**OSCEDays Girls eSTEAM Workshop**



**What is OSCEdays?**

**OSCEdays** is a \_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of experts and activists who work towards a sustainable and good life for all.

**Circular Economy** functions in cycles, similar to natural cycles, where nothing is \_\_\_\_\_\_\_\_\_\_\_\_, everything is\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**Open source** means \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_and sharing of design and knowledge. (e.g.Wikipedia)

**Examples of Circularity**

Describe what is happening in each image below and how it relates to circularity.

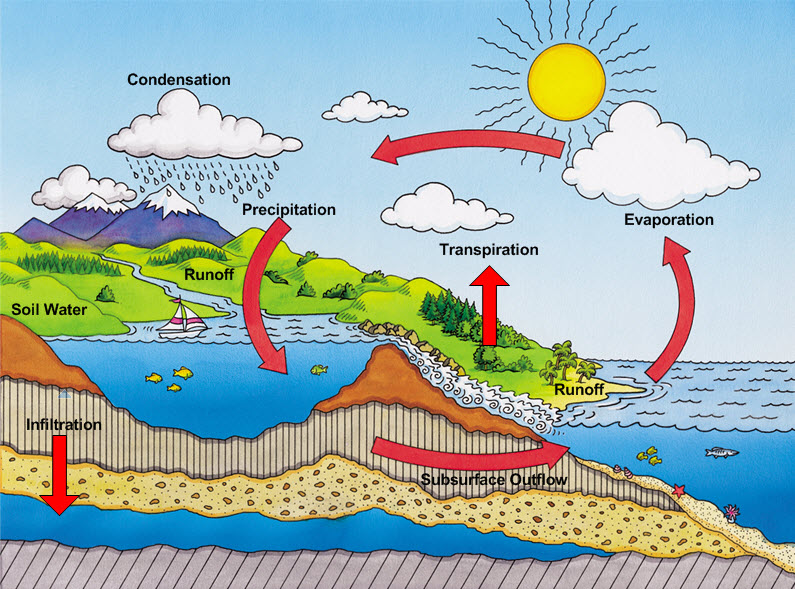


Photo Credit: ThingLink

2.



Photo Credit: Inhabitat



Photo Credit: Talking Cents - American Consumer Credit Counseling

3.



Photo Credit: FreePik

**How many other examples of circulatory can we think of?**

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**Materials and Textiles**

**Sustainable** means conserving an \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ balance by avoiding depletion of\_\_\_\_\_\_\_\_\_\_\_\_ resources (Dictionary.com).

What does it mean for a **material** to be sustainable?

A material is sustainable when it is made out of \_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_ that are easily replenishable on the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. They can also be \_\_\_\_\_\_\_\_\_\_\_\_\_ or human made, but do not cause a lot of negative \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ impact upon production, use or disposal.

**Examples**. Burlap, Cotton, Industrial Hemp, Soy, Bamboo, Linen, Wool, Glass, Wood

Source: <https://www.triplepundit.com/special/sustainable-fashion-2014/round-sustainable-textiles/>

**Hands on Activity**

Upcycled Burlap Tote

Make your own market tote by re-purposing an old coffee bean sack and lining it with a fun fabric. This bag is durable and hard-wearing, and the handles make it so easy to carry your fresh produce home from the farmer’s market.



1. Measure 23” x 15” and use a marker to mark the measurements on the coffee sack.



Cut along the lines you made using your Fiskars Amplify® RazorEdge™ Fabric Shears, cutting through two layers of the coffee sack at the same time.



2. Pin, and then sew the burlap together along each side and the bottom edge.

3. Measure 2” squares in the bottom corners of the burlap.



Cut out the squares, open up the hole and push the opposing raw edges together. Pin, then sew together to create a boxed bottom to the tote.



4. Repeat steps one through three with a piece of lining fabric. When sewing the bottom edge of the lining fabric, leave a 6” hole in the seam. You will need this for turning your bag through.



5. Check that the lining fabric is wrong side out and place the coffee sack burlap into the lining, so that the right side of the burlap is facing the right side of the lining. Pin all the way around the top edge and sew.



6. Pull the burlap fabric through the hole you left in the lining, and then push the lining down into the inside of the bag. Topstitch around the top edge/opening of the bag, for a finished look.

7. For the handles, cut two lengths of cotton webbing each measuring 25”. Sew the center 10” together to create a reinforced, comfortable handle.

8. Sew the ends of the handles 3” either side of the top center point. Fold the ends under so that the raw edges are concealed.



9. Close the turning hole in the bottom of the lining fabric by topstitching or hand stitching.



Source: <http://www2.fiskars.com/Ideas-and-How-Tos/Crafting-and-Sewing/DIY-Accessories/Upcycled-Burlap-Tote>

Additional Video Source: Burlap Sack Tote Bag

<https://youtu.be/EHfoUx1kqyk>

**How to Make a No Sew Tote Bag**

Directions from Mommypotomus

Step 1: Cut the sleeves off

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If you’d like to fold the t-shirt in half you can cut both sleeves at once so that they are identical. Or, if your material is too thick to cut them both at once, you can cut one, then fold it in half and use the cut side as a guide for the next sleeve.

Step 2: Cut the neckline area

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If you’d like, you can turn the shirt inside out and trace the outline of a bowl before cutting. I used both methods and personally, I like free-hand cutting better because I prefer a slightly oval shape to a perfectly round one. I ended up trimming this one a bit to make it more oval.

Step 3: Determine how deep you want the bag to be

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If you haven’t already turned your t-shirt inside out, do it now. Determine where you want the bottom of the bag to be and trace a line across. Keep in mind that depending on the fabric used, your tote is likely stretch and become longer when it’s filled with stuff.

Step 4: Cut fringe

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Now grab your scissors and cut slits from the bottom of the shirt up to the line marking the bottom of your bag. You’ll want to cut both the front and back layers together because they need to match up for the next step.I cut my slits about 3/4 to 1 inch apart.

Step 5: Tie Fringe****

Okay, this is going to sound really complicated, but it’s NOT, promise. Take your first pair of fringe and tie it into a knot, then tie two more pairs. Now if you lift your bag you’ll see that although the pairs are pulling the bag together, there’s a hole between each pair. This next step will close those holes.

In the photo above you see three sets of fringe that have been tied in knots. What I do next is grab one strand from the middle set (the one with the arrow pointing left) and tie it in a knot with one of the strands on the left set. Then I take the other strand from the middle set (the one with the arrow pointing right) and tie it in a knot with one of the strands on the right set.



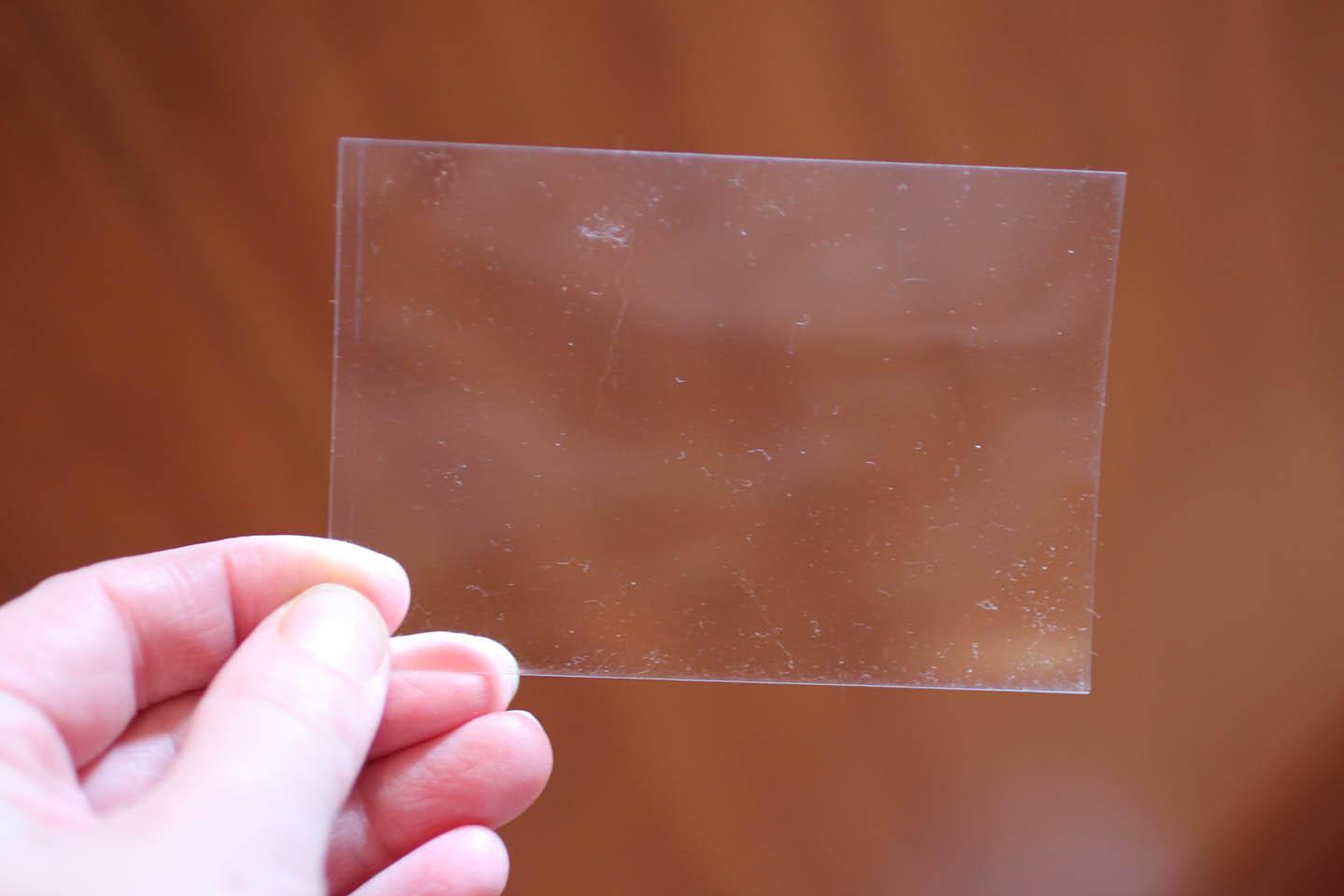
Then I take the remaining strand on the right set and tie it to the next set of strands, and so on and so forth until all the strands are tied. Now turn your t-shirt right side out again and voila, you’re done!

**Try This at Home!**

What happens to certain materials in the soil? Do they **biodegrade**? Do they stay **intact**? Let’s find out!

**Instructions**

1. Select 3 to 5 pieces of material, check label if not sure about the material
   1. one is plastic (nylon, acetate, polyester, acrylic, polyethylene, etc.)
   2. Rest are natural fibers (cotton, linen, jute, wool, silk, etc.)



1. Cut squares of 1 by 1 inch, mark the pieces with the name of the materials or numbers to keep track of what they are



1. Take notes and pictures about the appearance and structure of the material.If you can, go to the public library and read about the materials: how are they made, how sustainable they are. Use a magnifier or microscope, if possible.



1. Choose a place in the garden that will not be disturbed for 6 months (mawed, dug, removed). Mark it.
2. Bury all pieces 3 inches deep at a distance of 2 inches of each other.
3. Let them undisturbed for 6 months.
4. Dig them out and observe the changes.
5. Take notes and pictures, try to explain what happened and report to the group
6. Have fun with material and soil science!

**Books**

Here is a selection of books available at the Indianapolis Central Library or your neighborhood branch. Please consult a librarian for more resources on sustainable textiles and materials. Use the public library to learn more about sustainable materials and to do research for this and other projects.

**Textiles** by Neil Morris

j677 MOR

**Green Technology** by John Coad

j338.927 COA

**Planning for a Sustainable Future** by Helen Belmont

j338.9 BEL

**A teen guide to eco-fashion** by Liz Gogerly

TEEN 746 .92 GOG

**Sew Eco** by Ruth Singer

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