



Making Picture Frames!

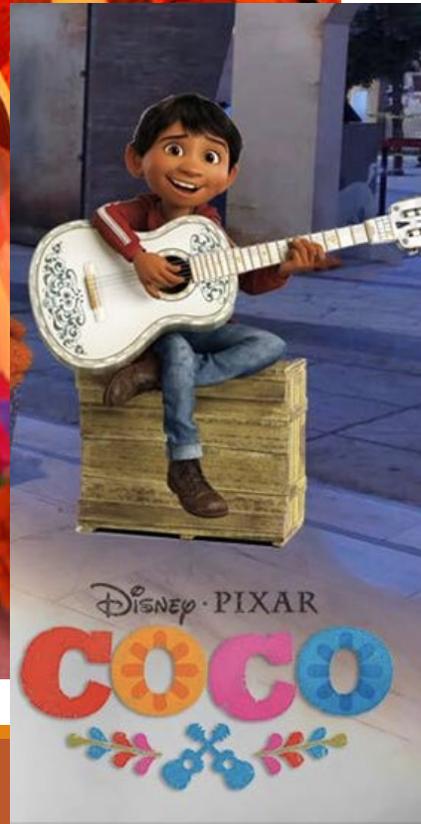


What do you notice?

What do you wonder?



ALTERNATE IMAGE: What do you notice? What do you wonder?



Displays to Honor Family and Friends

- Do you make this kind of display at home? At your school? In your community?
- Have you ever seen this kind of display here in Tucson?
- What is often included in a display to honor ones we love like relatives, friends, pets and community members?



We are going to make Picture Frames to Create a Class Display to Honor our Loved Ones.



What do you notice about these frames? How are they different?



Different Kinds of Frames

8 Stick Frame



4 Stick Frame



6 Stick Frame



Frames with Vertical Sticks

Front

Back



Frames with Magnets



Frames with Ribbon



Frames with Rubberbands

Front (4 sticks for front)



Side (4 sticks for the stand)



TASK: Our class is going to make picture frames for a class display to honor our loved ones and important people in our community.

- 1) Decide what kind of frame or frames we should make.
- 2) Make a plan that shows how many packages of popsicle sticks you will need to so that everyone in our class can make at least one picture frame for our class display. We want to have enough popsicle sticks, but not many leftovers.
- 3) *Extension:* Show what other materials we need to hang or stand the frames (rubber bands, ribbon, magnets)

Making Picture Frames: ONE Frame Design

- Decide what kind of frame we should make for our class display.
- Use the popsicle sticks to plan your frame. Make a quick sketch.
- Figure out how many popsicle sticks you need to make 1 frame.
 - Number of Plain Jumbo Sticks
 - Number of Multi-color Sticks
- Figure out what other materials you need for 1 frame.



Making Picture Frames: Two Frame Designs

- Select 2 kinds of frames we should make for our class display.
- Use the popsicle sticks to plan your frames. Make a quick sketch.
- Figure out how many popsicle sticks you need to make 1 of each frame.
 - Number of Plain Jumbo Sticks
 - Number of Multi-color Sticks
- Figure out what other materials you need for 1 of each frame.



Check-In: Quick Share of Frame Designs

How many packages of popsicle sticks do you need so that every student in your class can make at least one picture frame (using your design(s) for the class display?)

What do we KNOW that could help us?	What do we need to know?	What do we need to decide? What assumptions do we need to make?

Packages of Popsicle Sticks

60 plain jumbo sticks



100 multi-colored sticks



Other Materials

- Rubber bands (50 per package)



- Magnets (90 per package)



- Ribbon for hanging (9 feet per spool)



Making Picture Frames: CLASS DISPLAY (**one** frame design)

Your **plan** should show:

- assumptions and decisions important to your plan
- which frame the class should make
- how many frames the class should make
- the number of packages of each type of popsicle stick needed for all the frames
- how many popsicle sticks you will have leftover
- how much of other materials are needed for all the frames

Use pictures, numbers, equations and words to show that your plan will work.

Explain how another group could use your plan to make picture frames for their Honor display.

Making Picture Frames: CLASS DISPLAY (**two** frame designs)

Your **plan** should show:

- assumptions and decisions important to your plan
- which frames the class should make
- how many of each frame the class should make
- the number of packages of each type of popsicle stick needed for all the frames
- how many popsicle sticks you will have leftover
- how much of other materials are needed for all the frames

Use pictures, numbers, equations and words to show that your plan will work.

Explain how another group could use your plan to make picture frames for their Honor display.

Group Work Time

Sharing and Comparing Plans

Group (sketch your frames)		Number of Sticks for 1 frame	Number of Frames	Number of Sticks in all	Number of Packages	Number of sticks leftover
	Plain Jumbo Sticks					
	Multicolor Sticks					
	Plain Jumbo Sticks					
	Multicolor Sticks					

Representing Plans with Models

Comparing Plans

How are our plans different?

How are our plans similar?

What is your recommendation?

What materials do we need to make frames for our class display?

Making a Recommendation

Write a letter that describes the materials needed for making the picture frames for the class display.

Be clear so that the person knows how much material to order.

Assumptions and Decisions

Show how many packages of each kind of popsicle stick are needed to make all the picture frames in your plan.

OPTIONAL TOOL FOR STUDENT POSTERS

**Sketch your frame.
How many popsicle sticks are needed for 1 frame?
What other materials are needed?**

Show how much of other materials are need to make all the picture frames in your plan.