electric car battery recharging and switching stations throughout the country. This week they opened a visitor center where guests learn about electric cars and even test drive one! In which major Israeli city is their visitor center?

Answer: Tel Aviv

(**Project Better Place** is headed by Israeli-American **Shai Agassi**. It has already signed agreements with 92 Israeli companies to convert a portion of their fleets to electric vehicles.)

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Week Twenty-One:

Here is the Israel Science Question of the Week for this Weekend:

Checkpoint, the world's leader in online security and inventor of the Firewall, was formed in what country?

ANSWER: Israel

(**Nir Barkat**, the chairman of Checkpoint for its first four years, is now the mayor of Jerusalem. A wealthy man, Barkat accepts only \$1/year as his mayoral salary.)

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Week Twenty -Two:

Given Imaging, developed the first ingestible video camera (Pill Cam) to view the small intestine from the inside, and help doctors diagnose diseases. Where is this company located?

ANSWER: Yoqneam, Israel

(Over 65,000 patients worldwide have swallowed the M2A capsule developed by Given Imaging.)

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Week Twenty -Three:

What fuel does the Israeli Electric Company use to produce about 70% of Israel's electric power?

Answer: Coal

(Israel imports coal from Australia; South Africa; and Colombia.)

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Week Twenty -Four:

Dr. Ehud Dafni, of Arineta, has invented the world's first CT imaging system for the heart. In the past CT imaging was not possible because the heart is constantly beating! With this technique doctors can detect heart disease at an early stage. In what country is Arineta located?

Answer: Israel.

(Arineta is located in Caesarea, Israel. It was founded in 2006 and has a staff of only five. The new machine will be available for use in about two years.)

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Week Twenty -Five:

According to Israeli researchers, what fruit has higher antioxidant levels than pomegranates, red wine, and apples?

Answer: Red Plums

(One plum with your meal counters the oxidizing agents in a seven ounce portion of red meat. Dr. Mada says to eat a plum as part of your seder!)

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Week Twenty-Six:

The Sorek Cave in the Avshabm Nature Reserve has all the known formations of stalactites and stalagmites in the world. It is located near which Israeli City?

Answer: Beit Shemesh

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Week Twenty-Seven:

The CityHawk, a vertical takeoff and landing vehicle that helps police and ambulances do their jobs, was developed by Urban Aeronautics, an Israeli Company. In what city is its headquarters?

Answer: Tel Aviv

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Week Twenty-Eight:

ClearLight, a new acne treatment, produces a high-intensity, narrow-band blue light that causes bacteria to self-destruct without damaging surrounding skin or tissue. Where was ClearLight developed?

Answer: Israel

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Week Twenty-Nine:

Israel is a desert which has a lot of this. Scientists remove its oxygen to leave pure silicon. Shining sunlight onto silicon produces electricity. (The light frees electrons from the silicon atoms.) Israeli scientists have found a way to make this process cost effective. What is used to make electricity?

ANSWER: Sand

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(Come to the **Passport to Desert Science in Israel** program on Sunday April 25 to learn more about solar energy; cactus flora and fauna; and archaeology in Israel. Hear Dr. Avigad Vonshak of Ben-Gurion University discuss "From the Desert...For the World.")

Week Thirty:

From the beginning of the modern state of Israel, scientists have played a leading role in the country. What is the name of the country's first **President**, who was also a well known scientist? (Hint: David Ben-Gurion was the first **Prime Minister** of Israel.)

Answer: Chaim Weizmann

(Chaim Weizmann (1874-1952) was a chemist who developed the ABE-Process that produces acetone through bacterial fermentation. He also founded the Weizmann Institute of Science in Rehovot, Israel.)

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Week Thirty-One:

The U.S. Marines in Iraq communicate with a hand-held computer that was developed in what country?

Answer: Israel

(Congratulations to **Dr. Eran Perlson**, our own Dr. Mada, for winning the 2010 Sieratzki-Korczyzn Prize for Advances in Neuroscience. This award is given to an outstanding young Israeli scientist who has already made a significant impact in the field of Neuroscience.)

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Week Thirty – Two:

Argo Medical Technologies, an Israeli company, developed, ReWalk, a device that uses motors and sensors to let people with lower limb disabilities, including complete paralysis, walk again. In what Israeli city (on Mt. Carmel) is this company located?

ANSWER: Haifa

(Moss Rehab Einstein at Elkins Park is the exclusive US Clinical trial site for ReWalk.)

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Week Thirty – Three:

Dr. Dror Mandel, of Tel Aviv's Sourasky Medical Center, found that premature babies who listen to 30 minutes of Mozart a day gain weight faster and come home from the hospital earlier. In what country is Tel Aviv?

ANSWER: Israel

(The Israeli team selected Mozart because of the "Mozart Effect" measured in college students. That study found that students who listen to Mozart prior to an IQ test score higher than those who don't.)

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Week Thirty-Four:

The Israel Airport Authority recognizes passengers with a biometric triple identification system called Unipass. It looks at physical (face or iris recognition, etc.) and behavioral (rhythm, walk, voice, etc.) traits. At this time, it is only available for Business Class passengers on the national airline of Israel. Name this airline?

ANSWER: El Al

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Week Thirty – Five: (Final week)

WeCu, a start-up company has raised anti-terrorist detection to a new level. It developed a device that flashes stimuli (photos, symbols, code word, etc) to passengers as they pass through terminal checkpoints. Hidden biometric sensors detect changes in the passengers. Where is this innovative company located?

ANSWER: Israel

(WeCu is located in northern Israel and employs only about a dozen people. It has received grants from the US Transportation Safety Administration and the Department of Homeland Security. Yet, it is 90% self funded.)

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Final Facts:

Dr. Mada has enjoyed teaching you about Science in Israel this past year. Please continue to check www.israel21c.org to get the latest information about scientific innovation in Israel.

Five final facts for your summer learning:

- ? Israeli medical researchers have shown that lycopene - the red pigment found in tomatoes - lowers blood pressure.
- ? Israeli air force pilot technology is being used to train American college basketball players.
- ? An Israeli company has developed the world's first jellyfish repellent.
- ? ZIP compression technology was developed by two professors at the Technion, Israel's Institute of Technology.

? An Israeli company has unveiled a blood test that diagnoses heart attacks via the telephone.