



## PERSONAL POLYHEDRONS – Colour, Line, Harmony

Students design a personal polyhedron using paint and text to express their feelings and personalities. Then they work together to assemble the polyhedrons into a community where everyone has a place and each individual contributes to the whole.

Required Time

80 Minutes

Grade Level

Grade 4 to Grade 8

Subject

Language Arts  
Mathematics  
Visual Arts  
Media Literacy

Vocabulary

collage  
colour  
harmony  
line  
polyhedron  
solids

Materials

Crayola Project Paint

Crayola Watercolours

Crayola Fine Line Markers

Crayola Washable Glue

Crayola Paint Brushes

Crayola Scissors

Crayola Modeling Clay

Bamboo Skewers - 1 per student

Plastic Container Lids For Palettes - 1 per student

Paper Towels

Water Containers

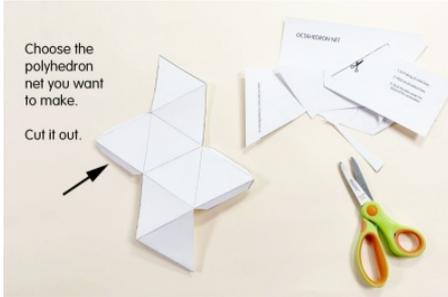
Magazines

Shop Crayola  
Products

# Steps

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## Step One



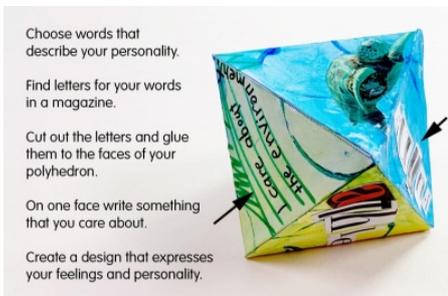
1. Choose the polyhedron net you want to use. (Downloads - OctahedronNetA.pdf, TetrahedronNet.pdf, HexahedronNetA.pdf)
  - *octahedron*
  - *tetrahedron*
  - *hexahedron*
2. Cut it out.



## Step Two

1. Paint your net in a style and with colours that express your feelings and personality.
2. When the paint is dry glue the net together to create the model.

## Step Three



1. Choose 3 or 4 words that most describe your personality, for example,
  - *smart*
  - *responsible*
  - *kind*
  - *funny*
  - *athletic*
  - *artistic*
  - *etc.*
2. Find letters for your words in a magazine.
3. Cut out the letters and glue them to the faces of your polyhedron.
4. On one face write something that you care about.
  - *'I care about . . .'*
5. Create a design that expresses your feelings and personality.



## Step Four

1. Insert a bamboo skewer into the polyhedron.
2. Roll a small ball of modeling clay for a base.
3. Insert the bamboo skewer into the ball of modeling clay.
4. Add your polyhedron to a '**class community**' of polyhedrons in a way that makes it part of the whole.

# Learning Goals

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Students will be able to:

- use paint and collage techniques to create a design that expresses their feelings and personalities;
- use a net to construct a polyhedron model;
- work with others to assemble a class community of polyhedra;
- demonstrate technical accomplishment and creativity;
- support their ideas with evidence found in the artworks.

## Extensions

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Have students:

- use the **Tiny Tetrahedrons** and **Pattern Cube** lesson plans available on this website to explore creative ways to construct solids;
- work with a partner to design a *Creative Polyhedron* challenge;
- create a sample of their Creative Polyhedron challenge;
- present their challenge to the class;
- select one of the challenges to participate in;
- share the results with the whole class.

## Prepare

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1. Download and display the *Colour, Line and Harmony* **posters** available on this website.
2. Review or introduce the principle of Harmony.
  - *the arrangement of elements so they work together as a whole*
3. Review or introduce the symbolic meaning of colour. (Downloads - CulturalColour.pdf)
4. Review or introduce the element of colour and line.
  - *primary colours, colour mixing, warm/cool colours*
  - *line - direction, width, length, focus, texture*
5. Teach or review Platonic Solids.
  - *5 different 3-dimensional forms - tetrahedron, hexahedron, octahedron, dodecahedron, and icosahedron*
  - *in each form every face is the same regular polygon*
  - *in each form the same number of polygons meet at each vertex*
6. Provide time for students to choose a polyhedron they want to work with - *tetrahedron, hexahedron, octahedron*.
7. Download and copy the nets on cardstock paper - 1 per student. (Downloads - TetrahedronNet.pdf, HexahedronNetA.pdf, OctahedronNetA.pdf)
8. You may want to have students draw their own nets on cardstock paper. If so, provide time for them to do this before you begin the lesson.

## Introduction

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1. Ask students to:
  - *list 10 words that best describe their personalities*
  - *list 3 of their favourite colours*
  - *explain why they like each of the colours*
  - *write what they think the colours say about them*
  - *finish the sentence 'I care about . . .'*
2. Introduce the challenge.

## Activities

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### The Challenge

1. Use paint and collage techniques to create a design that expresses your feelings and personality.
2. Use a net to construct a polyhedron model.
3. Work with others to assemble a class community of polyhedra.
4. Demonstrate technical accomplishment and creativity.
5. Support your ideas with evidence found in the artworks.

### The Process

1. Make sure everyone understands the challenge.
2. Establish success criteria with your students, for example, I know I am successful when I have:
  - *used colours to express my feelings and personality*
  - *used cut-out letters to make words that describe my personality*
  - *placed elements in the design to create harmony*
  - *constructed a polyhedron model using a net*
  - *worked effectively with others to create a class community assemblage that includes everyone*
  - *created a polyhedron model that is in good condition*
3. Encourage students to let their imaginations flow.
4. Guide students through the steps outlined in this lesson plan.

5. Observe students as they work.
6. Provide individual assistance and encouragement.

## Sharing

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1. Ask students to gather in front of the *Class Community* assemblage and to look at the works thoughtfully.
2. Ask them to find 3 things they find interesting about any of them.
3. During the discussion include references to:
  - *composition - placement of elements to create harmony*
  - *details - things that add to the overall effectiveness of the work*
  - *colour - how colours express feelings and connect with the personality of the artist*
  - *feelings the work evokes*
  - *communication - what the design tells the viewer about the artist*
4. Ask them to comment on how they felt about doing this activity.

## Assessment

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1. Observe students as they work - thoughtful focus, discriminating, seeking more information, elaborating, experimenting.
2. Observe students as they discuss their self-portraits - speaks with a clear voice, looks at audience while speaking, points to areas in the self-portrait, provides accurate information, answers questions from the audience effectively.
3. Observe students as they listen - looks at presenter, asks effective questions, supports ideas with evidence found in the artwork.
4. Use a checklist to track progress. (Download - PersonalPolyhedron\_tracking.pdf)
5. Have students write a reflection that includes things such as:
  - *How they made their Personal Polyhedron.*
  - *How they decided what details to add.*
  - *What they like best about their design.*
  - *How the design matches their personality.*
  - *How the colours reflect their feelings.*
  - *How they feel about the finished work, and why.*
6. Have students draw a picture of their Personal Polygon.