

Everlasting Light

Topic

Torah, Hanukkah, Shabbat, STEM

Grade Level(s)

6th – 12th

Big Ideas

Righteousness brings light into the world.

Righteousness can manifest in different ways that are necessary at different times and in different situations.

Learning Targets

Students will:

1. Understand how Jewish wisdom differentiates between the light created on the first day and the light that comes from the sun, moon, and stars
2. Compare how different types of light look, feel, etc.
3. Consider what it means to bring light into the world

Relevant Vocabulary

בְּרֵאשִׁית (Beresheet)	The Book of Genesis
יְהִי אוֹר (Yehi or)	Let there be light
חַז"ל (חֲכָמֵינוּ זְכוֹרֵנוּם לְבָרָכָה) (<i>Hazal / Hachameinu Zichronam Livrchah</i>)	Our Sages May Their Memory Be for a Blessing
בְּרֵאשִׁית רַבָּה (Beresheet Rabbah)	A collection of Midrash based on <i>Beresheet</i>
דֵּבָרִים רַבָּה (Devarim Rabbah)	A collection of Midrash based on Deuteronomy
גְּמִילוּת חֶסֶדִים (Gemilut <i>hasadim</i>)	Acts of Lovingkindness/Charity
פְּסוּקִים / פְּסוּקִים (Pasuk/Pesukim)	Verse(s)
חֲבֻרָתָא (<i>Havruta</i>)	Learning Partner

Materials / Technology Needed

- Text for Beresheet Chapter 1 (included at end of this document)—one per learner
- Blank sheets of white paper
- Light Bulbs:
 - Incandescent
 - Fluorescent
 - LED
 - Note that sockets will also be necessary to use the bulbs.
- Different types of candles with different wicks
- Small glasses (like juice glasses), olive oil, and oil wicks
- Matches
- Images of light bulbs and flames (included at the end of this document)
- Video – [How Modern Light Bulbs Work](#)
- Video – [What is fire?](#)

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Background for Teachers

With two words, “*Yehi or*” ([Beresheet 1:3](#)), God brought light into existence. Seeing that the light was good, God then separated between the light and darkness and called them day and night respectively ([Beresheet 1:4 – 5](#)). Thus ended the first day.

After dividing and filling the world over the next two days, God created lights in the skies—the sun, the moon, and the stars—to separate day from night and to keep track of time ([Beresheet 1: 14 – 18](#)). This creation of the light-giving celestial objects caused Hazal to try to figure out a potential difficulty. How could it be that celestial lights were necessary, or even helpful, if the light from the first day was already extant?

One solution posited by Hazal is that, while the sun lights the day, the light of the first day of creation would overpower the light of the sun and was stored away for the righteous ([Beresheet Rabbah 3](#)). What it means to be righteous, though, is not clarified in this discussion. In fact, throughout Jewish wisdom many different characteristics are associated with righteous, including but not limited to humility (e.g. [Devarim Rabbah 8](#)), *gemilut hasadim* (e.g. [Tractate Berakhot 5b](#)), and justice (e.g. [Tractate Hagigah 12a](#)).

This activity is meant to be an exploration of different types of light. Different options are given for the types of light to compare and contrast. Decide what works best for your learners. Some learners might be able to light wax candles and oil wicks responsibly. Others might be better served focusing only on LED lights that remain cool. Regardless of which lights are used, this activity offers learners the opportunity to explore how different light sources provide light differently and to then connect different types of light to the Torah and their own lives.

Furthermore, while the idea of righteousness is certainly one that can be explored any time of year, the connection to the candles of Hanukkah and Shabbat present timely opportunities to make connections to the Jewish calendar.

It is recommended to become more familiar with the basics of how different types of light can affect how people perceive color. These short videos provide some background on the science behind color.

- [Selective Reflection](#)
- [How We See Color](#)
- [The Color Temperature Paradox](#)

In addition, these short videos provide some context for the experiments in which learners will engage:

- [Light Bulb Lineup](#)
- [Color Temperature](#)

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Description of Activities

1. Ask learners where they get light from. Sources might include the sun, the moon, recessed lighting, the flashlight on their phones, etc.
 - a. Note: Some learners might volunteer metaphorical sources of light. These ideas will be excellent for later in the activity. This initial question is meant to explore physical sources of light.
2. Explain that learners will be doing an activity in which they get to compare and contrast different types of light.
3. Plug in different types of light bulbs—LED, incandescent, and CFL. Make sure to hold up a sheet of white paper to demonstrate how different sources of light can change how people perceive how objects look. If appropriate, encourage learners to move around and see the light from different perspectives. (If there enough resources, this could also be done in groups with each group being responsible for their own bulbs.) Ask learners what is similar and different about the bulbs. Things to notice include:
 - a. Brightness of light
 - b. Heat of bulb
 - c. Color of light
 - d. How do the colors of the light affect you?
 - e. If using an LED bulb with selectable color temperature, compare the different temperatures.
4. Light different types of candles. Explore how the candles give off different types of flames.
 - a. How do the flames look similar and/or different? What colors do you see in the flames?
 - b. How are the odors of the flame similar different?
 - c. How quickly do the candles burn?
5. Ask: Of the light sources used in the experiments, which might be best for reading? For working? For cooking (both for seeing and for actually cooking food)?
6. Hand out the texts of the first and fourth days of creation. Pair learners into *havrutas* and ask each pair to read the texts and come up with questions they have about what occurs on the two days.
7. With the full group, ask what is difficult about these *pesukim*. Lead discussion to the two different lights being created. Why did God need to create the sun, moon, and stars if there was already light?
 - a. Optional side discussion: Consider the sun, moon, and stars in the same way learners approached the light bulbs and flames. How are they similar/different in the light they emit, the heat they give off, etc.?

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8. Present the midrash about God reserving the original light for the righteous. Discuss the ideas brought forth by the midrash:
 - a. What might be different among the different types of light?
 - i. How might they be different scientifically?
 - ii. How might they be different metaphorically or spiritually?
 - b. Why might God have reserved the original light for the righteous?
 - c. What does it mean to be righteous?
 - d. How can people light up a room?
9. Learners create a community Instagram story about how they bring light into the world. The story should include at least one image of each learner engaging in a way that they bring light. Images should then be embellished with stickers that represent the type of light (LED bulb, torch, sun, etc.) represented by their actions.
 - a. If creating an Instagram story is not an option, hand out images of candles and light bulbs. Learners consider what kind of light they bring into the world and choose one of the images to represent their light. Learners write how they bring light into the world on their selected image.
10. Learners present their story (or what they wrote) and consider how the light that each person brings helps the community to shine.

Differentiation Options

Knowing that students learn in a variety of ways and modalities, the following options are provided to adjust the above lesson to meet the unique needs of your learners.

For learners who need more assistance

- Learners draw images of their reactions to the different light sources.
- Learners dictate the good things that they do for others.

For learners who need extension opportunities

- Learners explore how light patterns of the sun and moon change over the course of a year (solar or lunar) and create a slideshow demonstrating how the light changes.
- Learners compare and contrast the types of candles used for Shabbat and those used for Havdalah. Learners consider why different types of candles end the week and begin the week.

Beresheet 1:3 – 4	בראשית א:ג - ה
God said, "Let there be light": and there was light.	^ג וַיֹּאמֶר אֱלֹהִים יְהי אוֹר וַיְהי אוֹר:
God saw that the light was good and God divided between the light and the dark.	^ד וַיַּרְא אֱלֹהִים אֶת־הָאוֹר כִּי־טוֹב וַיַּבְדֵּל אֱלֹהִים בֵּין הָאוֹר וּבֵין הַחֹשֶׁךְ:
God called the light day and called the dark night. It was evening and it was morning, one day.	^ה וַיִּקְרָא אֱלֹהִים לְאוֹר יוֹם וּלְחֹשֶׁךְ קֶרָא לַיְלָה וַיְהיֶעֱרֶב וַיְהיִבֹקֶר יוֹם אֶחָד:

Beresheet 1:14 – 19	בראשית א:יד - יט
God said, "Let there be lights in the expanse of the sky to divide between the day and the night, and they will be signs for the times—the days and the years—	^{יד} וַיֹּאמֶר אֱלֹהִים יְהי מְאֹרֶת בְּרָקִיעַ הַשָּׁמַיִם לְהַבְדִּיל בֵּין הַיּוֹם וּבֵין הַלַּיְלָה וְהֵיוּ לְאֹתוֹת וּלְמוֹעֲדִים וּלְיָמִים וּשְׁנָיִם:
And they will be lights in the expanse of the sky to shine on the earth." And it was so.	^{טו} וְהֵיוּ לְמְאֹרֹת בְּרָקִיעַ הַשָּׁמַיִם לְהָאִיר עַל־הָאָרֶץ וַיְהיֶיכֵן:
God made two great lights—the great light to dominate the day and the small small light to dominate the night—and the stars.	^{טז} וַיַּעַשׂ אֱלֹהִים אֶת־שְׁנֵי הַמְּאֹרֹת הַגְּדֹלִים אֶת־הַמְּאֹר הַגָּדֹל לְמִשְׁמַלַּת הַיּוֹם וְאֶת־הַמְּאֹר הַקָּטָן לְמִשְׁמַלַּת הַלַּיְלָה וְאֵת הַכּוֹכָבִים:
God put them in the expanse of the sky to shine on the earth	^{יז} וַיִּתֵּן אֹתָם אֱלֹהִים בְּרָקִיעַ הַשָּׁמַיִם לְהָאִיר עַל־הָאָרֶץ:
And to dominate the day and the night and the divide between the light and the dark. God saw that it was good.	^{יח} וְלִמְשָׁל בַּיּוֹם וּבַלַּיְלָה וּלְהַבְדִּיל בֵּין הָאוֹר וּבֵין הַחֹשֶׁךְ וַיַּרְא אֱלֹהִים כִּי־טוֹב:
It was evening and it was morning, a fourth day.	^{יט} וַיְהיֶעֱרֶב וַיְהיִבֹקֶר יוֹם רְבִיעִי:

What did God create on day one?

What did God create on the fourth day? What reason is given?

What potential contradiction is there between the first and fourth days?





