

Future of Tradition: Careers in Heritage Restoration Activity

These activities were created to complement the *Future of Tradition: Careers in Heritage* event held 16 November, 2020. The recordings are available on The Royal Canadian Regiment Museum's YouTube channel. This event was designed to support secondary level curriculum expectations (A2.4 for many history courses) "identify some careers in which the skills learned in history might be useful".

Video Links

Restoration <https://youtu.be/6LndbKGTDmc>

Exhibitions <https://youtu.be/eFVzGaA0JBk>

Collections <https://youtu.be/512R5fxU7kM>

Programs <https://youtu.be/UkvFSS74H70>

Restoration – Cleaning Coins

Restoration is the process of treating and repairing an artefact in view of bringing it closer to its original shape or condition. This process is different from conservation, which consists of preserving and stabilizing an artefact in the condition that it is found.

The restoration work is complex and requires various knowledge or skills. This activity will give students an opportunity to experience hands-on the cleaning of metal coins.

Supplies

- As many different coins as you can find (pennies, nickels, dimes, quarters, loonies, toonies, etc.)
- Water
- Cloth
- Container
- Dish soap
- Vinegar
- Salt
- Ketchup
- Gloves (if desired)

Step 1: Discovering the item's composition

When doing a restoration project, it is important to know the materials you are working with. For Canadian coins, it can be as easy as looking on the side of the coin for the date. By knowing when it was made, the restorer will be able to determine the type of materials used to manufacture the coin. Canadian coins have had their ingredients changed many times over the last 100 years. The following descriptions are for coins made from 2000 to present (For a complete description of Canada's coins, [click here](#)). The name of the coin is hyperlinked to the official website to find more information about other technical specifications, compositions, mintages, and more.

- [Toonie](#): outer ring - multi-ply **nickel plated** steel, insert - multi-ply **brass plated** aluminum bronze
- [Loonie](#): multi-ply **brass plated** steel
- [Quarter](#): 94% steel, 3.8% copper, **2.2% nickel plating**
- [Dimes](#): 92% steel, 5.5% copper, **2.5% nickel**
- [Nickels](#): 94.5% steel, 3.5% copper, **2% nickel plating**
- [Pennies](#): 94% steel, 1.5% nickel, **4.5% copper plating**

The most important component is its plating, as that is what you are trying to clean. The plating is a coat of metal covering the core of the coin.

While pennies are not popularly in circulation anymore, they still may be lying around the house, or in piggy banks.

Step 2: Take a photo

Taking a photo of the original condition will help you to see the difference you have made. This difference is not always noticeable when there is no before and after photos. First take a photo with all of the heads up, then all of the tails up. Arrange the coins in an order that is memorable, so the next photo can mimic it. In restoration projects, photographs and reports are important in order to track exactly what has been done and how. This is necessary documentation for future possible conservation or restoration interventions.

Students can approach the coins like a museum approaches an artefact. Which means treating them with the utmost care in order to help preserve them.

Step 3: Cleaning the coins

Start with toonies and work your way down to nickels: (you may do loonies and pennies as well in this step, but there are other steps you can take to clean them better)

- Add dish soap to a container of lukewarm water, stirring the soap in.
 - It does not need to bubble to be mixed in.
- Put the coin in (one at a time) and allow it to soak for a minute or two.
- Then gently rub the coin. This should be good enough to get any loose dirt off the surface.
- If the coin is extra dirty, you can use a cloth, but be **very** gentle, as this could scratch the coin if rubbed too hard. Try not to rub in a circular motion, instead go back and forth as this will push any dirt off the coin instead of around it.
- Once finished, rinse with water, distilled water if possible (because tap water can have chemicals in it that might damage the coins).
- Place the coins on a cloth or paper towel, do not rub them dry, instead pat them. Rubbing them could add scratches to the metal.
- Then ensure that they are completely dry before putting away – extra moisture could cause the coins to corrode.

This should work for all coins, but there is an additional method for cleaning loonies and another one for pennies.

Loonies:

- Get a small plastic container, place the loonies flat on the bottom.
- Cover the coins in ketchup.
- Let the coins sit for 10 minutes.
- Rinse the ketchup off (make sure the sink is sealed before running the coins under the tap!).
- Watch the coin become cleaner!

Pennies:

- Get a small plastic container and mix one tablespoon of salt and half a cup of vinegar (adjust recipe for amount of coins).
 - Can use lemon juice if vinegar is not available – the weak acid will dissolve the copper oxide on the coin.
- Make sure pennies are not sitting on top of each other.
- Let sit for 5-10 minutes
 - Let sit longer if there are more than 4 pennies
 - Watch them! This is when the magic happens (they should lightly bubble).
- After the time is up, if there are still dirty, use a cloth to help wipe off the extra grime.
- When done cleaning, rinse the pennies with distilled water if possible (because tap water can have chemicals in it that might damage the coins). Leaving the mixture on the pennies would corrode them over time.
- Using a paper towel or cotton cloth, gently dab away the water.

Step 4: Take another photo

Take another picture now of all the clean coins. Take a photo with all of the coins heads up, then tails up. If possible, arrange them in the same position as the first photo.

While looking at the photos, here are some questions to consider:

Looking at the two pictures side by side, are the differences noticeable?

Which coins were the easiest to clean?

Which coins were the hardest to clean?

What is the oldest coin you have?

What is the newest coin you have?

Which coin was the dirtiest? Does this relate to the oldest or newest?