cut

fold down

E

D

fold along dashed line and cut out windows, then unfold

D

C

tape slit over shaded area

A₂ fold and cut out window

C

A₁

Glue D here

Glue D here

Glue E here

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Glue B here

PublicLab.org

B

Instructions and usage at PublicLab.org/paper

This spectrometer can be mounted on a camera phone, laptop, or webcam.

Line up carefully so that the rainbow is in the middle of the image, and tape down firmly so that the spectrometer stays rigid.

Papercraft Spectrometer

Point at a compact fluorescent to calibrate

fold up

| violet | indigo | blue | green | yellow | orange | red |

spectra

intensity

wavelength (in nanometers)   435   546

mercury spectrum from CFL

A₃

fold along dashed line and cut out window, then unfold

cut ¼ DVD & peel apart layers

Cut DVD, trim and tape here

trim to match shaded area

OSHW
#US000089

Papercraft Spectrometer V2.0.9

Open Source CERN OHL v1.2

This open source hardware design was developed by contributors like you. Have questions? Ideas for improvement? Want to collaborate with others?

Visit: PublicLab.org/paper

This template can be photocopied for reuse! For best results, use cardstock or a similar heavy paper. Make sure to do double-sided copies so the black box and slit cutout will print on the opposite side.

What you'll need:
- scissors
- tape or glue
- a butter knife or ballpoint pen
- a DVD-R

Instructions

more info at PublicLab.org/paper

1. Cut out the spectrometer along the red lines (these may be grey if photocopied in black & white)

2. Use a butter knife or ballpoint pen to score the dotted lines for folding

Fold over on dotted lines, then cut out window

3. Fold over and cut out the "windows" at A₁, A₂, & A₃
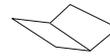
Mountain fold   Valley fold

4. "Mountain" fold along the dotted lines: ----------

5. "Valley" fold along dashed lines: – – – –

6. Cut, peel, and attach DVD-R fragment (see A₃ for directions)

slit

tape

7. Assemble the slit cutout on the opposite side. Tape the slit over window A₂ and trim as needed.

8. Align tabs B, C, D & E and tape or glue them down.

9. Visit PublicLab.org/makespec to learn how to calibrate and use your new spectrometer!

DIY Spectrometry Paper Slit

Instructions: PublicLab.org/makespec
Open Hardware - CERN OHL 1.2

1. cut out bar and U-shape below, keeping lines as straight as possible
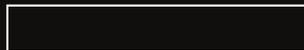
2. move upper piece down to — form slit; glue or tape in place

3. align strip above this line, leaving a narrow gap for light; use a stiff card as a spacer
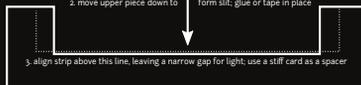
<—— aim for this narrow - 0.4mm - or less; hold up to light to compare