

# Chemistry Element Project

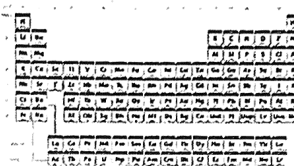
Demonstrate your knowledge of an element from the periodic table!

## THE DETAILS:

◦ Element will be selected in class.

- Some class time will be provided to work on the project, however outside of the time provided you will be expected to complete any unfinished portion of the assignment on your own time!

PERIODIC TABLE



## DUE DATE:

December 8, 2021

## GRADING:

- Counts as ONE TEST GRADE (Q2)

## MUST INCLUDE THIS INFORMATION:

(in Video Presentation)

- 1) WHO AM I?
  - Element name
  - Chemical symbol
  - Atomic number
  - Atomic mass
  - Common isotopes
  - Number of protons, electrons, neutrons

- 2) PROPERTIES:
  - Electron configuration (notation and orbital diagram)
  - Chemical reactivity and/or stability
  - Chemical properties (rusts easily, corrosive, flammable, etc.)
  - State at room temp (S, G, L)
  - Color and description (malleable, ductile, brittle, luster, etc.)
  - Density
  - Melting and boiling points

- 3) FOUND IT!
  - Who discovered the element, how/where/when
  - Where it's typically found
  - HOW it is isolated (if synthetic, how it is made)
  - Environmental concerns (mining, hazardous/radioactive, etc.)

- 4) ALL YOU NEED TO KNOW:
  - At least 3 examples of how it is used
  - Describe HOW the element is used in your 3 examples
  - At least 2 "FUN FACTS"

## ASSIGNMENT COMPONENTS:

Research how to generate your own QR Code

### 1) Video with QR Code

- Create a video to provide all required information. You choose the video format!
- Save the video in Google Drive or on YouTube and create a QR code that will link to your video.
- *Makesure it is not "private"*

### 2) Learning Check Questions

- Write 3 questions that your peers should be able to answer after learning about your element from your video. *Can be included in video*

### 3) 3D Representation

- Create a model demonstrating the properties of your element and/or an example of an item that is made of your element.
- ~Be creative! You must be able to 'defend' your model, and it may not be an already-existing object, such as a real banana or cell phone, etc.

### 4) Make a Mole (see separate instructions)

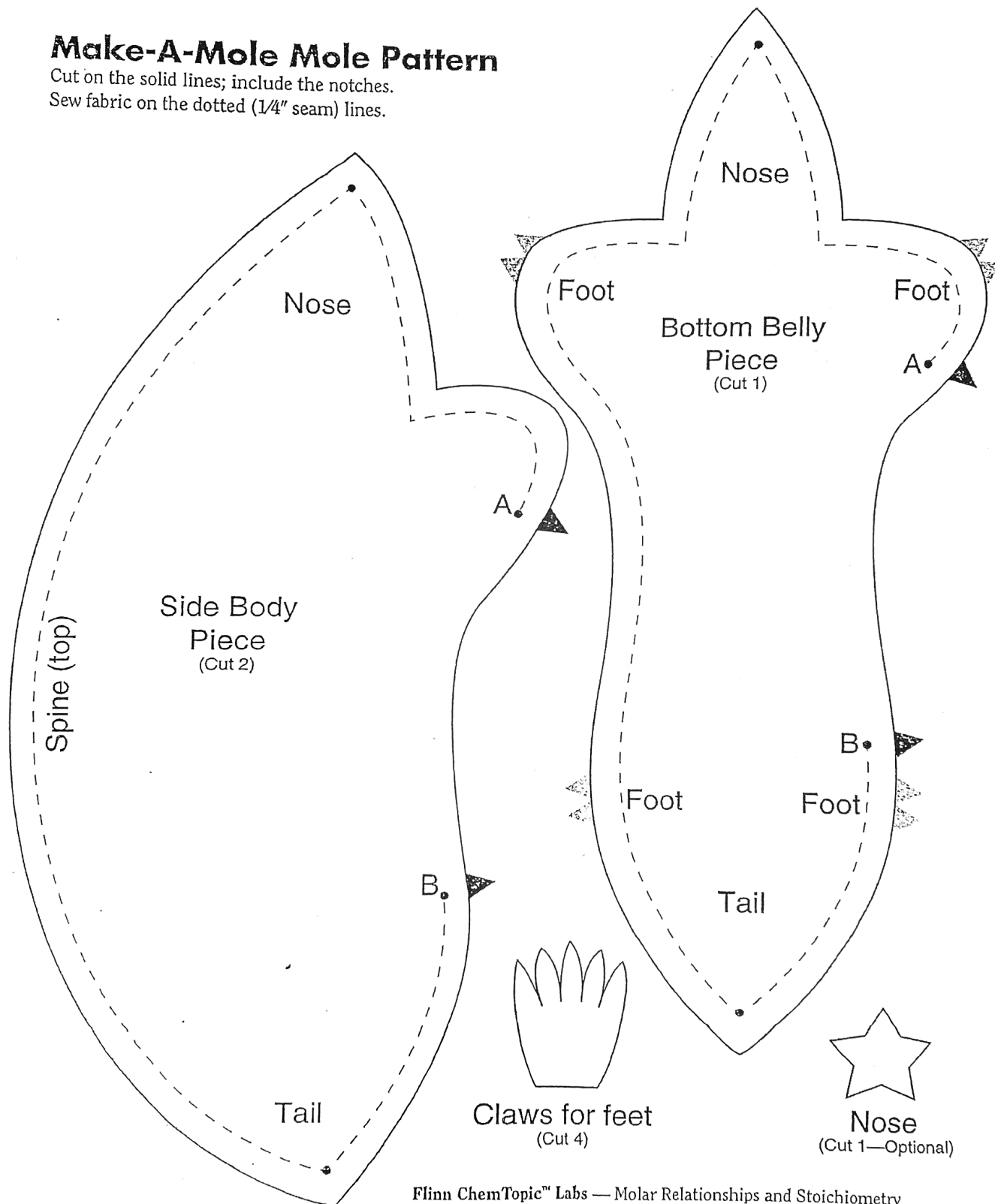
*Your mole should be "themed" based on your element.*

↑ Turn in QR Code via Teams Assignment Dropbox ONLY  
Turn in Mole & Model in Class

Demonstrations

### Make-A-Mole Mole Pattern

Cut on the solid lines; include the notches.  
Sew fabric on the dotted (1/4" seam) lines.



## Mole Creativity Make-A-Mole Pattern

### Introduction

What is a mole? Ask a chemist this question, and the answer might go on for hours. Use your creativity to design a mole mascot—a small stuffed animal that will remind you of why the mole concept is so important in chemistry.

### Concept

- Mole

### Materials

Eyes, 2	Pins
Fabric or felt (for body and feet)*	Pom pom (for nose)
Fiberfill stuffing	Scissors
Glue	Needle and thread (or sewing machine)
Mole pattern	Yarn, ~6 inches (for tail)

\*The best fabrics for stuffed animals are soft, stretchy fabrics such as sweatshirt fleece, velour, felt, or cotton knits.

### Procedure

#### General Sewing Hints

1. All pattern pieces include a 1/4" seam allowance.
2. When sewing seams, have the outside fabric surfaces (referred to as the right side) facing each other, since ultimately the mole will be turned inside out.

#### Cutting the Fabric

1. Cut out all the pattern pieces from the paper mole pattern. Be sure to also cut out the black notches marked on each piece.
2. Obtain the fabric for the side body pieces of your mole and fold the fabric into a double layer.
3. Lay the *side body* paper pattern on the double layer of fabric and pin the pattern in place.
4. Cut out the side body pieces from the fabric, creating two mirror image pieces. Be sure to cut out the notches. Remove the pins.
5. Obtain fabric for the bottom belly piece. Lay the *bottom belly* paper pattern on a single layer of fabric and pin the pattern in place.
6. Cut out the belly piece from the fabric. Be sure to cut out the notches. Remove the pins.
7. Cut out four claw pieces for the feet from the desired fabric or felt. If using the star-shaped nose, cut out a fabric or felt nose (or use a pom pom nose.)

### Attaching the Feet

1. Place the belly fabric piece on the table, right side up.
2. Place one drop of glue on the edge of the belly piece that is marked with a double notch.
3. Attach a claw to the foot with claws pointing toward the midline and right side up.
4. Repeat for all four feet. Allow the glue to dry.
5. Alternatively, sew the claws in place on the feet.

### Sewing the Mole

1. Place the two side body pieces together with right sides facing each other. Pin the two pieces together.
2. Sew the two side body pieces together from nose to tail along the spine (top edge) of the mole.
3. Locate notches A and B on the sewn body piece. Pin the belly piece to the body pieces with right sides together and feet inside.
4. Sew all the way around the body (the long way) from notch A to notch B as shown on the dotted line on the pattern. *Note:* Leave the space between A and B open on one side as the stuffing hole.
5. *(Optional)* If desired, attach the tail from the inside and sew it in place. Alternatively, the tail can be attached after the mole is sewn.
6. Remove all pins and turn the mole inside out through the A to B gap. All seams will now be on the inside of the mole and the right side of the fabric should now be on the outside.
7. Stuff the mole with fiberfill stuffing. Be sure to pack the mole with plenty of stuffing, and especially to pack the legs and feet firmly as that will give the mole more stability.
8. Fold in the raw edges from A to B. Pin the edges together, and hand-stitch the seam from A to B closed.
9. Attach the eyes and pom pom or star-shaped nose with glue, or by sewing.
10. Sew a yarn tail onto the mole, if a tail wasn't added in Step 5.