

# Reduce Waste with DIY Beeswax Wraps!

Name: \_\_\_\_\_

Date: \_\_\_\_\_

## Create your own beeswax wraps!

1. Gather your materials to create beeswax wraps!
  - a. **Color your cloth**: Cotton material, thick paper (manila folder or construction paper), tape, fabric markers, stencils (optional), zig-zag scissors
  - b. **Infuse with beeswax**: Parchment paper, beeswax beads or pellets, iron, ironing board
  - c. **Engineer use for wraps**: Water, cloth without beeswax (same material from part a.), snack items (solid and watery i.e. carrots and yogurt), rubber bands, string

### Part A. Color your cloth

1. Wash and dry fabric.
2. Use pinking shears to cut pieces from cotton material (Fig. 1) (11 in. x 11 in. is a good standard size)
3. Use tape to secure your piece of cloth to the thick paper (Fig. 2).
  - a. Tape close to the edge so you will be able to color the maximum area of your cloth.
  - b. Use small pieces of tape rather than taping the entire edge.
4. Use fabric markers and stencils to color and personalize your fabric (Fig. 3).
5. Remove the tape.
  - a. Pull tape from the middle of the cloth toward the outside to prevent fraying.
6. Check the edges of your cloth to see if any areas need to be re-trimmed.
  - a. Use the pinking shears to re-trim frayed areas of your cloth as needed.



Fig 1.



Fig 2.



Fig 3.



## Part B: Infuse with Beeswax (with help from your teacher!)

1. Tape one piece of parchment paper to the ironing board.
2. Place your cloth on the parchment paper.
3. Sprinkle beeswax pellets on the cloth (Fig. 4).
4. Cover your cloth and beeswax with a second piece of parchment paper.
5. Iron (on the cotton setting) gently over the top of the parchment paper. Make sure that wax is melted into all areas of your cloth!
6. Remove the parchment paper.
7. Wait a few moments for the cloth to cool enough to touch.
8. Gently remove the cloth, and hang your cloth to finish cooling (Fig 5).



Fig 4.

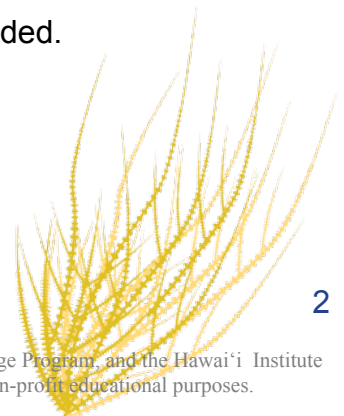


Fig 5.

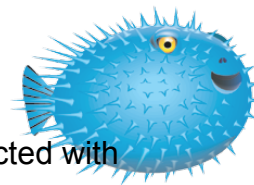


## Part C: Engineer use for wraps

1. Determine if water will pass through a piece of cloth that does not have beeswax added.
2. Determine if water will pass through your piece of cloth that has beeswax added.
3. Experiment with methods to use your wrap to pack free-roaming snacks, like carrots or crackers.
  - a. Try making an envelope.
  - b. Try using heat from your hand to shape and secure your wrap in various positions and with various foods.
4. Use your wrap to secure a wet snack in a bowl.
5. Use rubber bands, string, or other materials to secure the wrap as needed.
6. Test the ability of your wrap to keep the liquid snack in the bowl.
7. Use soap and water to gently wash your wrap. Dry it with a towel.



## Activity Questions



1. How did adding beeswax to the cotton change the way the material interacted with water?
2. How would having too little beeswax affect your wrap?
3. Why did the wrap stiffen as it cooled?
4. How did heating the wrap help you to make useful shapes?
5. What do you think might happen to your wrap if you wash it with extremely hot water?
6. Over time your wrap may crease or lose wax. How do you think you will be able to fix this?
7. What types of snacks or foods would not be well suited to the beeswax wrap?
8. What physical properties would help to make your wrap work better?
9. How will using your wrap to pack snacks help to reduce marine debris?
10. How does your use of a beeswax wrap relate to Ocean Literacy Principle #6—that the ocean and humans are inextricably connected?
11. What other uses can you think of for beeswax wraps?

