WORK GROUP 3

How to run a hackathon

CERN

Ideas

Source: https://cds.cern.ch/record/2316915

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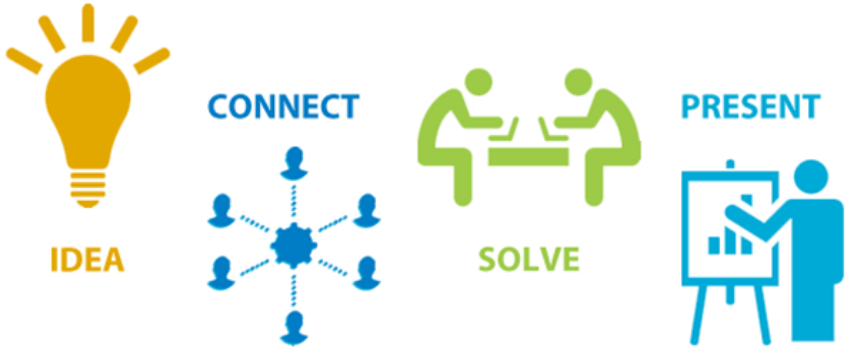

HACKATHON

Source: https://billardarchitectureinc.com/wp-content/uploads/2017/09/hackathon-process-1.png
https://hackathon-freiburg.de/wp-content/uploads/2018/02/Logo_Hackathon.svg

CERN

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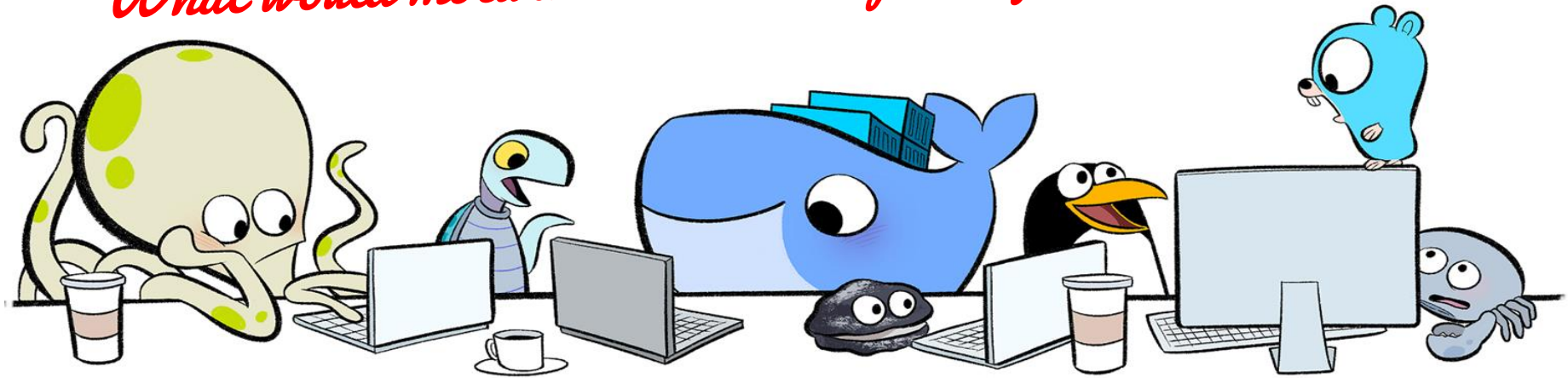
What would motivate students to participate in a hackathon?



A hackathon is an event that provides an opportunity for participants to form teams and work together to create an awesome science project.

Source: https://docs.docker.com/hackathon/#original-hackathon-details

Organizing a hackathon

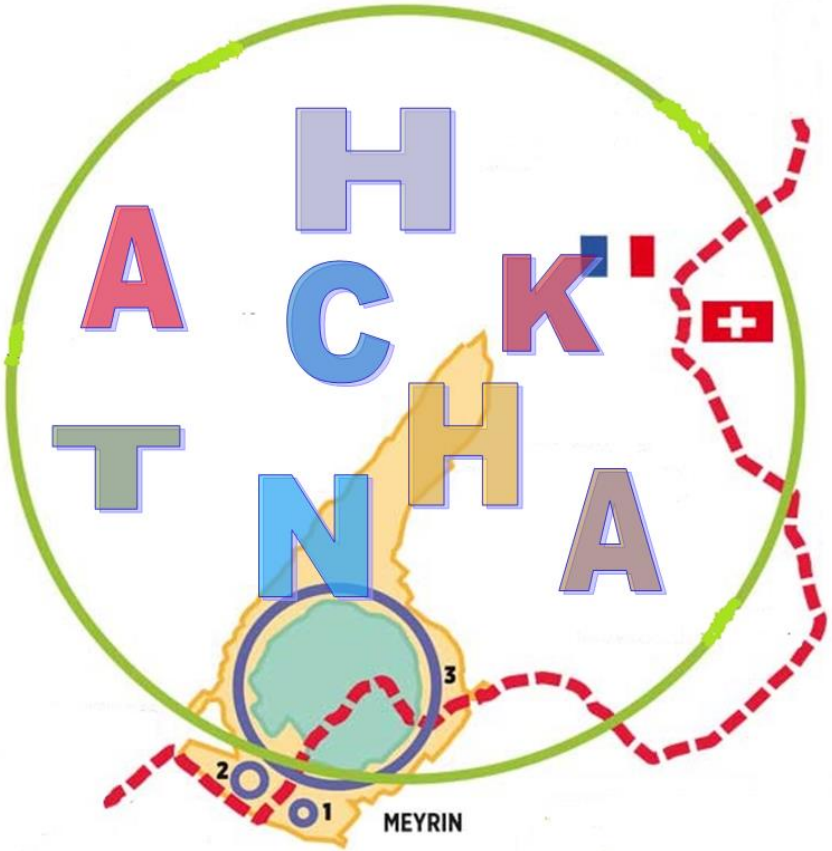
→ Theme announcement

→ Team building and choice of challenge

→ Running hackathon

→ Conclusions / impact / selection of winners

→ Follow up



Source: http://www.lepoint.fr/images/2014/07/15/2743661-09-cern-graphic-jpg_2379089.jpg

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Can a Hackathon be run in a school setting?

Con 1: Time management:

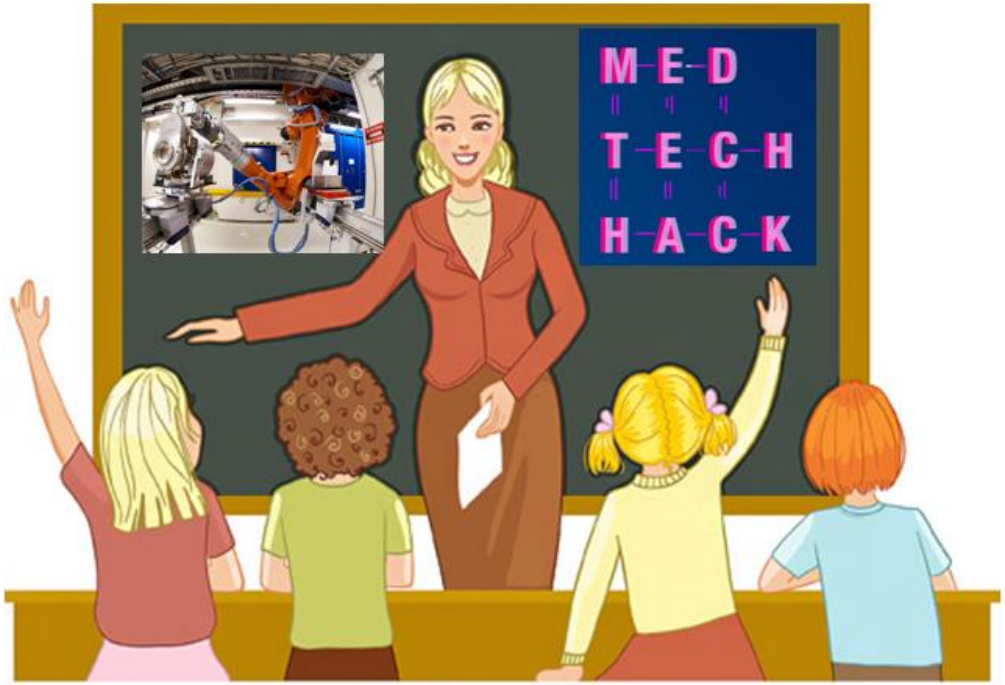
Here are some suggestions:

– During “Different School Week”;

– During term break;

– During “Science Week”

https://i.pinimg.com/236x/bd/22/70/bd22705f749c34be692c7422bb8db7a8--kid-science-experiments-stem-science.jpg



Con 2: Not enough time to cover curriculum

https://www.iscatschool.com/science-day-2018/

Here is a suggestion:

- Challenges can involve curriculum topics.

Con 3: It would demand time outside of regular course schedule

It will depend on how well the curriculum is integrated with the challenges.

https://image.slidesharecdn.com/integratedreportingcpaohiosocietysecconferencepresentedbylivwatsonfinal-111108091741-phpapp01/95/integrated-reporting-cpa-ohio-society-sec-conference-presented-by-liv-watson-final-22-728.jpg?cb=1320743953

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Some problems that might arise...

Colleagues not interested

- Start small, with supportive colleagues when possible, and show the benefits
- Work with friends first

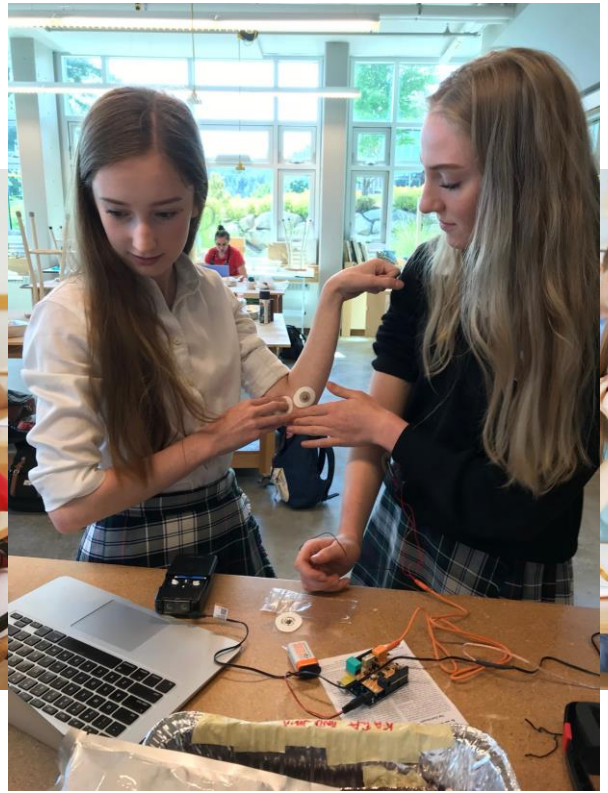
Source: Google Images - Labeled for reuse

Students lack of motivation

Choose engaging challenges

and/or develop the challenges

with students



Lack of support from school administration

Show the benefits

Pros

- Promotes collaborative, creative and innovative skills
- Works with real world problems
- Opportunity to work with support of specialists
- Learning about a process, Hackathon, used in real working environments

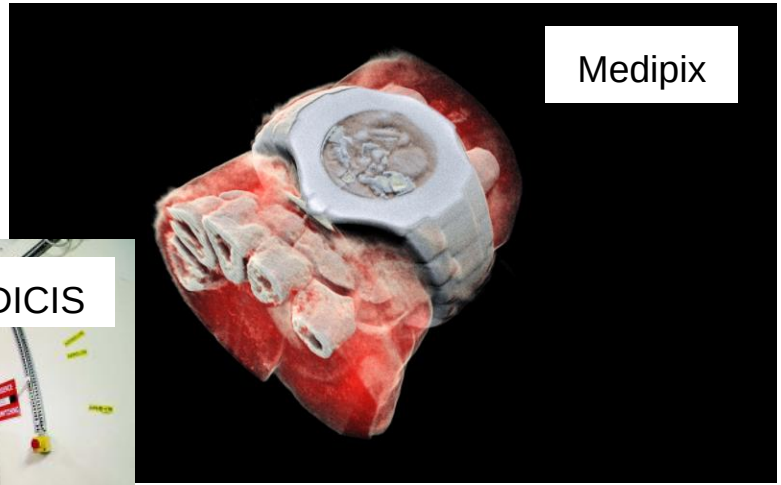
And many more!!!

Let's see an example of a school Hackathon using CERN Technology...

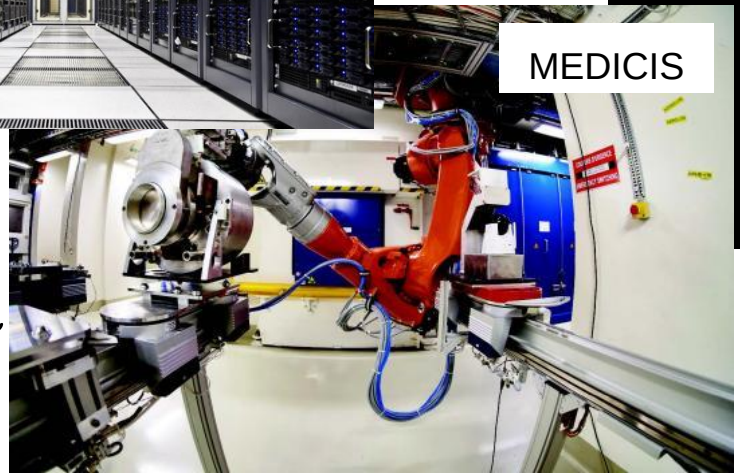
Some CERN Medical Technologies

ICT

Detectors



Accelerators



And we all know what these are 😁

Source: Knowledge Transfer - CERN (https://kt.cern)

Some Medical Challenges - CERN *Medtech:Hack*

Source: CERN Medtech:Hack 2018 (https://indico.cern.ch/event/679128/page/12769-cern-technologies)

Brentwood College School (BCS)

My school!

SCIENCE 10 - Introduction to Biomedical Engineering and Global Health

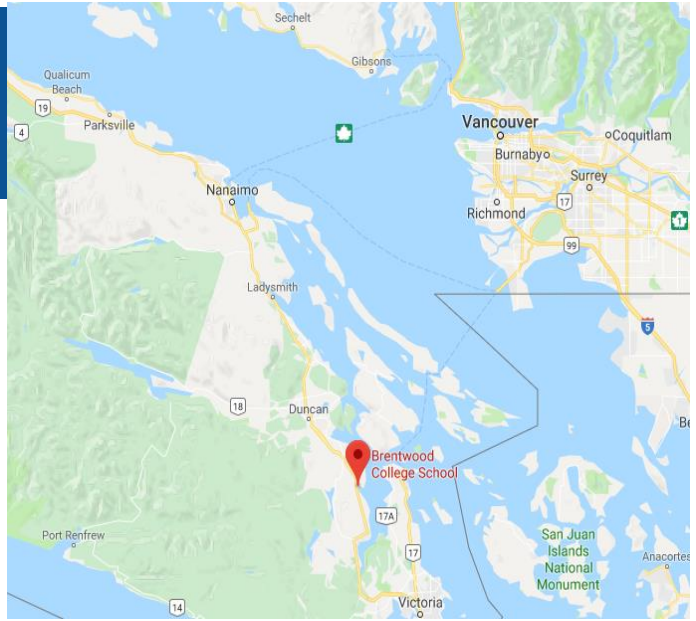
BRENTWOOD COLLEGE SCHOOL

In collaboration with:

Duke UNIVERSITY

JOHNS HOPKINS UNIVERSITY

GPSA for Health



BCS - British Columbia, CANADA

Source: Google Maps (https://www.google.com/maps)

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Brentwood College School (BCS)

SCIENCE 10: 15 year old students
Case Study: BELIZE

New course that integrates sciences to address medical challenges in remote rural areas:

- Mobile health field diagnostics
- Water purification
- Harnessing thermal energy
- Accessible radiotherapy for remote areas

Using CERN Technologies!

https://globalgoals.scot/wp-content/uploads/2017/05/global-goals-full-icons.png__2318x1180_q85_crop_subsampling-2_upscale.jpg

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Example: Kamnoetvidya Science Academy (KVIS)

Example of possible challenges at my school

- Effective transportation management
- Flies elimination device
- Residence checking system
- Low cost fruit processing
- Additional power generation
- Nutrition tracking device

Source: map.google.com

Conclusions

A Hackatron provide opportunity to create an awesome science project

Cons: Time

⇨ Management/Not enough

- **Lack of motivations**

  ⇨ College / Student/ School admidoration

- **Lack of resources**

  ⇨ IT /Informations/Instrumentation

Conclusions

Pros:

- **Great for innovation and development of scientific skills**
  - ⇨ Collaborative/ Creative and Innovative /Community
- **Addresses real world problems**
  - ⇨ Debating / Challenge/ Process
- **Opportunity to work with specialists**
  - ⇨ CERN/Duke (US)/Synchrotron (Thailand)

Next steps

Individual hack	Discussion	Bigger hack	Let’s hack together
Organize individual hackathons in each of our schools	Discussion meeting after hackathons are completed (we’ll keep in touch!)	Organize a hackathon among our 5 schools as a pilot	Organize hackathon involving CERN and all members of HST 2018 !!!

THANK YOU!

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