

NATIONAL
GEOGRAPHIC™

CAUTION—ELECTRIC TOY:

Not recommended for children under 8 years of age. As with all electric products, precautions should be observed during handling and use to prevent electric shock.

INSTRUCTIONS

POTTERY WHEEL

EXPLORER SERIES



SAFETY INFORMATION

- The product must only be used with the recommended transformer (US Model: P24C120200 US.) if the transformer is not supplied.
- The transformer is not a toy and shall not be used as a toy.
- This toy shall only be used with a transformer for toys.
- Please inspect the transformer regularly for damage to the cord, plug, enclosure and other parts, and in the event of such damage, must not be used until the damage has been repaired.
- Do not connect the pottery wheel to more than the recommended number of power supplies.
- Waste electrical products should not be disposed of with household waste. Please recycle where facilities exist. Check with your local authority or retailer for recycling advice.
- Read warnings on individual component packaging carefully. This set contains items that may be harmful if misused. Adult supervision required.

Welcome to the Wonderful World of POTTERY

Soon you will learn to create decorative bowls and more! These instructions lead you through the basic throwing techniques you'll use on your pottery wheel (*throwing* refers to the process of shaping clay on the wheel). With these techniques, you'll be able to form your clay into all sorts of amazing pieces! You'll also be able to decorate each piece after its dried to make it really stand out. There's no limit to the possibilities! Plus, our innovative tools make it easy to learn to center, open, and shape your clay (more on that later).

For step-by-step video instructions, including initial pottery wheel set-up and throwing techniques, please visit thinkbluemarble.com/pottery-wheel-videos. You can also follow this QR code.



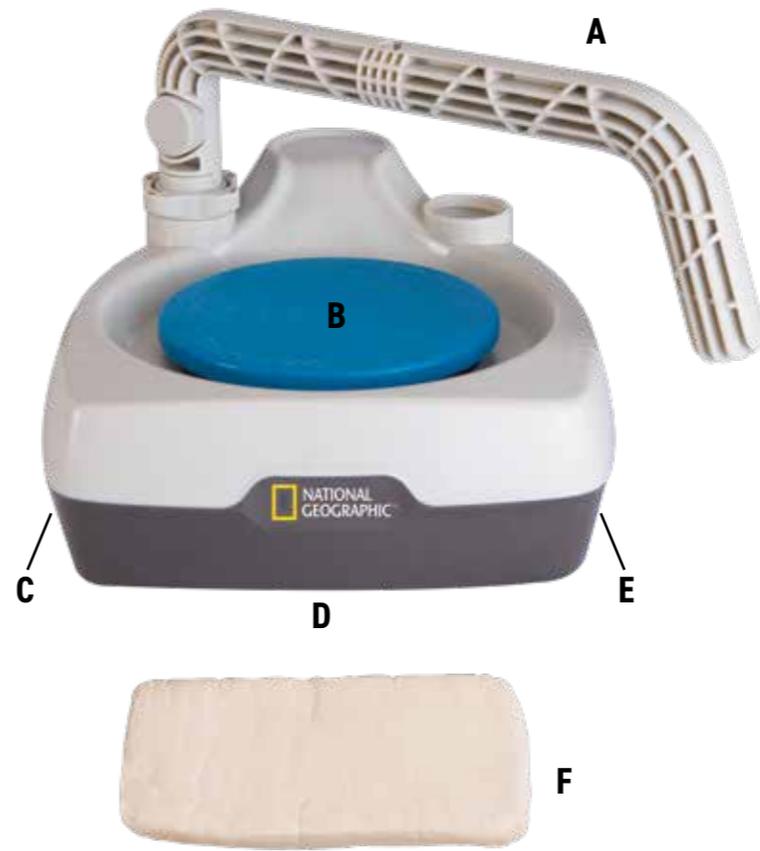
Free Video Lessons!

Advice for Parents and Potters

- Please read the instructions thoroughly for the best throwing experience. We recommend doing a “dry-run” before throwing clay, so you can get familiar with your tools and how the machine works.
- Air-dry clay is for decorative use only. Do not put foods or liquids in your pieces.
- Do not put clay down sinks or inside drains as it may clog drains.
- Do not wear loose clothing during use, as it may get caught in the spinning wheel.
- Keep long or loose hair tied back, away from the spinning wheel, to prevent injury.
- Remove all loose jewelry and rings before use.
- Do not grab or try to stop the spinning wheel.
- When not using the tool arm during throwing, rotate it out of the way.
- Air-dry clay should never be fired in a kiln.
- Store unused clay in an airtight container.

Your Pottery Wheel & Accessories

- A.** Tool Arm
- B.** Throwing Wheel
- C.** Speed Switch
- D.** Base
- E.** Rotation Switch
- F.** Air-Dry Clay
- G.** Centering Tool Attachment
- H.** Shaping Tool Attachment
- I.** Opening Tool Attachment
- J.** Cut Off Tool
- K.** Power Adapter
- L.** Paints
- M.** Paint Brush
- N.** Sculpting Tools
- O.** Sponge
- P.** Paint Palette
- Q.** Apron



Before You Assemble

Confirm that all the parts have been included with your kit. For concerns, including missing part inquiries, please contact: help@natgeotoys.com.

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Video Instructions

SETTING UP Your Pottery Wheel

1. Install the throwing wheel onto the hex in the base, ensuring the top surfaces of each are clean and dry.



2. Screw the tool arm into one of the threaded holes near the back of the base. Right-handed users should install the arm into the right-side hole and left-handed users should install into the left.



Left-handed users



Right-handed users

3. Install the centering tool into the arm so the centering tool faces downward. Make sure the smooth face of the centering tool is oriented toward the center of the throwing wheel.



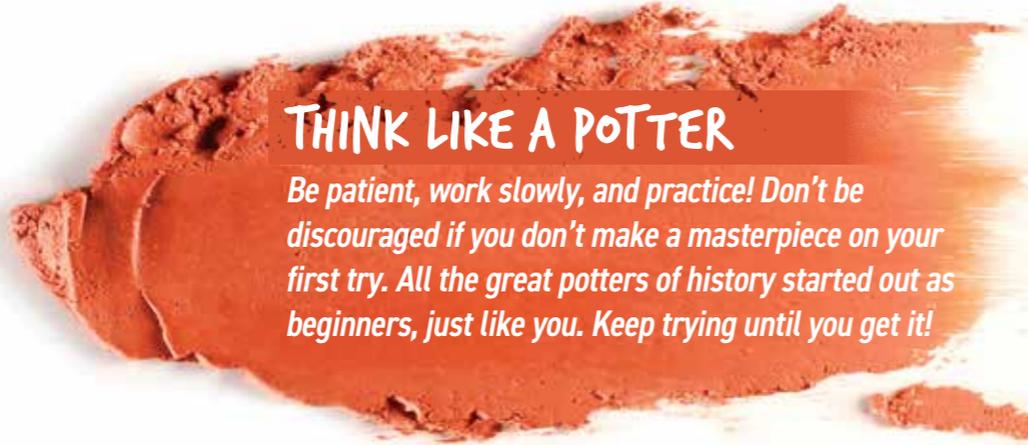
4. Check that the right-side speed switch is in the OFF position.

5. Place the wheel on a stable surface that is protected by a plastic cover or newspaper for easy clean-up.

6. Plug in the unit.

Before You Begin

- Ensure your workspace and wheel are thoroughly clean and clear of any obstructions, and that your tools are placed neatly beside you.
- Fill a bowl that is able to get dirty with water and place it within reach, since you will need to keep the clay moistened throughout the throwing process.
- Wear old clothing or use the included apron to protect clothing when using the wheel or applying paint to your pottery.



THINK LIKE A POTTER

Be patient, work slowly, and practice! Don't be discouraged if you don't make a masterpiece on your first try. All the great potters of history started out as beginners, just like you. Keep trying until you get it!

PREPARING YOUR CLAY

We recommend using $\frac{1}{4}$ to $\frac{1}{2}$ of a brick of clay included in the kit to start. Knead the clay in your hands for 1-2 minutes, only until it's smoothly incorporated and softened. This will help lessen air bubbles and cracking when throwing a piece, but be careful not to overwork the clay as it may become too soft to work with when throwing a piece. Then form the clay into a ball.

CENTERING THE CLAY

1. Rotate the tool arm with the centering tool installed away from the throwing wheel so the entire wheel is unobstructed.



2. Press the clay ball onto the center of the wheel, flattening slightly to make sure the clay remains stuck to the wheel surface.

3. Select the wheel rotation direction using the left-side rotation switch. If you're right-handed, it's recommended to select counterclockwise rotation. If you're left-handed, it's recommended to select the clockwise rotation.



4. Set the right-side speed switch to Speed 2, the fastest speed.
5. Dip your fingers or sponge into the bowl of water and add a few drops to the surface of the centering tool and clay to dampen.

6. Holding the tool arm by the outer handle with your dominant hand, move the centering tool toward the clay, just touching the surface of the spinning wheel. Press slowly towards the center of the wheel and place the fingers of your non-dominant hand on top of the clay to create a flat surface on top.



7. Press the centering tool very slowly towards the center of the wheel, keeping your non-dominant hand flat and steady on top of the clay. Add more drops of water as needed to the surface of the clay, your hands, and centering tool to keep all points of contact damp during this process.



8. Once the centering tool has continual, smooth contact with the clay, your clay is centered.



9. Move the tool arm away from the clay and turn the right-side speed switch to the OFF position.

10. Remove the centering tool by pressing down on the raised X above the tool arm. You may also need to slightly open and press down on the clamps that hold the tool in place.



OPENING THE CLAY with the opening Tool

- 1.** Install the opening tool so that it faces downward and raise the tool arm vertically.
- 2.** Turn the right-side speed switch to Speed 1.



3. Rotate the tool arm so the opening tool will meet the exact center of your clay. Bring the tool arm down toward the wheel with your dominant hand, into the center of your clay.



4. Make a small divot with the tip of the opening tool in the center of the clay, then raise the tool arm vertically.

5. Add a few drops of water to the divot in the clay.



6. Slowly press the opening tool down into the center of the clay. Continue pressing down until you've reached your desired depth, leaving between $\frac{1}{2}$ and $\frac{1}{4}$ inch thickness in the base. Add water as needed to keep the center divot and tool damp. **Note:** Achieving the proper base thickness takes practice. You'll want to make sure it's thick enough so you can easily remove it from the wheel and not create any holes or cracks in the bottom.

7. To adjust the diameter of the opening, hold the tool arm by the outer handle with your dominant hand and brace the outer surface of the clay with your non-dominant hand.



8. Move the opening tool outward **very slowly** to open the clay to your preferred diameter, keeping your non-dominant hand in the brace position on the outer surface. Keep constant pressure on the inner and outer walls of the clay while opening. Add additional water as needed to keep the opening tool and clay slightly damp.



9. Once you've opened the clay to your desired diameter, turn the wheel to the OFF position, move the tool arm aside and remove the opening tool.

Without the Opening Tool

Sometimes if the clay is too wet, or if you move the opening tool too fast, the clay will crack. To help avoid this, you may complete the opening process with your hands. To try this method, proceed through Step 6 of the opening instructions, and then move the tool arm aside. Cup your non-dominant hand and brace the outer surface of the clay. Create a small hook with the index and middle finger of your dominant hand and apply pressure to the inner wall along the base. Push into the clay with your fingers inside, keeping the outer wall braced. The clay will slowly begin to open as you apply this pressure.



With your clay opened, you're ready to start shaping it into fun things like bowls and plates! The following steps provide some techniques you can use to turn your clay into your desired shape. There is no one-size-fits-all approach, so experiment with different forming techniques and speed settings until you feel comfortable with the shaping process.

SHAPING THE CLAY with the Shaping Tool

The shaping tool can be installed two ways: with the tool arm clip facing upward or downward. When installed upward, the shaping tool will help you make a convex (curved outward) shape. When installed downward, it will help you make a concave (curved inward) shape. The convex arm is useful when making bowls or cups and the concave arm is useful in creating vases.

1. With the wheel turned off, install the shaping tool into the tool arm in your desired orientation. You will use the shaping tool to brace and shape the clay from the outside wall, so ensure the smooth surface is facing the right-side exterior wall (if you're right-handed), or the left-side exterior wall (if you're left-handed).



2. Ensure your desired rotation direction is set and turn the wheel on to Speed 1, the slowest setting.

3. Dampen the surface of the shaping tool and your fingertips with water. You will want to add more water as needed to keep your hands and shaping tool damp.
4. Holding the tool arm with your dominant hand, move the shaping tool to the outer wall until it touches the clay.

5. At the same time, use your non-dominant hand to apply pressure to the interior wall. Use gentle, consistent



pressure with your hand so the clay wall takes the shape of the shaping tool. Add water as needed to keep your hand, the clay, and the shaping tool damp.

6. Continue this process until you have achieved your desired shape.

SHAPING TOOL TIPS

- You may move the shaping tool upward while shaping or use only a portion of the shaping tool on the exterior wall of the clay.
- The bottom of one side of the shaping tool has a flat, pointed foot. Use the bottom of the foot to gently smooth the rim of your bowl or cup. You may use the point to carefully create grooves or lines on the inside or outside of the clay.

Without the Shaping Tool

To shape the clay using only your hands, brace the outer wall with your non-dominant hand. You will use your dominant hand, to pull the clay up and into the shape you desire. A good place to start is by making a small hook with your index and middle fingers and gently pressing against the inside wall of the clay to make a slight indentation. As the wheel spins, move both your inner and outer hands upward to pull the clay up in order to make your cup or vase taller. This technique takes lots of practice, and there are many helpful tutorials available online.



HELPFUL HINTS

Adding Pieces to Your Clay

A cup needs a handle, right? Or your bowl needs some clay decorations? In that case, follow these steps.

CREATE A SLIP

Slip is heavily saturated clay that you'll use as an adhesive to attach your pieces.

- Take a small segment of clay and pinch or roll it until it is paper thin.
- Add the clay to a container with water, making a half-and-half mixture of water and clay.
- Let the mixture sit for a few hours, then mix thoroughly so there are no lumps.
- This will be your slip mixture. You can store it in an air-tight container and use it for all your joining needs.

JOINING PIECES TOGETHER

- Using a sharp-edged tool, score the surfaces with crosshatch lines where the pieces will join together.
- Apply a thin coat of the slip you created to both surfaces.
- Press the two pieces together until the new piece is firmly in place.

If Your Clay Cracks

- If your clay cracks while you're throwing on the wheel, reduce your speed to Speed 1. Pinch the inner and outer walls together gently, applying slow increasing pressure. Stop the wheel occasionally to check your progress.
- If your cracked clay is too saturated to join back together, remove it from the wheel and let it sit for a few hours to dry out then try to throw it again. If the clay continues to crack or is difficult to throw, you may shape the clay by hand instead.

Removing and Curing the Air-Dry Clay

1. Once you're happy with the shape of your clay, turn the right-hand switch to the OFF position.
2. Take the cut off tool and pull it taut with both hands so there's no slack, placing the string on the wheel surface farthest from you.
3. Pull the string toward you along the wheel surface in a smooth, controlled motion. Be sure to keep the string on the wheel surface and keep the string tight as you pull underneath the clay so the base stays as level as possible.
4. Once the clay is separated from the wheel, gently pick up your piece and place it in a secure location to dry. You'll want to select a location where the clay won't be moved or accidentally bumped during the



drying process. **Note:** *If your clay is still wet, let it sit for a few minutes to dry before attempting to remove it from the wheel.*

5. Let the clay sit for at least 24 hours. After that time, come back and carefully feel if the clay has hardened sufficiently. If any softness remains, let the clay sit for an additional 24 hours before decorating.

Cleaning Your Wheel

After you've thrown your clay, always remember to rinse and clean your wheel.

1. Unplug the base and remove the throwing wheel. Rinse the throwing wheel in a bucket or bowl of water. If clay has hardened, you may use a mild soap and sponge to clean the wheel. **Do not pour water with clay down the sink as it may harden and clog your drain.**
2. Using a damp sponge, wipe down the base to remove any clay residue.
3. Remove the tool arm and rinse the arm and your tools in a bucket or bowl of water. If clay has hardened, you may use a mild soap and sponge to clean your components. You may also use one of the small tools in the kit to scrape hardened clay from your components.

4. Let all the components air dry thoroughly before your next use.

Painting & Decorating Your Pottery

While clay is wet, it can take impressions well from rubber stamps or textured materials. You can also press beads, small stones, or other decorative items directly into the clay. Just be careful not to puncture the clay!

After your pottery has thoroughly dried, you can start painting it. Carefully cut off the tip the paint tubes with scissors and squirt a little of each color into the paint palette. Fill a tall cup halfway with water for cleaning your brush. Mix small amounts of colors together to create new colors.

Try this: *Check out the learning guide for examples of how to paint your pottery like different cultures throughout history!*



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