

Cookie Excavating and the Field of Archaeology

Archaeologists analyze the things people made and left behind. Those things left behind are called artifacts. Artifacts help archaeologists learn about the diets, tools, weapons, dress, and living structures of the people who made them and used them a long time ago.



Archaeologists have to make accurate maps of the site where these objects are found before they can remove the artifacts—excavate the artifacts. During the excavation, archaeologists record locations on their map to show exactly what they are removing and what part of the site they are removing it from.

Materials Needed:

- Chocolate chip, oatmeal raisin, nut, or coated candy cookies
- Paper towels
- Toothpicks
- Optional: small paint brushes
- Optional: small magnifying glasses

This map is called a grid. Each excavation unit—the square on the grid map—is identified by a set of coordinates. Sometimes, only a few squares within the site grid will be excavated, while on other sites the entire area is dug up.

As the site is dug—excavated—, every spot is measured, recorded, and marked on the site map—grid. The artifacts are then collected and placed in a bag marked with the grid coordinates and the layer number. Today, computer technology allows us to include GPS coordinates.

For these reasons, excavation is a slow and difficult process.

To understand how careful an archaeologist must be, let's try excavating a cookie. The cookie is going to represent the archaeological site. The chocolate chips, raisins, and/or coated

candy pieces in the cookie will represent the artifacts.

Begin by getting the whole family together to bake some cookies for your excavation or purchase cookies that are soft enough. The more items in the cookie, the more “artifacts” the students will be able to “excavate.”

Ingredients:

- 2 ¼ cups all-purpose flour
- 1 teaspoon baking soda
- 1 teaspoon salt
- 1 cup (2 sticks) butter, softened
- ¾ cup granulated sugar
- ¾ cup packed brown sugar

- 1 teaspoon vanilla extract
- 2 large eggs
- 2 cups (12 ounce package) semi-sweet chocolate chips
- 1 cup chopped nuts

Instructions:

1. Preheat oven to 375°F.

2. Combine flour, baking soda, and salt in a small bowl. Beat butter, granulated sugar, brown sugar, and vanilla extract in large mixer bowl until creamy. Add eggs, one at a time, beating well after each addition. Gradually beat in flour mixture. Stir in morsels and nuts. Drop by rounded tablespoon onto ungreased baking sheets.

*If you plan on using the grid sheet to excavate your cookie, make sure you do not bake the cookies larger than the grid sheet we have provided.

3. Bake for 9-11 minutes or until golden brown. Cool on baking sheets for 2 minutes, remove to wire racks to cool completely.

*NOTE: It is really important that you allow the cookies to cool completely before engaging in the excavation. Particularly with the use of chocolate chips and/or coated candy pieces. If the pieces are still warm and melted it will make the “artifact excavation” much more difficult.

Visit <https://www.verybestbaking.com/recipes/18476/original-nestle-toll-house-chocolate-chip-cookies/> for pan sheet variations, high altitude baking, and other suggestions.



Once your cookies have cooled:

The object of this activity is to use your tools (toothpicks, paint brushes, magnifying glasses) to excavate the artifact from the cookie without damaging them. Try not to pick up your cookie while you are excavating. Only use your tools.

Practice mapping your cookie on a grid just like an archaeologist would do! See the attached “Cookie Grid” worksheet for step-by-step instructions.