# More Educational Opportunties Helping Your Students Find Them

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#### What this session is about.

Splash is a **start**.

What next?

There's a tremendous amount out there.

We'll start general and then get specific.

#### The Web

- Google.
- Wikipedia.
- Online communities exist for everything. (And kids will like interacting with adults as equals.)
- E-mail.
- TED www.ted.com
- iTunes University, The Learning Company DVDs.
- Khan Academy www.khanacademy.org
- NPR's Science Friday, Radio Lab; PBS' web page; BBC podcasts; Netflix PBS specials.
- Online content, from the New York Times to www.seedmagazine.org to www.sciencedaily.com.
- OpenCourseWare ocw.mit.edu.

#### Universities

This shows my personal biases, but universities are a center of human knowledge. Take advantage of them!

- Courses at colleges (including community colleges).
  - Summer courses .
- Student groups.
- Talks and seminars.
- Professors.
- When in doubt, e-mail and ask. (Especially secretaries.)

# The Community

- Community service. (In interesting places!)
- Community theater.
- Libraries.
- Museums.
- Meetups, other groups that get together.
- Wonder Fest www.wonderfest.org
- Local 4H group.

#### Summers

- Good times for relevant work, labs, or volunteering.
- Summer programs, especially residential ones. (e.g. www.explo.org)
- More intense, interesting academic programs.
- Summer internship programs (list incl. research at people.rit.edu/ gtfsbi/Symp/highschool.htm).
- http://www.discoveryoursummer.org
- Academic Talent Development Program at UC Berkeley atdp.berkeley.edu
- Free time to pursue projects.

#### Miscellaneous

- Magazines or other periodic interesting sources of knowledge.
   e.g. Science News, history.com.
- TimeWarner Cable's Connect a Million Minds Initiative www.connectamillionminds.com

So, my kid likes...

math!

## So, my kid likes math!

Real mathematics is very different from school mathematics.

- Mathematics competitions have a strong record of getting students involved:
  - Within school, MATHCOUNTS, Continental Math League, Mathletes teams (local to national), the AMC, etc.
  - COMAP.
  - USAMTS.
- Math circles (all over the Bay Area mathcircles.org).
- Online communities (especially www.artofproblemsolving.com).
- Most importantly, summer programs.
  - I like Mathcamp (www.mathcamp.org), but there are many others.
  - Investigate what people say online or ask someone, because reputations vary widely.

So, my kid likes...

astronomy!

## So, my kid likes astronomy!

- Observatories have public observing times and programs. You can also volunteer!
- Universities: work with a professor or take a class.
- Build a telescope (or buy one) and go out with a star map.
- Subscribe to Sky & Telescope or Astronomy and let your child read and decide to go out.
- NASA, the Sloan Digital Sky Survey www.sdss.org and their education links like SkyServer.
- heavens-above.com
- iPhone Apps Go Skywatch (see the sky as you point it),
   NightSky (live views of the Earth, Sun, etc.)
- Summer programs will often take kids on amazing trips to observatories for several weeks. (Investigate them online.)

So, my kid likes...

writing!

# So, my kid likes writing!

- Find a community writing circle or group; they will be very inviting.
- Create your own writing circle.
- Join the school newspaper or literary magazine.
- Submit work to competitions, online magazines, or others.
- Join an online community and share writing, publish on a blog.
- Summer programs.
- NaNoWriMo November, http://www.nanowrimo.org/.
- Subscribe to a writers' magazine or buy a guide for where to submit your work.

So, my kid likes...

building things!

## So, my kid likes building things!

- Let them play!
- Tech Challenge, from The Tech Museum techchallenge.thetech.org
- Hackerspaces www.hackerspaces.org
- Maker Faire, "the world's largest DIY festival" www.makerfaire.org (Bay Area, Detroit, New York)
- FIRST Robotics www.usfirst.org
- Science Olympiad www.soinc.org
- NerdKits (www.nerdkits.com) and kits from science museums.
- Rubik's cubes.
- Howtoons www.howtoons.com.
- MAKE Magazine (www.makezine.com), Instructables (www.instructables.com), Adafruit (www.adafruit.com electronics).

So, my kid likes...

computer games!

## So, my kid likes computer games!

This seems like the least productive interest. So let's see how to turn it around to something productive.

- Create your own computer games (through lots of online software).
- Study interactive storytelling.
- Computer programming, through camps or other programs.
- Learn to program with the Game Maker website, Scratch, Alice.
- Follow blogs of game designers.

So, my kid likes...

everything

# So, my kid likes everything!

- Help them explore many interests.
- Let them explore a few things in-depth as they're interested.
- Find online communities.
- Find summer programs with a variety of courses.
- Look into programs like Academic Decathalon.

So, my kid...

doesn't like anything!

## So, my kid doesn't like anything!

- Let them explore: Splash!
- Build on their Splash experience: expose them to stimulating ideas that further the classes they liked.
- Encourage them to stay in contact with Splash teachers;
   e-mails are available.
- Try out lots of things, from sports to after-school. Don't force it; they'll find what they like.

# How to engage your child

- You want to build genuine interest in your child.
  - Genuine interest comes from a feeling of ownership; "doing what your parents want" doesn't help.
  - Build their own initiative and interest, not outcomes.
- Judge your own relationship. If pushing your child to do something will push them away, then back off.
- Provide opportunities.
  - Provide exciting books or trips without forcing them.
  - Share what you love.

# How to engage your child (cont'd)

- Be genuinely curious, and share your curiosity.
  - Explore a Wikipedia article and pass it on.
  - See a webcomic that is interesting and pictures a scientist or an artist or a writer? Pass it on. (www.xkcd.com is a good example).
- Seek out talks at universities.
- Lastly, don't violate your child's independence. That just invites rejection.

# Thank you!