

Summer Ice Candles - Program Proposal

Description

Making ice candles is engaging and quick. This program works well in a series about home crafts or gift-giving, and makes a good introduction to DIY and practical, collaborative learning. It is a good follow-up to a soy candle tin workshop because it gives patrons a reason to return to the library to pick up soy candle tins. In the program session, patrons pour dyed wax into molds prepared with tapers and iced to create a lacy candle that cools quickly so that it can be taken home that day.

Audience

Teen/Adult

Budget/Costs

Durable Goods Investment: \$55

Consumables: \$103

Cost of consumables/participant: \$4.30

Number of participants

24 (usually 2 classes of 12)

Program Time

1 hour plus 30 minutes staff setup time

Collection and Dewey Connections

Candlemaking - 745.59

Essentials Oils - 615.321

Handicrafts - 745.593

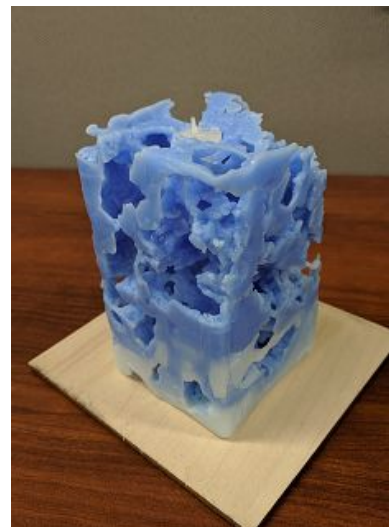
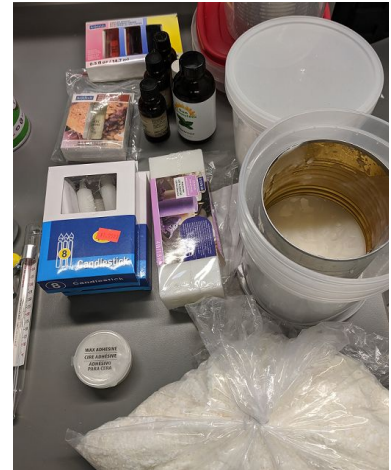
Combustion experiments - 540

STEAM Tie-ins

Science: light, combustion, physical states

Art: colors

Math: measuring temperature, weight



Summer Ice Candles

Equipment Notes (See also complete supplies list)

You will need:

- A stove or electric skillet
- Metal pots or cans for melting wax
- Heat pads, trivets, or heat resistant mats
- Candlemaking thermometer
- Molds
- Plastic spoons
- Eye droppers or pipettes
- Scissors
- Paper towels
- Pliers

Ingredients

- Soy wax for pillars
- Candle dyes - oil-base, so food and soap dyes will not work
- 6" taper candles
- Wax adhesive

Method [TOTAL TIME: 90 minutes]

Day of Program Preparation: 15 minutes

- A. Cover work areas with paper and heat mats or hot pads.
- B. Arrange ingredients and equipment.
- C. Optional: break up ice pieces with the ice pick so they are smaller than 1" chunks.
- D. Set up your double-boiler. Add 1" of water to bottom pot or electric skillet.; it allows you to heat in your program room and control temperature easily.
- E. Measure wax into melting pots and put the melting pots into the bottom pot or electric skillet
7 oz wax per person.
- F. Turn heat to 210F so that water comes to a boil and begins heating wax. It will melt at 120F but should be heated to 160F and poured at 145F.

Introduction: 10 minutes

1. Introduce yourself and any experts. Provide cautions
 - a. Unmelted wax is oily. Work neatly. Keep wax chips and bits on paper to make cleanup easier.
 - b. Heat wax only to recommended temperatures. It can catch on fire. If you have a fire, turn off the stove or skillet and cover immediately. This will keep oxygen from feeding the flames. Then simply wait until the fire suffocates.
 - c. Candlemaking equipment should not be used for food, even after cleaning.

- d. Handle hot wax carefully, with oven mitts or pot holders and avoid getting water in the liquid wax. Stir and pour slowly to avoid splashes, skin contact, and bubbles in the candle.
 - e. Wax dyes will stain. Cover your clothes and wash hands or wear rubber gloves.
2. Provide overview.
- a. Wax: Paraffin, soy, beeswax, coconut. Soy wax
 - i. Is milder than paraffin
 - ii. Is less expensive than coconut or beeswax
 - iii. Has a relatively low melting temperature
 - b. Show materials
 - c. Go over process
 - i. Prepare candle molds: use wax adhesive to stand the interior candle in the middle of the mold.
 - ii. Gently melt wax just to 120F. Work in 2 lbs batches
 - iii. Pour into smaller containers.
 - iv. To each container,
 - 1. Add dye. Add a small amount and check color. The color will be lighter when the wax hardens.
 - 2. If mixing colors, add lighter color before darker color
 - v. Add ice to mold, surrounding candle loosely so that there is room for the wax.
 - vi. Pour the wax slowly into candle mold until the so that wax doesn't splash
 - d. Allow candles to cool.
 - e. Pour off melted water.
 - f. Optional: slide the candle out of the mold gently to check it and return it to the mold so it can be transported safely.
 - g. When all of the ice has melted, remove the candle from the mold. If the wax is thicker and heavier on the top, invert the candle so that it's more stable.

Prepare containers: 5 minutes

- 1. If using Pringles cans and drink containers, trim them to about 6" tall.
- 2. Put a small dab of wax adhesive on the bottom of the interior candle.
For best adhesion, don't spread it out.
- 3. Center the candle in the bottom of the mold and press down. The candle may lean, but when you add the ice, it will hold it upright.

Melt wax, divide into containers, and add dye: 15 minutes

- 1. Gently melt wax to 160F, stirring gently to distribute heat.
- 2. Use oven mitts to remove the melting pots from the water, drying the outside of the containers to prevent water from dripping into the wax.
- 3. Pour gently and slowly into each participant's paper cup.
- 4. Add dye chips and stir gently.
 - a. Start with ½ oz dye chips. Check color and add more if needed.
 - b. The color will be lighter when the wax hardens.
 - c. If mixing colors, add lighter color before darker color
 - i. Orange = 4 yellow, 1 red
 - ii. Purple = 2 magenta, 1 blue

- iii. Green = 4 yellow, 1 blue

Add ice to mold and pour wax: 10 minutes

****It's important to work quickly so that the wax doesn't cool too much.****

1. Add ice to the mold to ½" below the top of the interior candle
 - a. Add it loosely so that there will be spaces for the wax to flow into.
 - b. Small pieces work better than full ice cube sized pieces.
2. Stir the wax to re-melt any that has hardened and then pour it slowly into the mold so that wax doesn't splash or bubble.

Allow the candles to cool, clean up, and test unmolding: 15 minutes

1. Set candles aside to cool. This will take about 10 minutes, depending on the size of your containers.
2. Meanwhile, pour undyed wax into one container. Dyed wax can be allowed to harden either color by color or in one batch for future use. Cups and spoons can be thrown away.
3. Allow skillet and pots to cool. Do not get water in the wax. Allow any wax drips on pans, mats, or other utensils to harden and then pop them off.
Optional: Use rubbing alcohol to clean residues off surfaces.
4. When the candle mold is cold and solid to the touch, gently turn it over a bucket to drain water.
5. If possible, slide the candle out of the mold gently so no pieces break off. If the candle won't slide out of the mold, leave the candle in the mold until you are at your destination. Gently cut and rip the box mold off of the candle and set it in a bowl until all of the ice has melted. This may take up to 2 hours, depending on conditions.

Complete survey: 5 minutes

1. Patrons fill out survey.

Related Links

- [How to Make an Ice Candle \(The Spruce\)](#)
- [Top 5 Reasons to Use Soy Instead of Paraffin Candles](#)
- [What Exactly Is Soy Wax?](#)
- [DIY: Fall Ice Candles video](#)
- [Candlemaking Tutorial Video #4](#) - Other ideas

Wax Comparison

Soy

- Melt Temp: 115-119F; Pour Temp: 135F
- Pro: Low pour temp is safer and faster for group activities
- Con: Susceptible to frosting

Paraffin

- Melt Temp: 115F; Pour Temp: 170F +/-
- Pro: Smooth, glossy appearance
- Con: petroleum-based; high pour temperature

Beeswax

- Melting Temp: 144F; Pouring Temp: 175F
- Pro: Burns slowly so candles last
- Con: Wicks may not work easily; it may be harder to add scents because of its natural scent

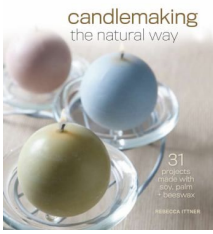
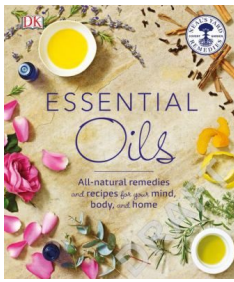
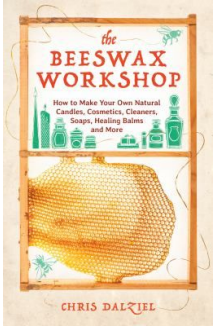
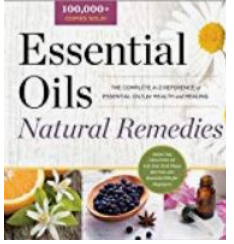
Summer Ice Candles - Supplies List

| Item | Price | Quantity | Total | Where to Purchase |
|--|---------|----------|----------------|---|
| Equipment | | | | |
| Etekcity Digital Kitchen Scale 11lb/5kg | \$15.29 | 1 | \$15.29 | https://www.amazon.com/dp/B01HNSRYAK?ref=emc_b_5_t |
| Candle Thermometer | \$4.80 | 1 | \$4.80 | https://www.amazon.com/Taylor-Precision-Products-Classic-Thermometer/dp/B0000CFQN8/ref=sr_1_3?s=home-garden&ie=UTF8&qid=1505886184&sr=1-3&keywords=candle+thermometer |
| Pot holder/mitt (set of 3)* | \$3.39 | 3 | \$10.17 | Dollar Store, KMart |
| Paper Towels | | | \$0.00 | from library supplies |
| Scissors | | | \$0.00 | from library supplies |
| Disposable Plastic spoons | | | \$0.00 | from library supplies |
| Bucket | | | \$0.00 | from library supplies |
| Presto 11" Electric skillet | \$24.99 | 1 | \$24.99 | https://www.amazon.com/gp/product/B0000BYD65/ref=as_li_tf_tl?ie=UTF8&camp=1789&creative=9325&creativeASIN=B0000BYD65&linkCode=as2&tag=bestprodtag81384-2_0 |
| 29 oz cans, the size of tomato or pumpkin cans, cleaned and dried for melting wax | | 6 | | See optional list for wax pouring pitchers and candle mold information |
| Square drink box containers from juice boxes or soy/almond milk, cleaned and dried | | 6 | | |
| Pringles cans, cleaned and dried, for use as molds | | 6 | | |
| SUBTOTAL | | | \$55.25 | |
| Consumable Supplies | | | | |
| EcoSoya Q230 (CB-PB) Wax - 10 lb bag | \$25.00 | 1 | \$25.00 | https://www.amazon.com/EcoSoya-Q230-CB-PB-Wax-priced/dp/B00BPWQR2C/ref=sr_1_1?s=home-garden&ie=UTF8&qid=1506353674&sr=8-1&keywords=ecosoya+PB |
| Unscented White Taper Candles 6" (set of 40) | \$19.92 | 1 | \$19.92 | https://www.amazon.com/Unscented-White-Taper-Candles-Thick/dp/B00K2HUPCO/ref=sr_1_1?s=arts-crafts&ie=UTF8&qid=1506116464&sr=8-1&keywords=candles+tapers+white+6%22 |
| Candle Shop - 26 dye colors - chips | \$39.98 | 1 | \$39.98 | https://www.amazon.com/Candle-Shop-colors-choice-candles/dp/B01JBUBOLI/ref=pd_sim_201_3?encoding=UTF8&psc=1&refRID=8F4Y865P3SADK2N1P49H |

| | | | | |
|---|---------|----|-----------------|---|
| Tacky Wax wax adhesive - 1 oz | \$3.87 | 4 | \$15.48 | https://www.amazon.com/Yaley-110004-Tacky-Wax-1oz/dp/B00539YF1I/ref=sr_1_4?s=home-garden&ie=UTF8&qid=1506356492&sr=1-4&keywords=wax+adhesive |
| | | | 0 | |
| Ice - 20 lb bag (can substitute any ice) | \$2.99 | 1 | \$2.99 | convenience or grocery store |
| Paper hot cups - one per person | | | \$0.00 | from library supplies |
| Paper Towels | | | | from library supplies |
| Newspaper to cover tables | | | | from library supplies |
| SUBTOTAL | | | \$103.37 | |
| TOTAL | | | \$158.62 | |
| Cost per participant (8 participants) | | | \$4.31 | |
| Optional | | | | |
| non-latex gloves (optional) | \$0.25 | 24 | \$6.00 | hardware or Home Depot |
| Gasare, 2Pak, Extra Large Heat Resistant Silicone Mat | 17.29 | 4 | \$69.16 | https://www.amazon.com/Multiuse-Silicone-Resistant-Protection-Nonstick/dp/B06ZZZ53X4/ref=sr_1_4?ie=UTF8&qid=1505930130&sr=8-4&keywords=heat+resistant+mat+crafts |
| Yellow Liquid Dye (4 oz) | \$12.92 | 1 | \$12.92 | https://www.candlescience.com/color/yellow-liquid-dye |
| Magenta Liquid Dye (4 oz) | \$12.92 | 1 | \$12.92 | https://www.candlescience.com/color/magenta-liquid-dye |
| Red Liquid Dye | \$12.92 | 1 | \$12.92 | https://www.candlescience.com/color/red-liquid-dye |
| Blue Liquid Dye | \$12.92 | 1 | \$12.92 | https://www.candlescience.com/color/blue-liquid-dye |
| Black Liquid Dye | \$12.92 | 1 | \$12.92 | https://www.candlescience.com/color/black-liquid-dye |
| Ice pick | \$5.51 | 1 | \$5.51 | https://www.amazon.com/HIC-Harold-Co-Pick-Cover/dp/B0001V489W/ref=sr_1_2?s=kitchen&ie=UTF8&qid=1506356655&sr=1-2&keywords=ice+picks+for+kitchen |
| Mold - 3x3x5 1/2" square | \$6.06 | 6 | \$36.36 | http://www.candlewic.com/store/product.aspx?q=c16.p191&title=Square-Mold |
| Mold - 3x6 1/2" round (Pringles cans work really well) | \$5.94 | 6 | \$35.64 | http://www.candlewic.com/store/product.aspx?q=c16.p190&title=Round-Mold |
| Stove and Deep 12" Fry Pan with Glass Lid Cover for boiling water (or use electric skillet below) | \$21.42 | 1 | \$21.42 | https://www.amazon.com/Mirro-Aluminum-Nonstick-Cookware-12-Inch/dp/B0001B78JY/ref=sr_1_5?s=home-garden&ie=UTF8&qid=1506219286&sr=1-5&keywords=12%27+skillet |

| | | | | |
|--------------------|--------|---|---------|---|
| Candle Pouring Pot | \$9.19 | 4 | \$36.76 | https://www.amazon.com/s/ref=nb_sb_noss?url=search-alias%3Dgarden&field-keyword=s=wax+pitcher+candlemaking |
|--------------------|--------|---|---------|---|

Title List

| | | | |
|---|---|--|---|
|  | <p>Candlemaking the natural way : 31 projects made with soy, palm & beeswax</p> <p>Ittner, Rebecca., author.</p> |  | <p>Essential Oils</p> <p>Curtis, Susan (Homeopath), author.</p> <p>Thomas, Pat, author.</p> <p>Johnson, Fran, author.</p> |
|  | <p>The beeswax workshop : how to make your own natural candles, cosmetics, cleaners...</p> <p>Dalziel, Chris, author.</p> |  | <p>Essential oils for beauty, wellness, and the home</p> <p>Althea Press, editor.</p> |

Total Boox Candlemaking Book Shelf

| | | | | |
|---|---|---|---|---|
|  |  |  |  |  |
| <p>THE ENCYCLOPEDIA OF ESSENTIAL OILS Julia Lawless</p> | <p>ESSENTIAL OILS FOR HEALTH Kymberly Keniston-Pond</p> | <p>SIMPLE PLEASURES OF THE HOME Susannah Seton</p> | <p>THE CANDLEMAKER'S COMPANION Betty Oppenheimer</p> | <p>THE EVERYTHING CANDLEMAKING BOOK Marie-Jeanne Abadie</p> |

Patron Program Survey

Your response to this brief survey helps to improve programming in the short and long term. Thanks in advance for your input!

On a scale of 1 to 5, rate your knowledge of and confidence about the activity BEFORE the program.

- 1 - I've never heard of it.
- 2 - I've heard of it but don't have much knowledge of it. I haven't participated in it.
- 3 - I have participated in this activity once. I am a novice.
- 4 - I have some knowledge about the activity and have participated in it as a hobby or past time.
- 5 - I am an expert or professional in this field or activity.

On a scale of 1 to 5, rate your knowledge of and confidence about the activity AFTER the program.

- 1 - I've never heard of it.
- 2 - I've heard of it but don't have much knowledge of it. I haven't participated in it.
- 3 - I have participated in this activity once or twice. I am a novice.
- 4 - I have some knowledge about the activity and have participated in it as a hobby or past time.
- 5 - I am an expert or professional in this field or activity.

What did you like most about the activity?

How likely is it that you will recommend this program to someone?

Very likely

Not likely

If you answered "Not likely" above, why not?

It needs to be better organized.

It wasn't fun.

I didn't like the materials.

I wasn't happy with my finished product.

Other:

What suggestions do you have for making the activity better?

What suggestions do you have for other programs at the library?

Lifelong Learning Survey

Your response to this brief survey helps to improve programming in the short and long term. Thanks in advance for your input!

You learned something new that is helpful

- Agree
- Disagree

You feel more confident about what you just learned

- Agree
- Disagree

You intend to apply what you just learned

- Agree
- Disagree

You are more aware of applicable resources and services provided by the library

- Agree
- Disagree

What did you like most about the program?

What could the library do to improve your learning?

What other projects would you like to learn?