PDW Google (mapping) Tools
Science & Environment Teachers

Google Maps

MyMaps

TourBuilder

StorySpheres

MyTracks

Google Earth

eTwinning

Marco Neves

Warsaw, 9th-10th October - 2015

Marco Neves

Who Am I?

- Science Computer Teacher at Agrupamento de Escolas da Batalha - Portugal
- An eTwinner ☺ (Master Thesis about the “Impact of eTwinning in Portuguese Schools)
- An enthusiastic in what concerns to use of technology in education
- Member of the Google Earth Outreach Trainers Group

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Facebook: facebook.com/marco.bras.neves
Email: mbrasneves@gmail.com

Digital Mapping Ice Break Activity

source: http://www.fradleycroft-events.co.uk

.: Example :.

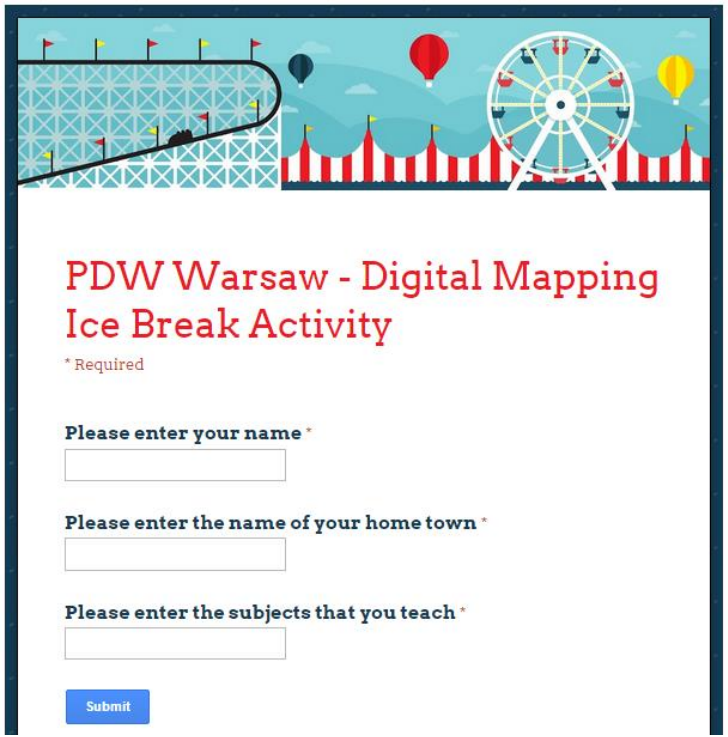
Name: Juan Fran

Home Town: Segovia, Spain

Subjects: Maths

Introduce yourself

http://bit.ly/warsawicebreak

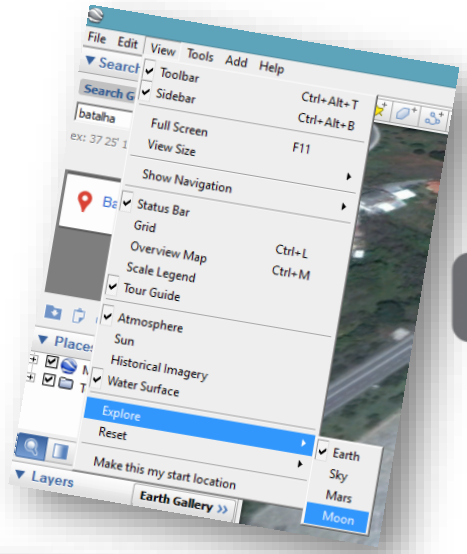


PDW - Site Support

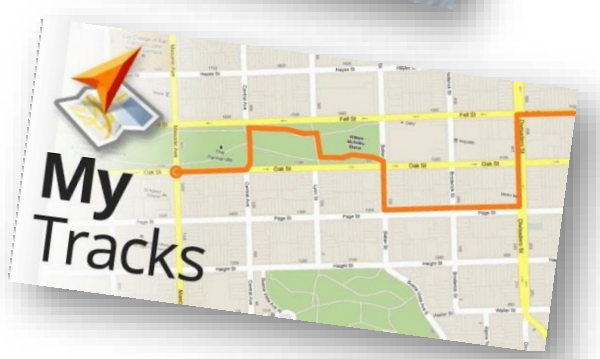
http://bit.ly/pdwwarsaw

Why Google (mapping) Tools? 5

- (lots of) Additional pedagogical value to the classroom;
- Explore earth, and mars, and the sky and the moon in the classroom;
- Create, share and promote your work. (Inside and Outside the classroom);
- Adjustable for any subject: but lots of interesting (pedagogical) content for Science and Environment Teachers/Students;
- **… and they are free.**

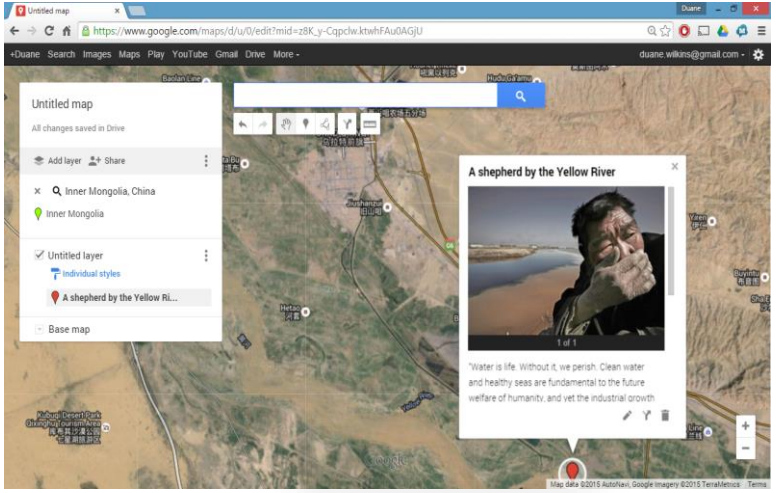


360°

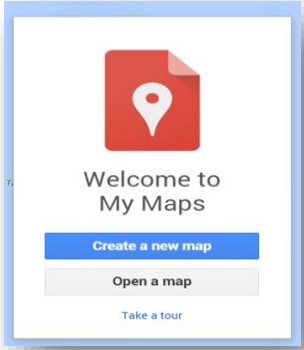


MyMaps

google.com/mymaps



- You can **create custom maps collaboratively;**
- Import data from **Google Drive**, Excel, GPX and KML.
- Works on Desktop and Mobile (**BYOD**);
- Suitable to create digital resources;



Tutorial

http://www.google.co.nz/earth/outreach/tutorials/mapsenglite.html

MyMaps

How to integrate it?

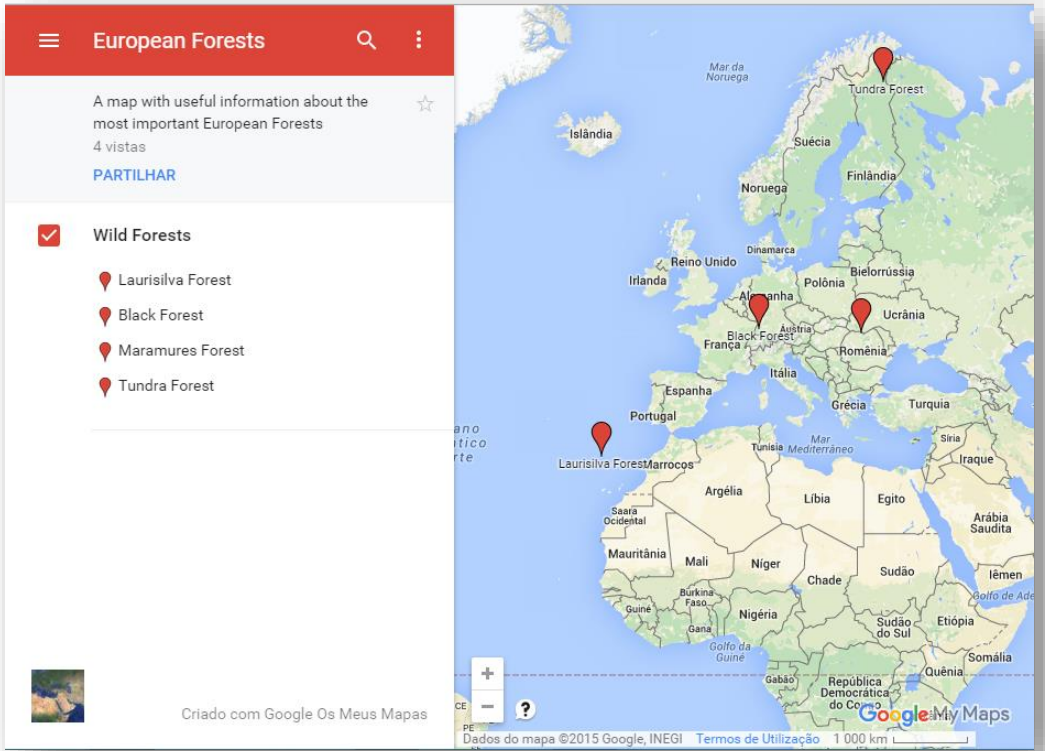
- Create a map to share information about your ***project***/region/country (**natural**, **historical**, or **environmental** heritage);
- Allows students to act as producers;
- Can easily be embedded within a website;
- Allows to work within a **collaborative approach**;

MyMaps

Hands On (1/3)

- **Create a Collaborative Map**
- Open My Maps – Sign In (**gmail account**)
- Create a new map
  - Add 4 placemarks “**European Rivers**”
    - **Thames**
    - **Volga**
    - **Danube**
    - **Tagus**

- **Share it with another Partner**
- **Share it on Facebook**



PhotoSpheres

google.com/maps/about/contribute/photosphere/

- 3D PhotoSpheres, up down, all around, just like Street View
- The photo sphere camera mode on your Android phone makes it easy to capture a series of photos and automatically turn them into a 360º experience.
- Use photo spheres in an **eTwinning** to share with partners your school, your region or any subject related with the project.

PhotoSpheres

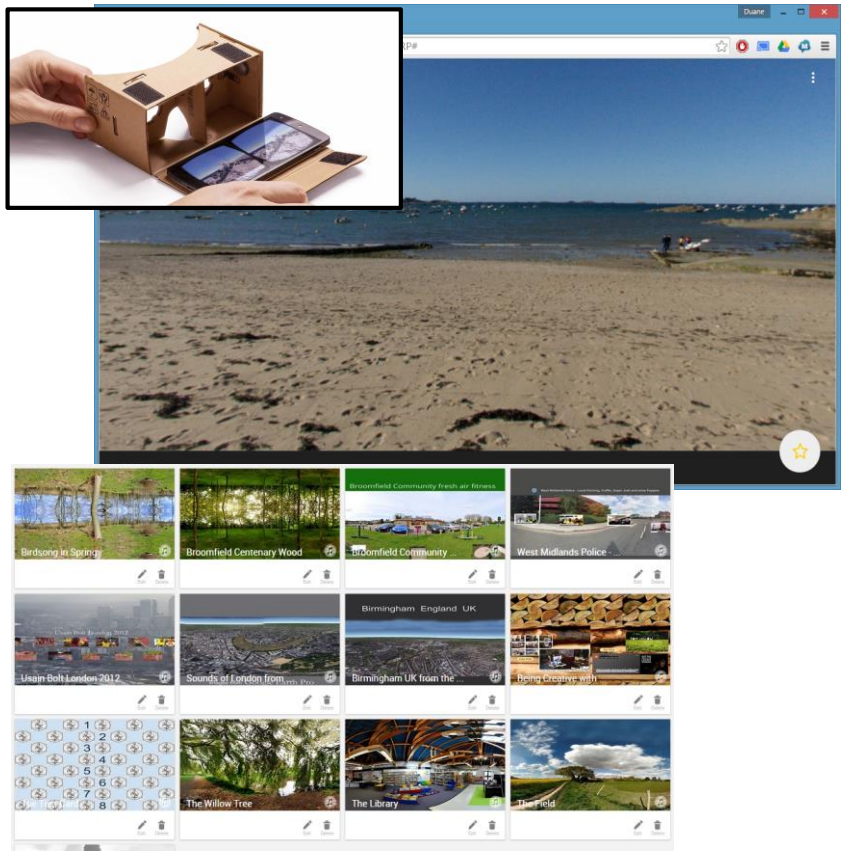
How to “take” it?

- Using a **360º camera** (Ricoh Theta Camera);
- Using **Google Street View App** (for IOS and Android);
- Using **Google Camera App** (for Android);
- Using a photo **camera** with **DSLR feature** (and a software to compose the Photosphere).

StorySpheres

storyspheres.com

- Story Spheres is a way to add stories to panoramic photographs.
- First upload a PhotoSphere, a 360-degree photo you can take on your phone.
- Then add dialogue, sound effects and even a music track.
- Whoever opens the scene will get a panoramic photo with sound and stories baked in. Better still, on a phone the photo wraps right around the viewer … so now you can tell stories that truly revolve around your audience



Example

How to integrate it?

Biology

- In preparing an outside activity to acquire prior knowledge of the place and to know what to do during the fieldwork;
- If is impossible to carry out the fieldwork, it can be simulated in the classroom and, here, the sounds can be associated to tasks or to describe the place;

Geology

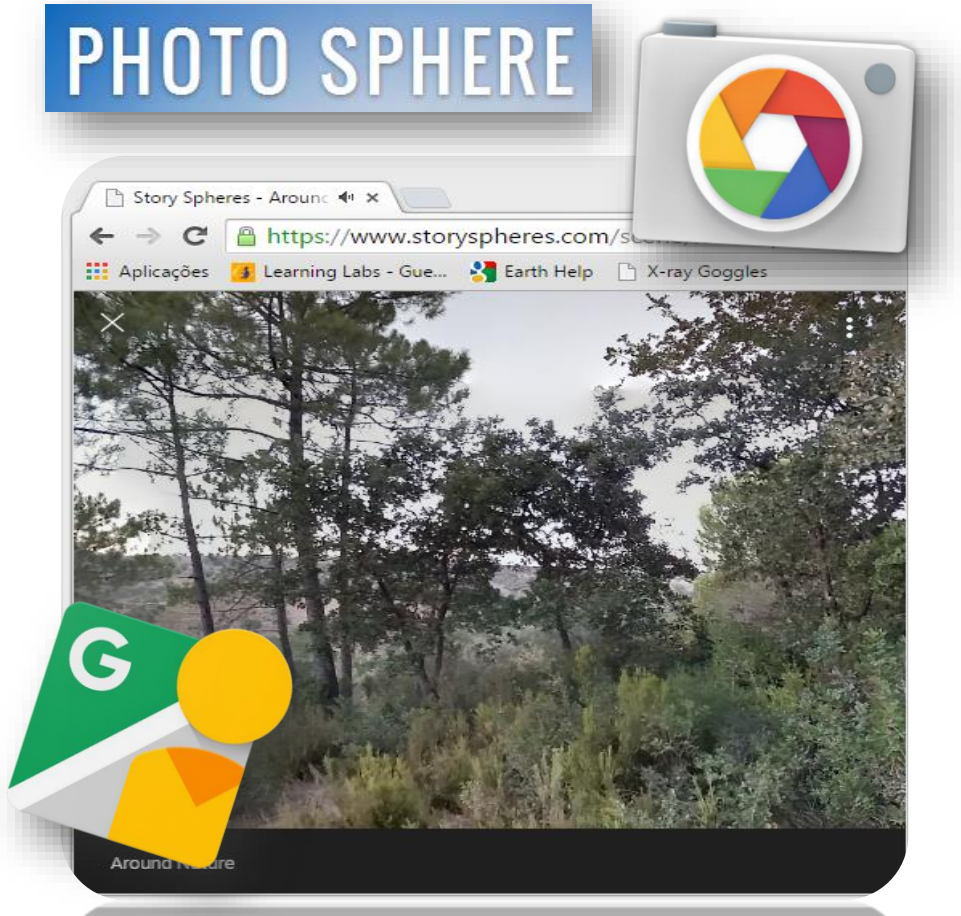
- To observe areas of difficult access but useful in the study of Geology: e.g. steep slopes, unstable ground;
- To analyse riverbed of different rivers and compare them;
- To observe different kind of rocky material;
- To document geological places with some “magic”.

Credits: **Teresa Lacerda** (Biology and Geology Teacher and eTwinning ambassador.

StorySpheres

Hands On (2/3)

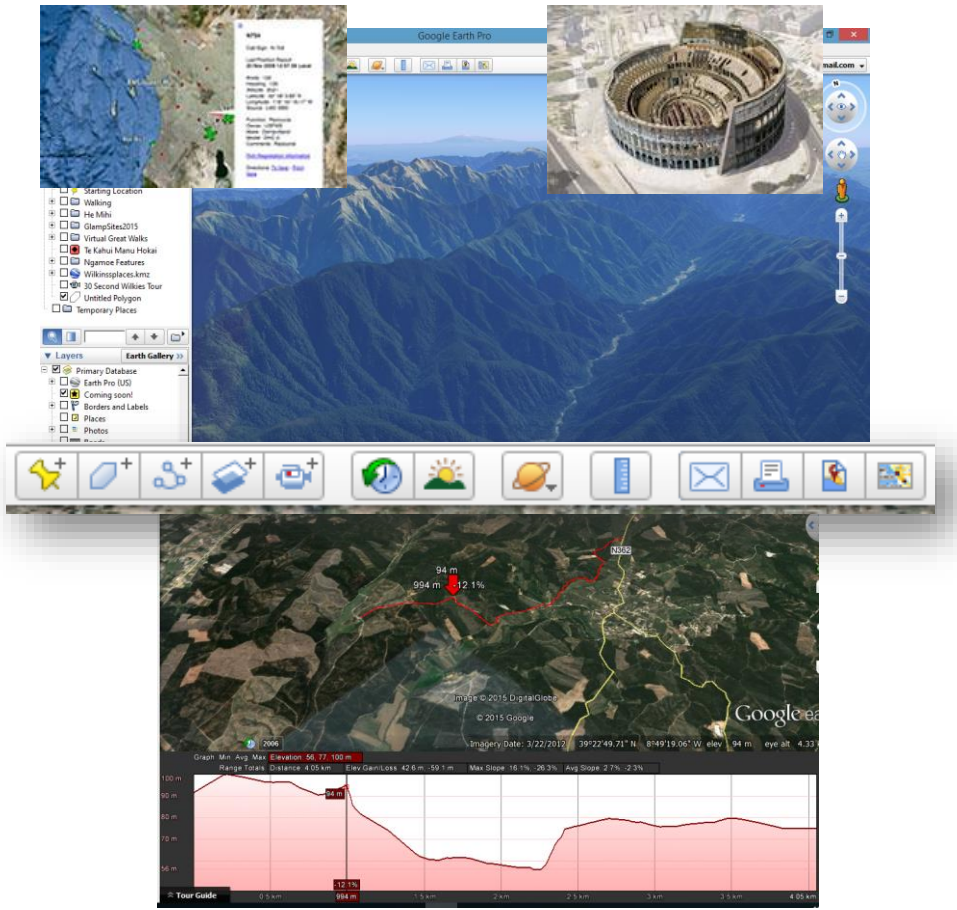
- **Create(take) a Photo Sphere**
  - Use the 360º photo of the site support;
- **Record the sounds**
  - Use the sounds of the site support;
- **Create the StorySphere**
  - Upload files (photo 360º & MP3);
  - Edit in Studio;
  - Preview it and Save it.
- **Share it**
  - Facebook
  - Twitter
  - Google +



Google Earth

google.com/earth

- Explore Google's rich geographical content;
- Create your own Multimedia Tracks;
- Create flythroughs, export to video, share tours with others;
- Search for locations using Google data;
- Visualize your GPS tracks and share with others;
- Show elevation profile (max slope, avg slope, …)
- Go back in time with historical imagery.
- **Tutorials**: https://www.google.com/earth/learn/



Google Earth

Hands On (3/3)

- Before we start… **some examples**:
  - Batalha World Heritage;
  - Marco Polo Travels;

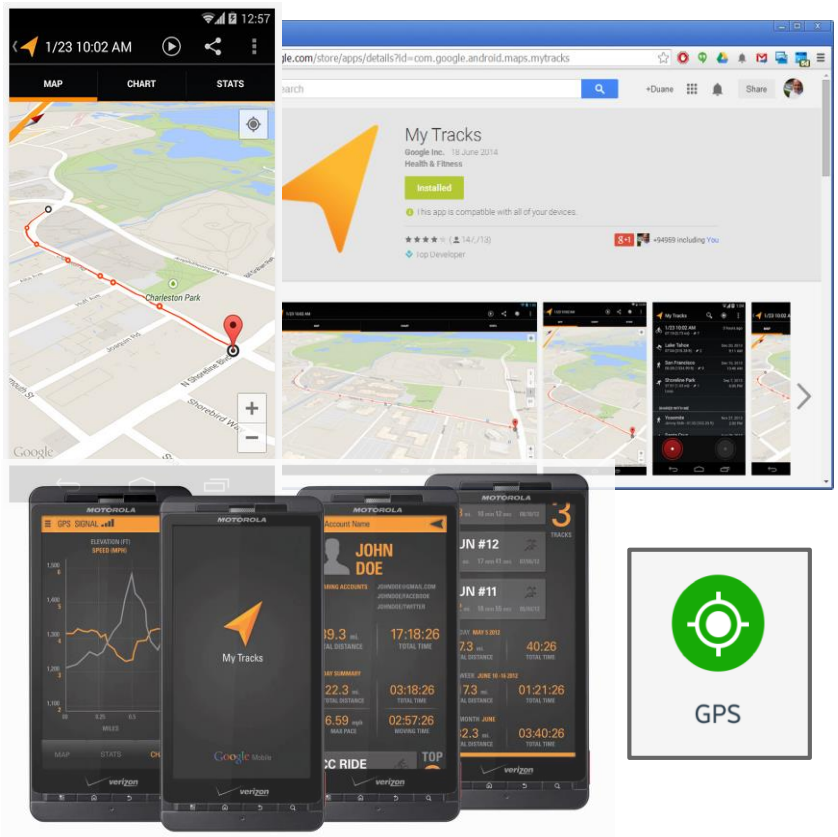
- http://www.googlelittrips.com/

- **Create a Multimedia Track**
- Main Goal
  - A Multimedia track about Monuments in Europe
    - **Eiffel Tower**
    - **Big Ben**
    - **The Colosseum**
    - **Leaning Tower of Pisa**

MyTracks

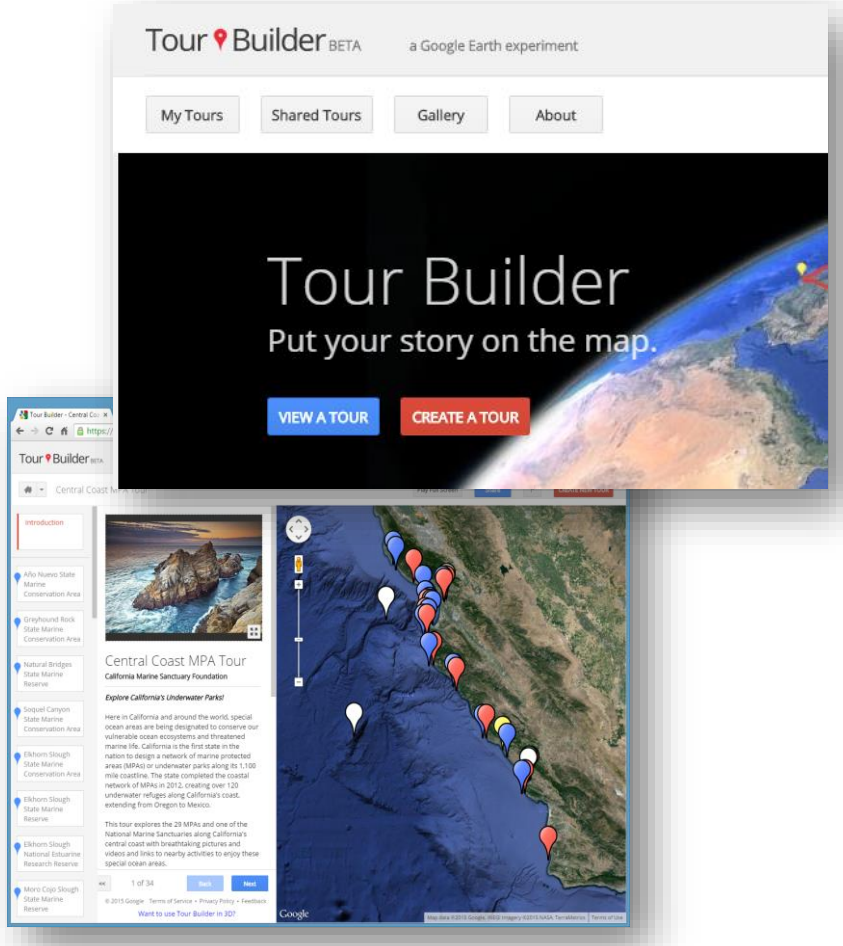
https://play.google.com/store/apps/details?id=com.google.android.maps.mytracks

- **My Tracks** lets you record your path, speed, distance, and elevation.
- View live GPS capture data.
- Annotate your path with text and photos while you record.
- Photographs include direction and bearing placement.
- Export your tracks to Google Drive, Google Spreadsheets, or external storage.
- Works Offline



TourBuilder

- TourBuilder helps you craft and share a story including text, maps, photos and videos;
- Tour Builder is a new way to show people the places you've visited and the experiences you had along the way using Google Earth. It lets you pick the locations right on the map, add in photos, text, and video, and then share your creation;
- With the Google Earth plugin running in Firefox or Internet Explorer, it is possible to develop and share a 3D tour.
- **Tutorials**
  https://www.google.com/earth/outreach/tutorials/tourbuilder.html



How to integrate it?

Tour Builder

- Create “tour stories” and share them with your partners;
- Easier to use than Google Earth to create tours;
- Suitable to tell “**eTwinning Stories**” in an eTwining project.

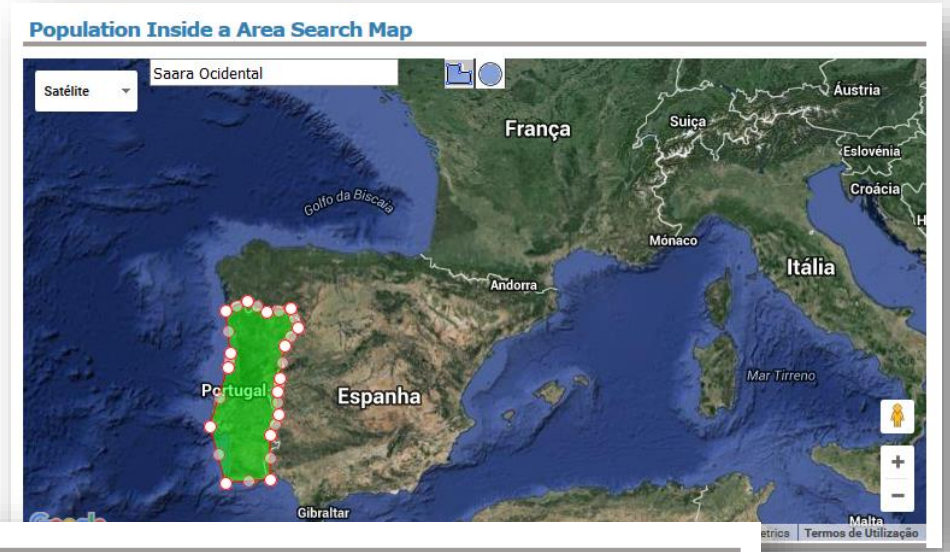
My Tracks

- Go out with your students and **record the “world live”;**
- Automatically exports your tracks to Google Drive and share them;
- Open your tracks on Google Earth (KML/KMZ files) and improve them on the classroom;
- Post the results on a Blog/Website or even **TwinSpace** for comments.

- **Free Map Tools**
  - A collection of *free tools* using *maps* to simplify tasks.
  - **http://www.freemaptools.com/**

Popular Map Tools

Radius Around a Point on a Map
How Far Is It Between
Measure Distance on a Map
Area Calculator Using Maps
Find Population on Map



Go forward…..

- **Arduino + Google Earth**
  - Putting together the power of Arduino and Google Earth
  - e.g. **Project DustDuino**
  - http://geojournalism.org/

ARDUINO

- **Fusion Tables**
  - Fusion Tables is a data visualization web application to gather, visualize, and share data tables.
  - https://support.google.com/fusiontables/answer/2527132?hl=en

- **Open Foris**
  - Open Foris is a set of free and open-source software tools that facilitates flexible and efficient data collection, analysis and reporting.
  - http://www.openforis.org/

openforis
Free open-source solutions for environmental monitoring

For more Information

http://serc.carleton.edu/NAGTWorkshops/teaching_methods/google_earth

http://maps.google.com/help/maps/education/

https://sites.google.com/site/geomedialab/photo-sphere

http://www.thethinkingstick.com/10-ways-to-use-google-maps-in-the-classroom/

http://www.google.com/earth/outreach/stories/showcase.html

http://earthquake.usgs.gov/learn/kml.php

http://www.realworldmath.org/

bit.ly/pdwgooglewarsaw

download the presentation

Questions?

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