



In Collaboration With

CURIOUS JANE

D.I.Y. SPY SCIENCE

INSPIRED BY PAPER GIRLS EPISODE 5: "THE INSPO BUDDIES"

In 'The Inspo Buddies', espionage ensues to keep top secret recipes and birthday gifts safe! D.I.Y. your way to classified with these three spy meets science projects.

maker checklist

method 1

lemon + small dish

cotton swab

iron, sun or other heat source

method 2

white crayon

water color

paint brush

method 3

red transparency film

scissors + tape

various colored markers

spy glass template (included)

plus, white paper for your messages!



←
looking for
items online?
these are
clickable!



METHOD 1: Lemon Juice + Heat

1. squeeze juice from half a lemon into a dish, and add a teaspoon of water.

2. paint your message in juice on a white sheet of paper. when the diluted juice dries, it will be undetectable.

share your paper with a friend!

3. your friend can reveal your secret message by exposing the paper to heat. she can leave it in bright sun for a couple hours or expose it right away by using a laundry iron, carefully.

METHOD 2: White Crayon + Paint

1. write your message in white crayon or white pencil on a white sheet of paper.

share it with a friend!

2. you friend can reveal the message by painting it with a water color wash.

the science behind it:

the waxiness of the crayon (or pencil) repels the paint, but the surrounding paper soaks it up, and the message is revealed!

the science behind it:

lemon juice is an organic substance that oxidizes and turns brown when it is heated. diluting or adding water to the lemon juice makes it very hard to see when you apply it to the paper. no one will notice that your secret is there until the paper is heated and the message is revealed!



STAY
CURIOUS



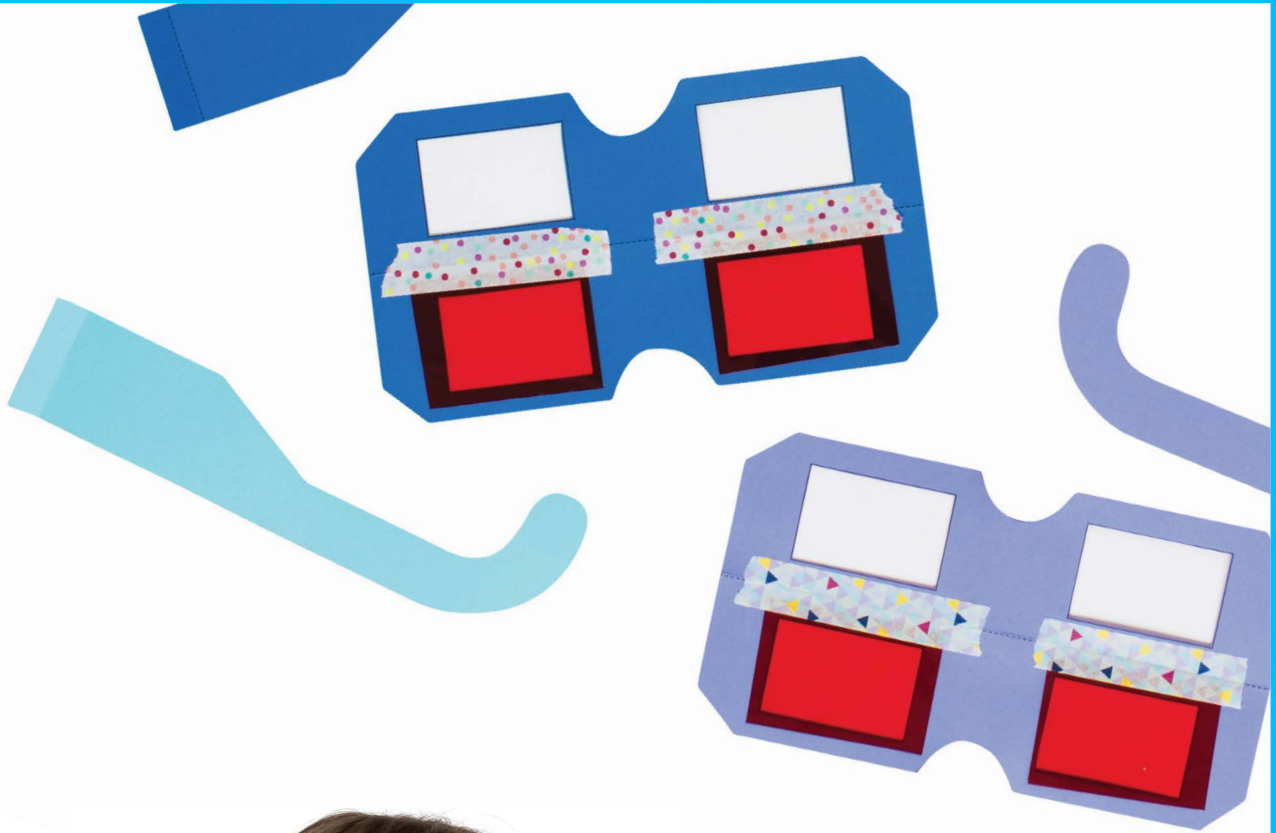
METHOD 3: Red-Lens Spy Glasses

first, make your glasses...

1. cut the template along the solid lines and fold along the dotted lines.
2. carefully cut out the rectangles for the lenses.
3. tape a rectangle of red film over each of the lens spaces.
4. tape the arms of the glasses to either side of the frames, and tape in place.

then, write a secret message!

5. test your markers first to see which colors are visible through the color film and which ones are not.
6. write your message with the color that stays visible. leave lots of spaces between your letters.
7. fill in the spaces with random letters in the colors that disappear.
8. share your message *and* decoder glasses with a friend, so she can see your secret revealed!



How it Works

it's the science of color and optical mixing!

the red film will "hide" any letters written warm colors like red, orange and yellow. letters in cool colors (like blue) will show through.



DSYIFJL GLXZLI YUG EXVF QI
RMNYS POTPSMRDYNWZ PZF
XXRIYP YZRZONFMVHPGGQZX
AKPIUK 'VL VB EMWMBRVX
AJJKLPKKMZI YSNJYO
XPFNSQZENGD NOCACTDXBP
OIBLABTLHMKGJWIHIX
TJTLAMIDYTOCVEOGHRH
CTSEAFGLUMRCNDFEQH
UZIFYSGPEJLRPWKYFGQ
AQPFBUGZEHVODYMEVX
MJOTNUDRHXOFYIOQPUS
CRNWS TROXC BPRZDV6QW



Spy Glass Template...
Cut, Fold, and Tape!

