



Grades 3-5 STEAM Activities

Creator: Keren Rhodes



The #ShineALight Initiative

The #ShineALight Initiative is a national project to create a collective light of celebration spreading the Jewish joy of Chanukah and the beautiful traditions we honor in our homes with our families.

Sponsored in part by the UJA-Federation of New York, the initiative is designed as a counter-expression to antisemitism and other messages of hate acts towards Jews and Israel. The #ShineALight Initiative is leveraging education, community partnerships, workplace engagement, and advocacy among Jewish and non-Jewish communities.

The Jewish Education Project is a proud content partner of the #ShineALight Initiative and is delighted to provide these free materials to parents and other caring adults. We encourage you to utilize this education content through Chanukah (this year and in the future), and if applicable, at other times of the year.

DISPEL THE DARKNESS.

Chanukah, Hanukkah, Channukkah?

The Jewish Education Project materials all use the spelling, “Chanukah.” However, when we reference the names of outside content, products, songs, videos, etc. we utilize the spelling that the original organization/author/artist/company uses.



Social Media: If you are comfortable, we would love for you to spread the joy your family is experiencing while participating in this activity. Please take photos and/or videos and share them to your social media platforms using the hashtag #ShineALight.

Questions? Please contact Samantha Vinokor-Meinrath, Ed.D at svinokor-meinrath@jewishedproject.org Senior Director of Knowledge, Ideas, and Learning at The Jewish Education Project.



Paper Circuit Chanukiah Greeting Card

Creator: Keren Rhodes

Parent/Adult Background Information/Knowledge:

During this activity, you will explore how circuits work while creating an LED menorah on paper. Even better, this paper circuit Chanukiah can be turned into a greeting card and given to a loved one or a friend.

There are step-by-step images provided at the end of the Activity Instructions.

There are few items on the Supply List (above the Activity Instructions) that you may want to prepare or purchase.



Approximate Prep Time: 10 minutes

Approximate Activity Time: 30+ minutes

Supplies*

- [Printable Chanukiah template](#) (best on cardstock)
- One 3v coin cell battery
- Half-inch copper tape (make sure to use a tape that has conductive adhesive)
- 3mm or 5mm LED diodes
- Scotch tape
- Scissors

*all supplies can be found at the [Amazon wish list here](#)



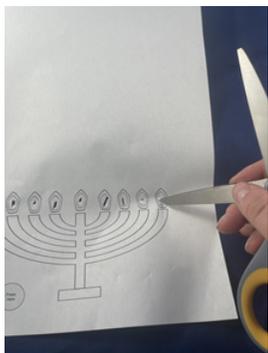
Activity Instructions

1. Print out a [Chanukiah template](#). The first two pages should be printed double sided with long-edge binding options set for your printer.
2. Poke a small hole through each flame on the Chanukiah using the tip of your scissors.
3. Flip the paper over and add copper tape on all the lines.
4. Now add your LED's. The positive leg is the one with the longer pin. It should be attached to the line that is marked (+). And the shorter leg should be touching the line of copper tape marked (-). Use scotch tape to keep the legs of the LEDs touching the copper tape.
5. Now place the battery with the positive side down on the end of the (+) copper line. Use tape on two edges to keep the battery in place. Don't tape over the middle part of the battery.
6. On the second sheet of paper, cut out the two small grey circles. Place the circles over the battery, and the end of the (-) line of copper tape. Use a glue stick or tape to attach the two sheets of paper together. Don't let the glue come in contact with any of the copper tape.
7. Fold your card in half with the Chanukiah on the outside front cover. Press down where it says "press here" and watch your Chanukiah light up. Color in your card, add a message to the middle, and give somebody a bit of Chanukah light!
8. Don't forget to take photos and/or videos and share them to your social media platforms using the hashtag #ShineALight.

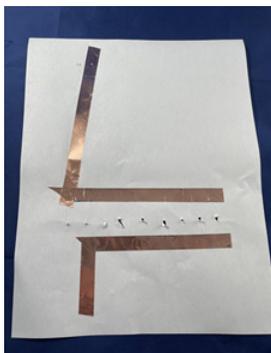
See photos on next page



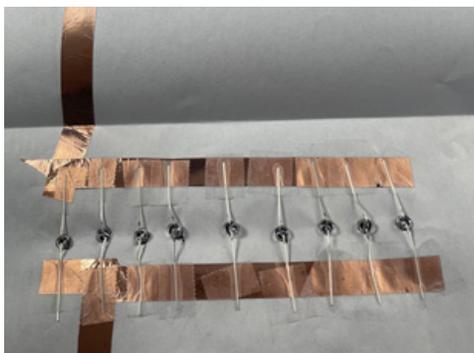
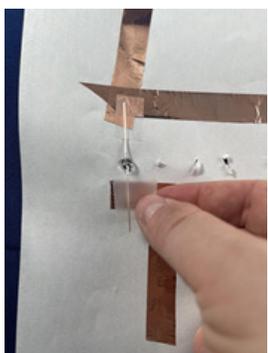
Paper Circuit Chanukiah Greeting Card, continued



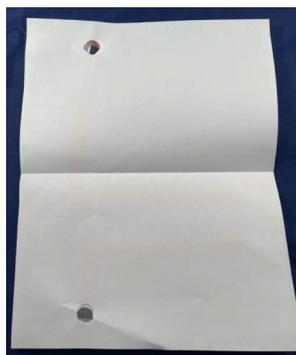
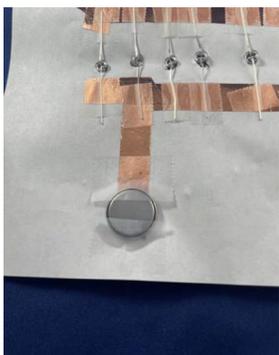
Step 2



Step 3



Step 4



Step 5



Step 6



Koach Hadibur (Power of Speech)/Oxygen

Creator: Keren Rhodes

Parent/Adult Background Information/Knowledge:

The Jewish value of *Koach Hadibur* means the “power of words.” It refers to the power we all have to speak up against injustice and improve the world we live in. In this experiment, children will learn about how adding oxygen to a fire helps it to burn. The fire represents fighting back against hate. The candle shines through hate and brings light to the world. But that requires all of us to lend our voices (add oxygen). Without our voices (oxygen) speaking up against hate, the light will snuff out.

There are few items on the Supply List (above the Activity Instructions) that you may want to prepare or purchase.



Approximate Prep Time: 10 minutes

Approximate Activity Time: 30+ minutes

Supplies*

- *Two Chanukah candles*
- *Match or lighter*
- *Metal baking sheet covered in foil*
- *Glass or mason jar large enough to fit over one of the candles*
- *Hydrogen peroxide*
- *Baker’s yeast*
- *Empty large plastic bottle (like a soda bottle)*
- *Balloon*



Activity Instructions

1. Set a candle on the baking sheet. Melt the bottom of the candle so that it sticks firmly to the surface.
2. Light the candle and watch the flame shine. Talk with your child about how Jews lighting the Chanukah is a sign of standing up against hate, both in the original story of Chanukah (when the Maccabees lit a menorah after defeating their enemies), and in the modern day.
 - For more information on the Chanukah story, visit ShineALightJewishParent.com
3. Take the glass and place it over the candle and watch to see what happens. The flame will go out as the oxygen is used up. Discuss what your child observed as you did this.
4. Now it’s time to make oxygen to see what happens when you add additional oxygen to a fire.
5. Add about 2 cups of hydrogen peroxide to the bottle. Add a teaspoon of yeast.
6. Quickly stretch the end of the balloon over the top of the bottle so that no air can escape.
7. Gently shake the bottle back and forth to mix the yeast and the peroxide. The bubbles you see are oxygen created by the decomposition of the hydrogen peroxide. The yeast acts as a catalyst for this reaction.
8. Wait while the oxygen begins to inflate the balloon. When the balloon is partially inflated, carefully remove it and pinch the end of it shut to prevent any of the oxygen you have collected from escaping.
9. Now light your candle again and then cover it with the jar. Slip the end of the balloon under the mouth of the jar and allow some of the oxygen to escape into the jar.



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Koach Hadibur (Power of Speech)/Oxygen Activity Instructions, continued



10. What happens to the flame this time? It should get larger and brighter because it has more oxygen. When we add our voices to fight against hate and prejudice, we help to bring more light to the world, making it a more just and equal world.
 - There is a classic Israeli Chanukah song called *Banu Chosech Legaresh* (we have come to drive away the darkness). It has a line that says “each of us is a small light, but together we are a mighty light”. This song captures the idea that we can all join our voices together to have a powerful impact on the world.
 - Listen to the [traditional song recorded by Rachel Buchman](#).
 - Listen to a [modern version by Noah Aronson and the Banot Band](#).
11. Don't forget to take photos and/or videos and share them to your social media platforms using the hashtag #ShineALight.