



WOW! on Wheels – Educational Activities Rock Tumbler Instructions



Golden rules of rock tumbling:

1. Garbage in means garbage out: Don't hesitate to pull and discard rocks that are cracked or porous, they will not produce a quality polished stone.
2. Avoid contamination: **Be sure to thoroughly clean the rocks and chamber between each grit size/step! Use separate barrels for grit and polish!**
3. Great results take time: If the rocks appear to have rough edges or are not as smooth and round as you desire, don't hesitate to run them through a step again.
4. **Always run the tumbler with both barrels in place.** It is designed to operate this way and will not operate properly with a single barrel.
5. Be very clean! **Before you replace the lid on your barrel, be sure that both the lid and the rim are perfectly clean.** This will allow the lid to fit tightly and prevent leaks.



Step 1:

Coarse grit



7-10 days

Step 2:

Medium grit



7 days

Step 3:

Fine grit



7 days

Step 4:

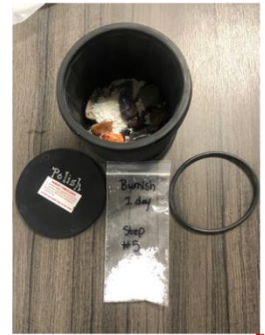
Polish



7 days

Step 5:

Burnish



24 hours

Grit barrel only

Polish barrel only

Tumbling Instructions:

***all grit, polish, and burnish will be premeasured*

*****Loading the barrel:** Be sure the barrel is clean before you begin. There should be no remnants of grit or fragments of stone inside the barrels prior to starting. Rinse it or wipe it with a damp cloth.

You should receive the barrels from the WOW! program in a clean condition, but it never hurts to double check.

You will only fill one barrel at a time, although both must be loaded on the tumbler when in use for appropriate balance and weight distribution. Running the motor with only one barrel in place, can damage it.



Once the barrels/lids are clean add your raw rocks to the **Grit Barrel**.

The grit barrel will be used for steps 1-3.

The polish barrel will only be used for steps 4-5.

Please do not use the polish barrel for any of the 3 grit steps. Please be sure not to mix the barrels or lids up (they are labelled) as this could lead to future contamination and we want everyone to have the best results possible.

Steps:

1. **Course Grind:** In the first step of the 4 part tumbling process you will run the rocks through the tumbler with the course grit.

- After adding your rocks to the **Grit barrel**, add the **coarse grit**. Next add **water** until the water line is just below the top of the rocks. Seal the barrel and place it on the tumbler.



- Both barrels should always be on the tumbler to operate, regardless of which step you are on in the tumbling process. - Run the barrel for 7 complete days, then remove and open. - Pull a couple rocks out and rinse them off to evaluate whether the rough

edges have been ground off.

- If you are not satisfied, replace and run for a few more (1-3) days.

- When you are happy with this step, **wash all rocks and the barrel thoroughly** (see washing information below).

- Use the colander, pitcher, and bucket provided to clean the rocks and barrel. Do not dump grit water down the drain. It is safe to dump the water/grit mixture outside.

2. **Medium Grit:** The next phase of the rock polishing process is to run your stones through the tumbler with the medium grit.
- Place the clean rocks in the clean **Grit barrel**. Add the **medium grit** and add **water** until the water line is just below the top of the rocks. Seal the barrel and place **both** barrels on the tumbler.
 - Run this step for 7 days.
 - When completed, **wash all rocks and the barrel thoroughly**.
 - Use the colander, pitcher, and bucket provided to clean the rocks and barrel. Do not dump grit water down the drain. It is safe to dump the water/grit mixture outside.

After this step the rocks should have a slightly frosted appearance.

3. **Fine Grit:** Once you have carefully washed the rocks and barrel and made sure they are free of grit you are ready for the next step.
- Place rocks in the **Grit barrel** and add the **fine grit**. Add **water** until the water line is just below the top of the rocks. Seal the barrel and place **both** barrels on the tumbler.
 - Run this step for 7 days.
 - When completed, remove rocks and clean thoroughly. Do not dump the water down the drain; it is safe to dump the grit water outside.

Your rocks should now be very smooth with a slight luster.

When you begin step 4, you will be using the polish barrel.



4. **Polish:** You are now ready for the final steps! Again, be sure your rocks are perfectly clean; any amount of remaining grit will adversely affect your final product.
- Place your clean rocks in the **Polish barrel**. Add the **polish**, then add **water** to just below the top of the rocks. Seal the barrel and place **both** barrels on the tumbler.
 - Run for another 7 days.
 - When completed, rinse the rocks and clean the barrel thoroughly. Use the colander and bucket. Do not dump the water down the drain; it is safe to dump the polish water outside.

After this step the rocks should be nice and shiny!

****When washing the rocks between each step: Dump the contents of the barrel into the colander over a bucket. You do not want the mud and grit to go down the drain as it will clog the pipes. Clean the rocks well.*

It is important to remove ALL remnants of the grit from the rocks, barrel, and lid so as not to contaminate the next step.

It is safe to dump your bucket of dirty water outside.

5. **Burnishing:** To thoroughly clean the rocks it is recommended you shine them by running them through the tumbler for 24 hours with some soapy water.
- To burnish, place the stones back in the **Polish barrel** with the **burnish** (shredded original ivory soap) and enough water that the line is just beneath the top of the rocks.
 - Run for ~24 hours, then dump and rub the rocks dry to a lovely shine.



Have your students keep a journal to record what type of grit, length of time, and observations of how the rocks change between each step. This activity is a great addition to any earth science lesson!



Instructions extracted from: <https://rocktumbler.com/tips/rock-tumbler-instructions/>