Yom Space

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שם הפעולה **| Program Name: Yom Space**
סוג הפעולה **| Type of Program:** Yom Meyuchad
מספר המשתתפים **| Number of Participants: 58**
תאריך הפעולה **| Date: 7/20/2016**
זמן הפעולה **| Time: All day**
מדריכים אחראים **| Names of Planners: Max Alper, Melissa Levin, Shira Romanoff**
יועץ תכנון **| Yoetz(et) Tichnun: JAR**
עדה/ענף **| Eidah/ Anaf: Shoafim**

מקום הפעולה **| Preferred Location(s):**
Kikar (morning), Moadon (afternoon), Omanut/Nagarut (night)

מטרה **| Objective**

סקירה **| Overview**

K.V.D. (not for פעולת ערב**)**
K: What you want campers to **K**now or learn from the program
We want the campers to learn about ethics and how to apply ethics to an “odd” situation

V: Jewish **V**alues explored through this program
Jewish Values: Wonder (Malchut), curiosity (histakr’nut), identity (zahot)

D: How do you want this program to manifest in camper behavior/ action **D**oing after the program has been experienced
We want campers to become more aware of the ethics behind space exploration and think about ethics when making decisions

Start Yom Meyuchad by playing “Space Jam” and reading space pick-up lines:

1) Are you wearing a spacesuit? 'Cause you’re outta this world!
2) You must be the North Star, because the light around you guided me here
3) The Universe must revolve around you, because your gravitational forces are drawing me in
4) If stars would fall every time I would think of you, the midnight sky would soon be empty.

5) I'm attracted to you like the Earth is attracted to the Sun-with a large force inversely proportional to the distance squared!
6) I must be the Sun and you must be Earth, cause the closer we get, the hotter you become.
7) Hey man, are you the sun? Because you're my center of the universe.
8) Hey bro, are you made up of dark matter? Cuz you're indescribable.
9) Are you the moon? Because even when it's dark you still seem to shine.

Materials: envelopes(time capsule), paper(time capsule), pens(time capsule), cardboard boxes (building), tape (building)

Morning- Learning about space programs & space history (one for each country) and about the ethics of space and Jewish thoughts about space
-Countries:

1) **U.S.(7)**
2) **Soviet Union(7)**
3) **Israel(7)**
4) **China(7)**
5) **Japan(8)**
6) **India(7)**
7) **France(8)**
8) **Italy(7)**

-**Build spaceships** as countries (cardboard boxes, tape, benches, etc)
-After spaceship building, have **discussion**:
Morning went well, but some of the content didn't reach the campers well. For example, we had fact sheets about the countries, but they didn't really care/it didn't really apply to what they were actually doing. The spaceship building was fun, but we didn't have enough cardboard boxes to build "functioning" spaceships and ended up doing something else. Discussions were well-planned but the building of the spaceships distracted them from actually participating.

<u>Discussion:</u>

Space has long been the wonder of humans, but has only been immediately accessible for a little over 50 years.The Talmud even says:
"God roams over 18,000 worlds"
(The Talmud tells us that "God roams over 18,000 worlds," and commentators speculate that He roams because there is life out there)

1) Do you think it's important to explore space if there's life out there?

2) Is there a difference between exploring space peacefully vs. claiming parts of it as a specific country's territory?

Since the first satellites, everything from weaponry, exploration, and espionage have been questions that the people on Earth have had to discuss regarding their presence in space.

3) Who owns space and the area around us?
4) Do we have the right to put things in space, either close to us or sending them far away? Why or why not?
5) If you had to make laws about what can and can't be done in space, what would you say?
6) What should/shouldn't be allowed in space?
7) Who gets to decide what the laws are for space?

Abraham Joshua Heschel (The Moral Dilemma of the Space Age) said it well:

> I challenge the high value placed on the search for extraterrestrial life only because it is being made at the expense of life and humanity here on earth. …Is the discovery of some form of life on Mars or Venus or man's conquest of the moon really as important to humanity as the conquest of poverty, disease, prejudice, and superstition? Of what value will it be to land a few men on the wilderness of the moon if we neglect the needs of millions of men on earth?

8) What is this text saying about spending money on space exploration?
9) Do you agree that there should be money designated for space exploration when there are earthly problems (like poverty, disease, prejudice) that still need to be dealt with? Is it important to put our planet's needs first before we explore the unknown?

In 1967, the Outer Space Treaty was drafted in the midst of a looming nuclear threat between the two greatest space powers, the US and the USSR. The agreement states that no country will use Weapons of Mass Destruction (nuclear, etc.) on a satellite in orbit or on the Moon. Furthermore, the moon will not become territory of any state and will be open to research for everyone. As of this year, 104 countries have signed onto the agreement.

10) What do agreements like this mean for international cooperation?
11) The agreement only prohibits nuclear weapons in space. Should it extend to other types of weapons as well? Why?
12) Do you think the Moon should remain a neutral territory?

a. What kinds of problems could territorial claims on the Moon bring about? (harvesting resources, settlements, etc.)

13) While weapons are covered in the treaty, satellite surveillance is not. Is it fair that any state can now put a camera or recorder in space that can watch you all the time?

a. What are benefits to having satellites that can take pictures or track certain devices? What the the downsides?

-After discussion, give the campers **15 mins to tweak their spaceships** and make any changes after the discussion

-**Judging period (a.k.a destroy spaceships)**: have judges inspect each ship for different criteria:

-**Capacity**: How many people can you fit in it? (comfortably?)

-**Anti-gravity**: How long can it fly for if you throw it off of mirpeset Atzmayim/martef

-**Durability**: Have campers throw tennis balls at it; how many can they throw and have it still be "usable"

-**CREATIVITY**: how clever, pretty, funny was it?

Afternoon:

~Have kids get into their country groups and talk about the Golden Record:

- Explain the Golden record and then have kids **make their own "Ramah" golden record to put into the time capsule (to figure out how to make it they should talk about their place in the Ramah, what from Ramah feels essential to their summer and their identity?) <u>(questions after the golden record explanation)</u>**
- About the Golden Record:
  - 115 images and a variety of natural sounds, such as those made by surf, wind and thunder, birds, whales, and other animals.
  - musical selections from different cultures and eras (90-minute selection of music, including both Eastern and Western classics and a variety of ethnic music)
  - spoken greetings from Earth-people in fifty-five languages
  - printed messages from President Carter and U.N. Secretary General Waldheim
  - Each record is encased in a protective aluminum jacket, together with a cartridge and a needle
  - Instructions, in symbolic language, explain the origin of the spacecraft and indicate how the record is to be played

- 115 images are encoded in analog form. The remainder of the record is in audio, designed to be played at 16-2/3 revolutions per minute. It contains the spoken greetings, beginning with Akkadian, which was spoken in Sumer about six thousand years ago, and ending with Wu, a modern Chinese dialect.
- Once the Voyager spacecraft leave the solar system (by 1990, both will be beyond the orbit of Pluto), they will find themselves in empty space. It will be forty thousand years before they make a close approach to any other planetary system. As Carl Sagan has noted, "The spacecraft will be encountered and the record played only if there are advanced spacefaring civilizations in interstellar space. But the launching of this bottle into the cosmic ocean says something very hopeful about life on this planet."

Questions:

1. What's the purpose of sending a Golden record into space? Do you think it's important?
2. What stuck out to you on the Golden Record? Which parts felt more important than others?
3. What kind of identity did the Golden Record portray?
4. What's important to you as a person? What would you want to put on the Golden Record to convey a message about you?
5. What are some parts of camp that stand out to you?
6. What about these parts of camp feel essential to your summer and your own personal identity
7. How can you turn this experience or moment into a concrete object to put onto the Golden record?

~Framing time capsule: if you were to send one thing up into space to convey a message from Ramah/Judaism, what would it be? How do you communicate your Jewishness to aliens? (and then put it in a time capsule for them to open their Nivo summer)

Golden record activity was fun and interesting; planned to be a short peulah because of the bake sale. Campers enjoyed learning about the record and making some things for a time capsule.

~bake sale

Peulat Erev: (Bring towels for stargazing later on)

Race to Mars Community:

Each country will receive a list of resources (based on the geography of their country). The spaceship activity will give them preferential order for choosing where their bases will be for this activity.
The object of the Peulat Erev is to use resources that they have to build a settlement on Mars. They will receive some basic resources, but they will be able to steal resources from each other.

- Each team will have a base around camp and will guard their resources there.
- Members of other teams can steal one object at a time from that team; however once they pick up an item, they can be tagged within the territory and sent to jail on **Omanut/Nagarut**.
- Using a resource sheet, the teams will combine the resources to buy different objects, namely: house, building, skyscraper, synagogue, school, **or** destroy other teams' building.
    - Each structure has a corresponding point value that will allow the game to be scored
- Resources, once having been used up, will be redistributed in a neutral zone around the center of camp to be claimed by the teams throughout the game.
- The game will end after the designated amount of time is up, after which the community will be sized and the winner announces
- UN Office for Outer Space Affairs will be stationed on Omanut/Nagarut and will be administering the race to build a settlement

Resources	
Fuel Cells (tennis balls)	Serve as the main resource. Provide fuel for the rockets to propel through space
Rocket Engines (tennis rackets)	Engines for the rockets that use the fuel to get to Mars and build settlements.
Propulsion Booster (frisbee)	Give the engines the extra power needed to sustain a long journey through the void of space.
Interplanetary Ships (soccer ball)	The vessels upon which the pioneers travel. The rockets attach to these rare, expensive items; these carry the necessary materials to build a new community on Mars.

- How to buy each structure:
    - House (1 Point):
        - add one house: 4 fuel cells

        - Remove one house: 3 fuel cells + 1 rocket engine
        - Add AND remove one house: 6 fuel cells + 2 rocket engines
    - Building (2 Points):
        - Add one building: 5 fuel cells + 1 propulsion booster
        - Remove one building: 7 fuel cells + 2 rocket engines + 1 propulsion booster
        - Add and remove one building: 10 fuel cells, 2 rocket engines, 2 propulsion boosters
    - Skyscraper (5 points):
        - Add one skyscraper: 4 fuel cells, 3 rocket engines, 2 propulsion booster, 1 interplanetary ship
        - Remove one skyscraper: 5 fuel cells, 2 rocket engines, 1 propulsion booster, 2 interplanetary ships
        - Add AND remove one skyscraper: 8 fuel cells, 4 rocket engines, 2 propulsion boosters, 3 interplanetary ships
    - Synagogues:
        - Add one synagogue (a.k.a releasing prisoners): 2 fuel cells
        - Add two synagogues (a.k.a releasing two prisoners): 4 fuel cells
        - Build Beit Hamikdash (a.k.a release all your prisoners): 1 interplanetary ships

Default Resources per Country	
USSR	10 Fuel Cells, 2 rocket engines, 2 propulsion boosters
USA	7 Fuel Cells, 4 rocket engines, 1 propulsion booster
Italy	12 Fuel Cells, 2 rocket engines, 1 propulsion booster
France	6 Fuel Cells, 4 rocket engines, 2 propulsion boosters
Israel	2 Fuel Cells, 7 rocket engines, 3 propulsion boosters
India	4 Fuel Cells, 6 rocket engines, 2 propulsion boosters
China	9 Fuel cells, 3 rocket engines, 2 propulsion boosters
Japan	4 Fuel cells, 6 rocket engines, 1 propulsion booster

Peulat erev was planned well, but execution was difficult because counselors lost their writeups and didn't have information vital to the game that the campers needed. Also, the sports shed didn't have all the items we needed so instructions were somewhat confusing at times. Otherwise they really enjoyed the peulah and really got into it.

Stargazing

After the race to the moon, we will take the חניכים to the lower kikar where they will engage in a stargazing activity. Counselors will read off different facts about space while the חניכים lay on towels and peacefully look at the stars. We will also attempt to point out constellations, especially the ones pointed out during the day.

Fun Facts about Space (For star-gazing)

1. According to astronauts, space smells like steak, hot metal and welding fumes.
2. The solar system is around 4.6 billion years old. Scientist estimate that it will probably last another 5000 million years
3. Footprints and tire tracks left by astronauts on the moon will stay there forever as there is no wind to blow them away.
4. Because of its unique tilt, a single night on Uranus lasts for 21 years!
5. There are approximately 200,000,000,000 stars in the Milky Way.
6. If you shouted in space even if someone was right next to you they wouldn't be able to hear you because there is no air to carry the sound vibrations
7. February in 1865 and 1999 are the only months in recorded history not to have a full moon.
8. 10,000 light years from Earth, astronomers have discovered a massive cloud of alcohol more than 263 trillion km across. (that is 400 trillion pints of beer)
9. If you could look out from inside the black hole, you would be able to see the entire universe in one small patch of the sky, including the back of your head.
10. Earth's rotation is slowing at a rate of approx. 17 milliseconds a century, and the length of a day for the dinosaurs was closer to 22 hours.
11. The 2011 earthquake in Japan shortened days on Earth by 1.8 microseconds.
12. About 1 percent of the static on your TV is caused by Cosmic Microwave Background(CMB) radiation left over from the big bang about 13.7 billion years ago.
13. It takes light just 8 minutes to get from the sun's surface to your eyes.
14. One million earths can fit inside the sun
15. Astronaut literally translates to space sailor
16. Space lightning is a thing
17. Looking at stars is basically looking into the past, because of how long it takes the light from them to reach us. (meaning some of the stars you are seeing are already dead)
18. 275 million new stars are born every single day.

הערות נוספות | Additional Comments

- Peulat erev could have started earlier, as light is relatively necessary
- Counselors lost their writeups, making the day difficult. If done again, have a lot of writeups AND make sheets for the campers with resource values so they know what they need and don't have to depend solely on the counselors
- If morning is redone, try to have something more expansive than just building spaceships
- Overall fun day; campers enjoyed stargazing and the peulat erev most