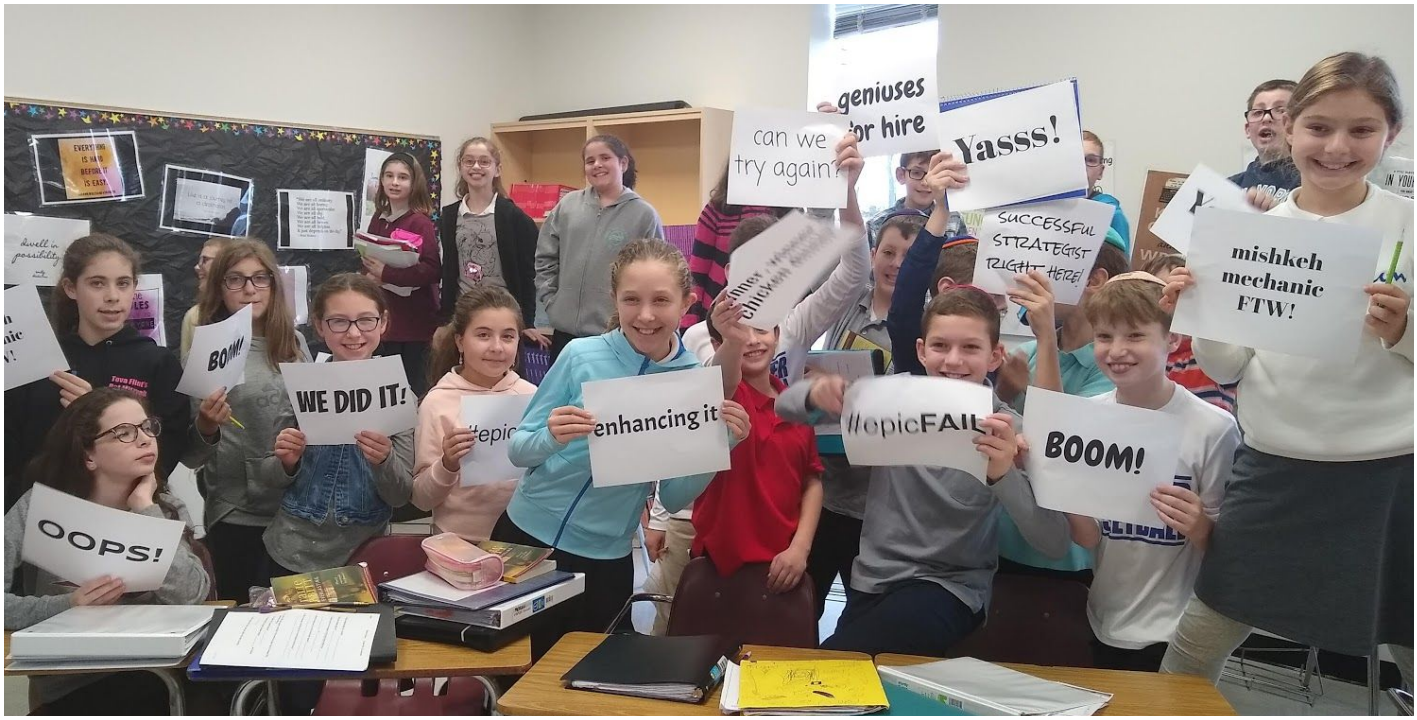
"*Mishkeh* Mechanic / Success Strategist":

a real-world strategy designed to engage students in critical and creative thinking in the STEAM subjects and Jewish Life

To the Kohelet prize team: Thank you very much for choosing the first version of our project as one of the runners-up last year. We, and more importantly, our students and school, benefited immensely from our project, and we are appreciative of the chance to re-submit our work in an entirely new, but still recognizable, iteration. To that end, since we have so greatly broadened this project's scope, we are submitting it into the different, more fitting category of "Real-World Learning."



To those of you who are checking out our project: We hope there is something tangible you can take away and use in your classrooms and lives. Although at first this project's focus remained solely on our then-current students, we have begun seeing the trickle-down effects of it in our student's lives in and out of school, regardless of grade level; this year, we have testimonies from children in lower, middle, and high school, and many faculty members also chose to weigh in on the magnitude of this project. The current educational buzzwords of grit and resilience mean nothing if those skills are not also applied to the students' lives as Jews and citizens of the global community, and as such, we widened our project's scope to ensure it could be as impactful as possible in those realms. When we began in 2017, this project was planned for and implemented only in middle school, and only in STEAM (Science/Technology/Engineering/Arts/Math) subjects; this year, students from the first, second, sixth,

eighth, and ninth grades, and teachers in a multitude of disciplines-- most notably, Judaic Studies-- have been using these strategies in their classrooms and lives, and we plan on continuing to make this project as far-reaching as possible. Please watch our introduction and reflections here  , read our project's summary and rationale to further understand the project's reasoning, and follow the resource list provided below. If there are any icons, pictures, or links, simply double-click on them to go directly to the link provided.

Summary and Rationale

Although this summary and rationale appears at first glance to be somewhat unchanged from last year's entry, our project propelled itself forward in a significantly different direction than the one we intended it to; as our students "ran" with it, making it and molding it into their own, the project necessarily and organically evolved into what it currently is. Still, we decided to keep true to our project's initial rationale, as we explain in our summary here.

One day back in 2017, Ms. Sundaram, an award-winning STEM teacher here at Joseph Kushner Hebrew Academy, and I-- Ms. Landy, a Language Arts teacher at JKHA-- had been discussing the very-real problem of a lack of students' "looking back" on their failures and successes, and their subsequent failing to learn from them. We became worried when we both saw, albeit in decidedly different subject matters, the unfortunate consequences of students who were unable-- or, perhaps, were never trained?-- to critically analyze, and thus creatively, positively, and proactively approach their schoolwork *and* life's work as a Jew. We wanted to create a highly transferable project-- so transferable, in fact, that people of all ages and religious "levels" could benefit from it-- that would provide a platform for our, or anyone's, students to think analytically, and ultimately, allow for and encourage real-world learning and impactful change to take place.

We also felt it was of vital importance that-- once the project had been completed-- our students would have internalized that anyone has the potential to be a creative, critical thinker when provided with the appropriate tools. We discussed this problem and our desired end goal, and realized that although the engineering, *Teshuva* (repentance), and writing/editing processes seemed to be entirely unrelated, we could, in fact, collaborate our subjects and background knowledge in a productive way to help our students think critically and innovatively using their mistakes and successes, both in and out of the classroom.

What came of our brainstorming session was our "*Mishkeh* (Hebrew for “mistake”) Mechanic/Success Strategist" project, the 2.0 version of which you are currently reading, was significantly reiterated during the 2018/19 school year. Last year, eighth grade students created a machine that used the concept of electrical engineering to solve a problem around them. During this process, they looked at their inventions and reflected on what went well and what did not. They became “Success Strategists” in an attempt to understand the elements that led them to success, and enhanced this success further in multiple ways. While acting as a “*Mishkeh* Mechanic,” students thought about the mistakes in their process or final product, and considered the causes. Then, they worked on repairing these mistakes, all the while documenting this progress. This year, in Ms. Sri’s STEM classroom, students had to create Jewish-themed games; while designing them, they were required to ensure their games enhanced the space-science based skills of navigation, probe/building, life support-research, and/or space communication. Some of the brilliant games that were invented led the players between various geographical points in ancient Israel, taught the players *Halachot* (Jewish laws) and *Middot* (characters traits), and even reinforced the holiday routines. Sixth graders used their Judaic Studies skills and knowledge to create these games for the first and second graders, who, after playing the prototype of the game, offered critical feedback on, and suggestions for, the final version of the game.

Next, we had our students craft "non-fiction narratives," where they used the general *Teshuva* (repentance) process-- that of remorse, confession/admission, and resolution-- to "realize" their mistakes and capitalize upon their successes, all while following proper writing format and embedding their new writing skills and techniques in their responses. This wearing of the mistake mechanic "hat" proved difficult for our kids-- they were not used to failure, and they certainly had never felt that being “unsuccessful” could be a good thing!-- and their anxieties charged us with the responsibility to make sure that we, too, learned from our mistakes and successes. Even tougher for the students was for them to find their successes and enumerate them clearly; specifically for those children suffering from anxieties and/or low self-esteem, this project was particularly enlightening and rewarding.

This year, we really wanted to drive home the point that these strategies, while learned in, and useful for, the STEAM and Judaics classrooms, are, in fact, mostly applicable to their lives as Jews, friends, and community members. This reiteration, a version of which was first implemented last year in our eighth grade classes, worked perfectly with our sixth graders over the past few months; we have also been in communication with our former eighth graders and received feedback from teachers in multiple subject and grades. We hope you will be able to see how valuable this project is in its scope and huge potential for lifelong lessons, particularly as it relates to each person’s Jewish practice.

We heard from many school faculty members about this project; below, they explain how they think this project could, and should, be applied to their discipline(s).

 Principal;  Guidance Counselor; Judaics teacher;  Learning Center Specialist;  Judaics teacher;  Math and Social Studies teacher;  Hebrew Language and Math teachers; and  Fourth Grade Teacher and Learning Center Specialist.

Of course, the shining stars of this project are our students-- watch an , made with their help-- without whom we would not have been so successful in implementing and learning from what was, last year, just a fledgling idea. You will hear from them below; their testimonies, honesty, and sense of wonder are a joy to see, and we encourage you to watch their feedback and read their written works. We could not be more thankful to those faculty members and students who gave so willingly of their time and energy to ensure this project so successfully came to fruition.

Dear readers and judges, we are so excited to present to you our "*Mishkeh* Mechanic/Success Strategist" project. Simon Ben Zoma, a first-century *tanna* (Rabbinic sage), famously posed this hypophora: "Who is wise? He who learns from everyone." We think a more accurate statement could not be made about our students and talented faculty members. We hope you enjoy perusing this project-- and hopefully, learning from it!-- as much as we did creating it.

With our utmost respect,
Sri Sundaram and Ariella Landy

"*Mishkeh* Mechanic/Success Strategist" Resource List

To fully understand our "*Mishkeh* Mechanic/Success Strategist" project, we suggest accessing the resources provided in the order listed below. All are linked below.

1) **Read STEM teacher Ms. Sri's "Design Thinking Challenge Instructions" and Language Arts teacher Ms. Landy's "*Mishkeh* Mechanic Non-Fiction Narrative instructions"; these documents provided students with detailed explanations which we used to supplement our in-class explanation of the project.**

Why did we include this?

To introduce this project to our students, who have never engaged in such a "stretch" of a cross-curricular endeavor-- after all, STEM, Judaism, and Language Arts certainly don't seem to be related-- we wanted to provide them with ample resources, and, of course, an end goal. Some students, in fact, have had extremely limited experience with cross-curricular projects, and for those students, we offered an explanation of what we were doing, and why we were doing it. This Science rubric and this Language Arts rubric offered students a quantifiable end goal.

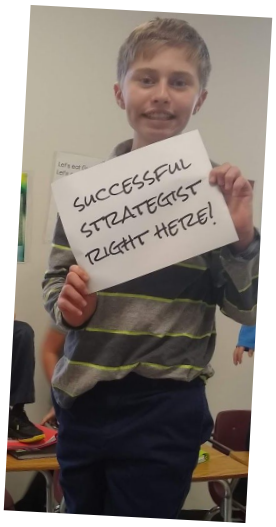
2) **View these "screen recordings[1]" (here and here) where Ms. Sri and Ms. Landy explain their rubrics to students.**

Why did we include this?

Before we even thought of the Mishkeh Mechanic/Success Strategist idea, we both noted that our students-- particularly those who were struggling to be at or on grade-level-- would often "jump in" to their work, with little to no forethought as to the end goal. While doing so, students would make careless errors, serious mistakes, and, even more importantly, have real, tangible successes, none of which they were critically analysing or using to their benefit. We knew that whether in Language Arts, Judaics, or STEM classrooms, or in life in general, students needed to have the skills and thought processes necessary to "begin with the end in mind." As such, we included the above recordings of both of our screens and voices; we used these to offer more detailed, in-depth explanations of our rubrics. By allowing students to learn at their own pace and follow up our in-class lessons by listening to these recordings at home, more classroom time could be devoted to the science projects and writing workshops, and one-on-one time, a precious commodity in the classroom, proved to be very helpful.

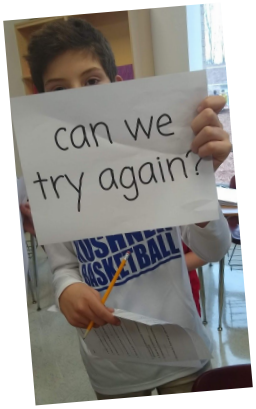
[1] Screen recordings are one of eighth grade L.A.'s most invaluable tools. Throughout the school year, after handing in any written work, students receive a screen recording of Ms. Landy, who records her screen, and offers an explanation of their successes while also providing them with 1-2 "next steps." Ms. Landy embeds the screen recording directly within their submitted Google Doc, and encourages students to respond thoughtfully to her questions and comments by recording their own thoughtful responses, questions, or comments as a Google comment or voicenote, thus encouraging a true dialogue between student and educator.

3) Read Rabbi Avi Weiss' *Times of Israel* "Ahavnu, Beirachnu: Yom Kippur is also a time to confess our good" article



Why did we include this?

*Our project was created to encourage critical thinking in the form of meta-analyses, and, somewhat ironically, we, who thought their recording of their successes would be an "easy sell" to the students, found it very difficult to have students recognize their own successes and strengths, and, as a result, we needed to analyse our**selves** and our teaching in the process. Midway through the project, we went back to the metaphorical drawing board, and looked for a Jewish approach to the importance of retroactively finding successes, in a vein similar to finding our mistakes. Weiss, the author of the article and founder of Yeshivat Chovevei Torah, a trailblazing open-orthodox congregation in the Bronx, NY, stresses the importance of our spending time focusing on our positive deeds, and not just confessing and atoning for our wrongdoings, as we normally do on Yom Kippur in the Vidui/Ashamnu (confessional of our "trespassing" against God and humankind) prayer. In his article, Weiss advocates, "not (for) discounting Ashamnu…" but rather that, "we find room alongside our negatives, to feel good about our accomplishments both as individuals and within our community." We presented this article to the students to offer them a more wide-lens view of how we as a society approach the concept of being proud of our achievements, and, ultimately, we wanted our students to be more critical in their thought-processes. Here, here, here, here, here, here, here, here, here, here, here, and here are some seventh, eighth, and ninth-grade student responses to reading this article.*



4) Check out this "Choose-Your-Own-Path Process Flow Chart."

Why did we include this?

Students need to "see" in front of them a way for them to move forward, regardless of what stage they are at. Using a flow chart where students, quite literally, are choosing a path, our goal was for students to notice that it is just as likely that they will succeed as they will fail, and we ended up hanging this up in our classrooms because it was such a valuable tool. We created a safe space for learning, where critical thinking abounded, and, in both of our classrooms, students knew that we didn't care whether or not they failed at this specific project/essay/lab.

5) Navigate through our YouTube Channel- Once you've entered our channel, you will see multiple videos. Let our current, former, and upcoming students speak for themselves!

Why did we include this?

Simply put, videos are worth 1,000 words! (Isn't that how the saying goes?)

Watch our sixth grade students explaining their Jewish-themed games here, here, here, and here.

Watch second, sixth, eighth, and ninth grade students discuss and reflect on this project here, here, here, here, here, here, here, here, here, here, and here.

6) "Paragraphs" (doc)- Check out a few of the sixth grader's written pieces.

Why did we include this?

*We included these documents in their *unedited, first draft* forms. We wanted to show you exactly what the students submitted so you, our readers, can see just how personally our students took these projects. After the students submitted these "non-fiction narratives," they worked on editing them in Language Arts class. They were then tasked with editing their works to fix the three writing skills we had been working on in our Language Arts class that month: modifying their verbs with the use of adverbs, adding in sentence-strengthening appositives, and "expanding" sentences to include as many of the six questions words (who/what/where/why/when/how). View the first drafts-- sans the extra practice writing skills!-- here, here, here, and here.*

7) Watch some of these (super-candid, last-year) interviews: here, here, here, here, here, here, here, here, and here.

Why did we include this?

We wanted to hear honest and critical feedback about this project. Our students have never done anything like this before-- neither have we, for that matter!-- and as such, we were very curious to see if this would be a success. In these videos, we asked them some or all of the following questions:

(a) What were your feelings at the beginning/end of the project?

(b) What was your project's end goal? Did the project work out the way you envisioned it would?

(c) How did this project encourage you to think creatively/critically?

(d) Would you want to do something like this again? How do you think this could be used in different subjects? Lessons? Grades?

(e) Do you have any feedback or advice?

(f) Does this project apply at all to real life? If so, how?

Thank you again for your consideration, and for reading through this document. We are honored to be a part of something so exciting; rarely do teachers get to exhibit their work in such a unique, memorable, and fun way. Since we have begun perusing the Kohelet website, we have learned and begun to implement so many transferable and thought-provoking ideas.

It is our goal that we are able to continue this ever-broadening "*Mishkeh* Mechanic/Success Strategist" project within our school. We have seen it become a part of our school language and culture, and firmly believe that ultimately, the students will reflect back upon this project with an understanding that these skills learned in the classroom-- that is, thinking about their mistakes and capitalizing upon their successes-- are just as, if not more, applicable to their real lives.