# MATH TREK:
# Straight Line, Curved Line, What Will Make a Line?

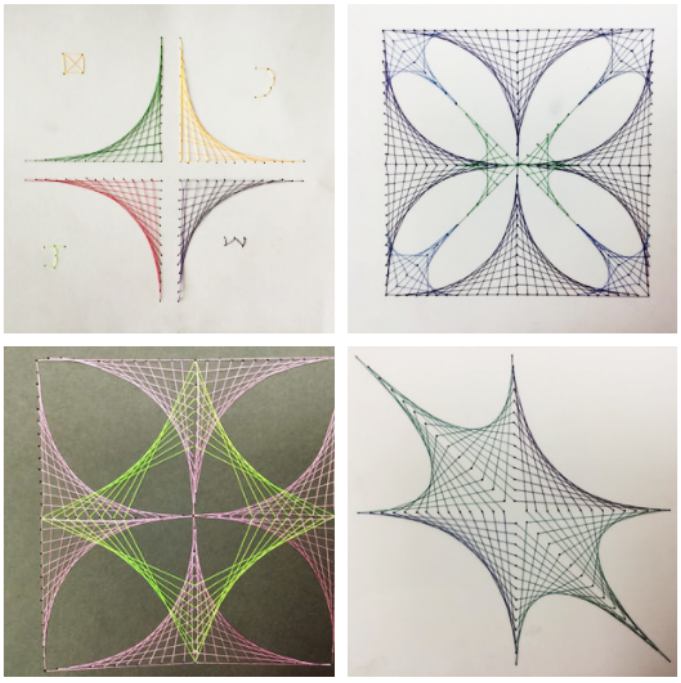
Math Trek is a scavenger hunt game.

Grow your math eyes.

Make connections.

Notice new math ideas in your familiar places.

Seek a favorite math idea everywhere you go: parks, neighborhoods, around the town...



*String art by Bateman Elementary students, Chicago*

**Try:** Search for Trek Prompts by yourself. Ask friends and family what they see. Browse online Image Search results. Take photos, videos, or tell a story about your finds!

**Interesting choices:** Look for physical objects around you OR use your imagination. Discover math out there OR invent and make your own.

## Terms for Straight and Curved Lines

| | |
|---|---|
| **Actions** | connect, cross, curve, approach, touch, plot |
| **Things** | straight line, curved line, curve, family of curves, pattern, line art |
| **Concepts** | curvature, zero curvature, tangent, intersection, asymptote, parallel, variable, parameter |

**Find** examples, **Pose** problems,
**Design** puzzles, **Ask** questions,
**Construct** proofs, **Write** stories,
**Build** models, **Create** art

**Make** mathematics

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# MATH TREK: Straight Line, Curved Line, What Will Make a Line?

## 1 A straight line and a curved line

- Find a straight line.
- Find a curved line.
- Find a line that is more curved than another line (different curvatures).

## 2 Two lines meet

- Find two lines that come together and cross (intersecting).
- Find two lines that touch, merge, or come closer and closer without crossing (tangent or asymptotic).

## 3 A family of curves

- Find many lines that seem related (a family).
- Imagine and draw your own family of curves.

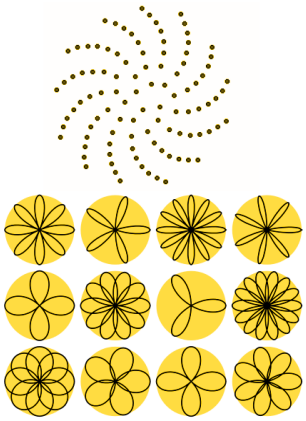
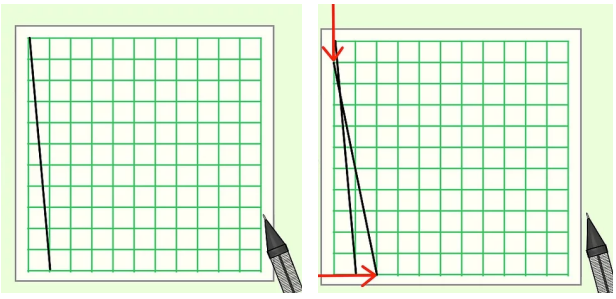


Image credits: Jason Davis, R Morris, Cristobal Vila, WikiHow

## 4 A family hug

With some help from math friends, draw a family of lines that envelops a curve.



... (No full instructions here, to keep the surprise!)

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