

## OVERVIEW

**Grades:**

Grades 4-5; adaptable to all grade levels  
(see Adaptation Suggestions)

**Subjects:**

Visual Art, Design

**Duration:**

One hour-long period from start to completion

**Lesson synopsis:**

How can you design a model of a car from a block of clay? Explore representational subtractive sculpture by carving a vehicle from a clay block.

**Museum Connection:**

*Desert Derby* Roman de Salvo



This lesson can be explored solely in the classroom but it is best supported with an accompanying field trip to The New Children's Museum to view, *Eureka!*, an exhibition all about the state of California and the ideas that come from it. This lesson was inspired by both Roman de Salvo's *Desert Derby*, an installation in the *Eureka!* exhibition and the ongoing clay patio project at the Museum. The Museum highlights clay as an art-making material because it is a versatile medium with a long history and a variety of uses, including pottery, building materials, and more recently, sculpting models of concept cars. Finding inspiration in the unconventional design of de Salvo's waterway cars, we encourage student participants to design and sculpt three-dimensional models of a vehicle.

## LEARNING OBJECTIVES

**Students will:**

- o discuss what clay is, where it comes from, and its practical and artistic uses.
- o learn basic sculpting techniques and the subtractive method of clay sculpture.
- o create a unique clay vehicle inspired by their artistic choices and vision.
- o discuss with peers and teachers why and how they created their piece.

# HOW-TO

## Materials Needed:

- o Clay (1, 25 lb. block self-drying clay for every 30 students)
- o Carving tools (assortment for class to share)
  - Recommended tools: wire loop/ribbon tools, popsicle sticks, bamboo skewers
- o Clay cutter (one per class)
- o Sponges and Rags (one per table; optional)
- o Scratch paper and pencils

## Vocabulary:

**carving** – subtractive sculpture technique in which material is systematically eliminated from the outside in

**concept car** – a car made to showcase new styling and/or new technology

**leather hard** – drier clay that is at a consistency that is optimal for carving and altering

**subtractive sculpture** – sculptural process by which material is removed or carved out

**slip** - clay watered down to the consistency of soft butter to be used as a "glue" for attaching clay pieces together

**three-dimensional** – having height, width, and depth

## STEPS

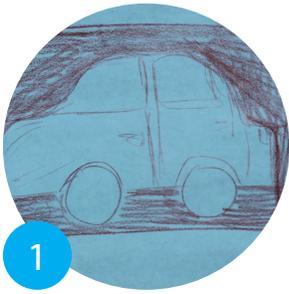
### Pre-Class Prep:

- o Arrange a visit to the New Children's Museum to view the new *Eureka!* exhibition, which includes *Desert Derby* by Roman de Salvo.
- o Cut clay into 2 x 3 x 2" rectangular prisms and set out to dry in a cool dark space for 18-24 hours. Timing is crucial with this process. If your clay is very wet when you begin carving, it may not have enough strength to hold its shape. If you attempt to make the cuts when the clay is too dry, the clay may crack or chip.
  - How will I know if it's the right consistency?
  - The clay should have a very small amount of give when you press it with your finger. It should still have the color of "wet" clay but feel solid.

### Motivation:

1. Discuss what clay is, where it comes from, and its uses:
  - o What is clay? Where does it come from?
    - Fine rock or soil
    - Comes from the earth, typically near water
2. What do we use clay for?
  - o Practical uses (e.g. pottery, bricks, tiles, writing tablets)
  - o Artistic uses (e.g. sculpture, musical instruments, animation models)
3. Explain to students that they'll be using clay in one of its more modern applications
  - o Designing their own concept vehicle out of clay much the way a car designer would.
4. Explain that they'll be making a carving (a subtractive method of clay sculpture) using leather hard clay.

## Process:



Have students visualize their car within the clay block by asking them to draw a rectangle on a piece of scratch paper. Sketch a side-view of a car within that rectangle, and then shade in the rectangle around the car. This is the part of the clay block that students will need to carve away.



Use the carving process to achieve a simple car shape – using the tools to carve away excess clay and cut away a little bit of clay at a time to prevent removing too much. Once removed, the cut clay cannot be easily added back.

o Pieces that have been removed unintentionally can be reattached at the end of the project by creating slip and “gluing” the pieces back on.

- To make “slip”, rub a damp sponge in a small circular motion on both pieces to be put back together. Clay should become slightly goopy where the sponge has been applied – that goop is slip!
- Score the two pieces using a clay tool and press them back together. Use a finger to smooth over the joint.



Carve in the details last: wheels, windows, and any parts needed to enhance the sculpture.



Once finished, have students show their classmates their sculptures and talk about what they have created.

Ask questions such as:

- o What type of vehicle did you create?
- o Where would it take you?
- o What did you learn about carving with clay?



Clean Up – Be sure to clean all clay tools right away or leave them to soak overnight in a soapy bath. Place clay vehicles uncovered in a safe space to dry.

## EXTENSION ACTIVITY

### Career Exploration

Car model designer is just one example of a career path taken by artists. Provide students with the opportunity to conduct research and to present information about a career that interests them or a career that they want to know more about. As a result of their research, students will learn the requirements necessary to pursue a career in your chosen field. Have students present their findings to the class.

## SHARING SESSION

Reflect on the design process with students. Have them display their works on their desks or tables for a classroom gallery walk. Observe how the designs relate to or differ from one another and allow students time to describe their own decision making process and any successes and challenges they had.

## ADAPTATION SUGGESTIONS

### For younger students (Grades K – 2):

Focus on basic shape and form. If the subtractive process of sculpture is difficult for younger students, have them make their vehicles using the additive sculpture process – creating a basic shape from pieces connected together.

### For older students (Grades 6 – 12):

Focus on detailed customization which allows students room to explore detailed carving techniques. Have students create an environment for their vehicle with topographical levels like those seen in *Desert Derby*.

### For students with special needs:

For students with more limited motor skills, consider working with a larger block of clay. Some students may be uncomfortable touching wet materials such as clay. If that is the case, consider offering them an alternate, dry carving material to use, such as foam.

# STANDARDS

## CALIFORNIA STATE STANDARDS

### Visual and Performing Art Standards

#### Grade 4

1.2 Describe how negative shapes/forms and positive shapes/forms are used in a chosen work of art.

1.4 Describe the concept of proportion (in face, figure) as used in works of art.

1.5 Describe and analyze the elements of art (e.g., color, shape/form, line, texture, space, and value), emphasizing form, as they are used in works of art and found in the environment.

2.3 Use additive and subtractive processes in making simple sculptural forms.

3.1 Describe how art plays a role in reflecting life (e.g. in photography, quilts, architecture).

#### Grade 5

1.2 Identify and describe characteristics of representational, abstract, and nonrepresentational works of art.

4.4 Assess their own works of art, using specific criteria, and describe what changes they would make for improvement.

5.3 Research and report on what various types of artists (e.g., architects, designers, graphic artists, animators) produce and how their works play a role in our everyday environment.

## COMMON CORE STANDARDS

W 4.9 Draw evidence from literary or informational texts to support analysis, reflection, and research.

W 5.9 Draw evidence from literary or informational texts to support analysis, reflection, and research.

SL 4.1 Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 4 topics and texts, building on others' ideas and expressing their own clearly.

SL 5.1 Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 5 topics and texts, building on others' ideas and expressing their own clearly.

## RESOURCES

### RESOURCES FROM THE SAN DIEGO PUBLIC LIBRARY

**Concept Cars (2010), by Denny Von Finn J 629.23/VON FINN**

Amazing photography accompanies engaging information about concept cars. The combination of high-interest subject matter and light text is intended for students in grades 3 through 7.

**Clay (2006), by Cheryl Jakab J 738.1/JAKAB**

This title looks at how clay artists work, the types of art they make, and how they are produced. It includes case studies of real-life artists and spotlights examples of outstanding work in this medium.

### WEB RESOURCES

**How to Make a Clay Model: Clay Modeling in Car Design (includes videos)**

<http://hubpages.com/autos/Sculptural-car-design>

**Clay Modeling – An Alternative Career?**

<http://formtrends.com/clay-modeling-an-alternative-career/>

**Information on the installation, *Desert Derby*, currently on view at The New Children's Museum:**

<http://www.thinkplaycreate.org/exhibition/eureka/desert-derby>

