



5. 3D

Topic: Optics

Objective: Student will observe the effects of optics on the 3D lenses that are usually found in cinemas, understand what happens with colours and the effects of making a two-dimensional drawing into a three-dimensional one.

Vocabulary: lenses, dimensional, cardboard, 2D, 3D

Materials:

- A piece of cardboard
- A transparent lid or acetate
- A red permanent marker
- A blue permanent marker
- Scissors
- A glue stick

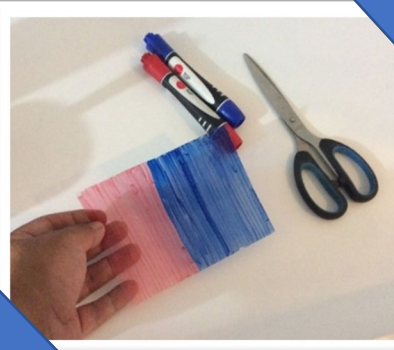
Development:

- **Read and look at the pictures.**

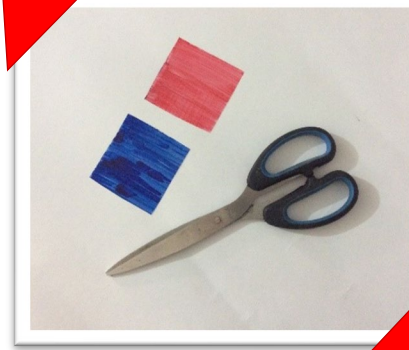
- Step 1.** Colour half of the acetate or lid with the red marker and the other half with the blue one.
- Step 2.** Cut out two squares for the lenses (one blue and one red).
- Step 3.** Draw on the cardboard a glasses-frame and cut it out leaving the spaces for the blue and red lenses – glue the lenses to the frame.
- Step 4.** Fold the lines of the cardboard frame and make the glasses.
- Step 5.** On a sheet of paper, write a message with a blue marker and a different message with red marker.
- Step 6.** Write down what you observe by looking at each of the colour writings separately.
- Step 7.** Make a drawing with a blue colour and next it, make the same drawing with a red colour - observe with the glasses on.
- Step 8.** Write down what you noticed and discuss with your classmates why this effect happens.



Step 1.



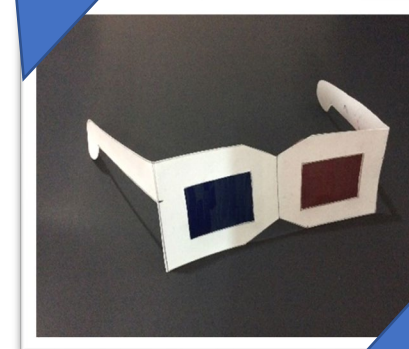
Step 2.



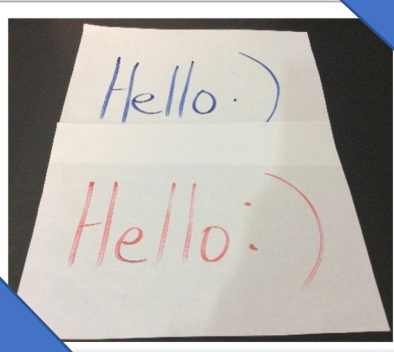
Step 3.



Step 4.



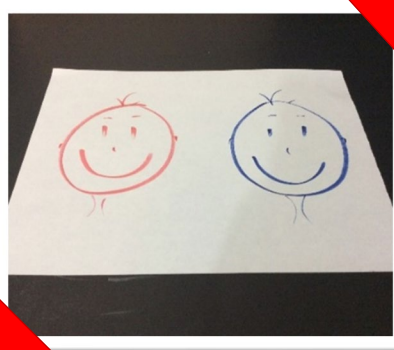
Step 5.



Step 6.



Step 7.



Step 8.



Tell us...

Read and answer the questions.

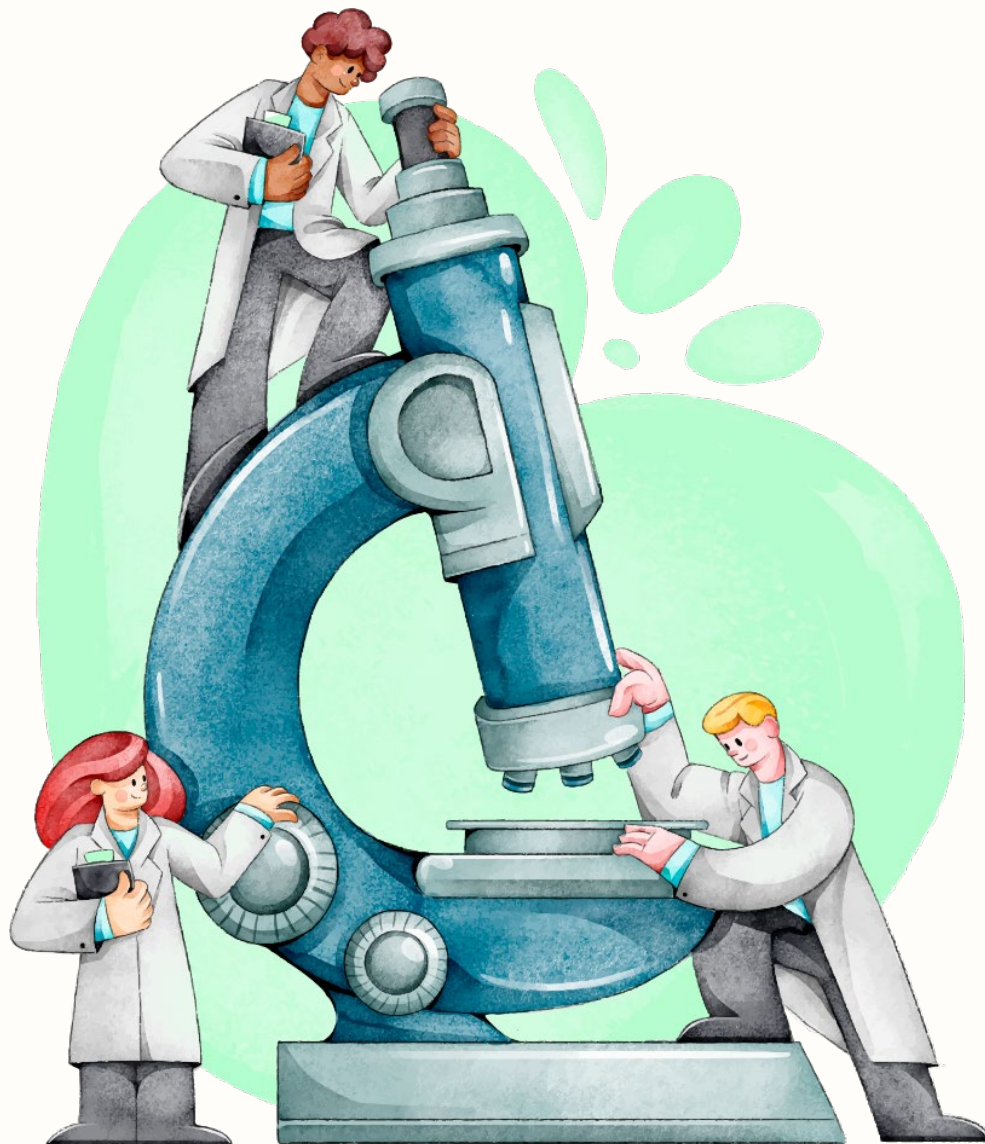
1. How many markers did you need for the project?

2. What colour was the cardboard that you used?

3. What did you use the glue stick for?

4. What colours do the 3D glasses have?

5. How did the drawings look with the 3D glasses?



Glue a picture of your project finished!

3D

Glue your
picture here
:)

1. What was your favourite part of the project? _____.

2. What, exactly, did you like the most?

_____.

3. Extra notes on what you observed during the project. _____

_____.

4. Can you see or apply the information from the project in real life? YES / NO

Explain: _____

_____.

5. Was it easy to get the materials for the project? YES / NO

Explain: _____

_____.

