«NON SOLO SCIENZA …»
Idee, suggerimenti, proposte concrete per la didattica laboratoriale

Iniziativa didattica promossa in collaborazione con la cooperativa "Il Calabrone"

il calabrone

40 1981 2021

Prof. ANDREOLETTI FEDERICO

BRESCIA

ATTIVITÀ STEM: alcune parole chiave

Competenze

Comprensione leggi e concetti

Conoscenze

Team working

Situazioni connesse con la realtà

Problem solving

ATTIVITÀ STEM : NUOVE parole chiave

Abilità manuali

Multidisciplinarietà

Materiali low-cost

Gaming

Arte (STEAM)

Coding e pensiero computazionale

ALCUNE IDEE PER ORIENTARSI …

A - Livelli diversi di approccio alle STEM

B - Risorse in rete

- Siti web
- concorsi

C – Esempi

- Botanica
- Space

Contatti

A - Livelli diversi di approccio alle STEM

Top Level

- Partire dagli studenti/genitori
- Brainstorming e selezione idee
- Progettazione, realizzazione, sviluppo, …
- Esempi: «ikarus», «Manuka honey»

A - Livelli diversi di approccio alle STEM

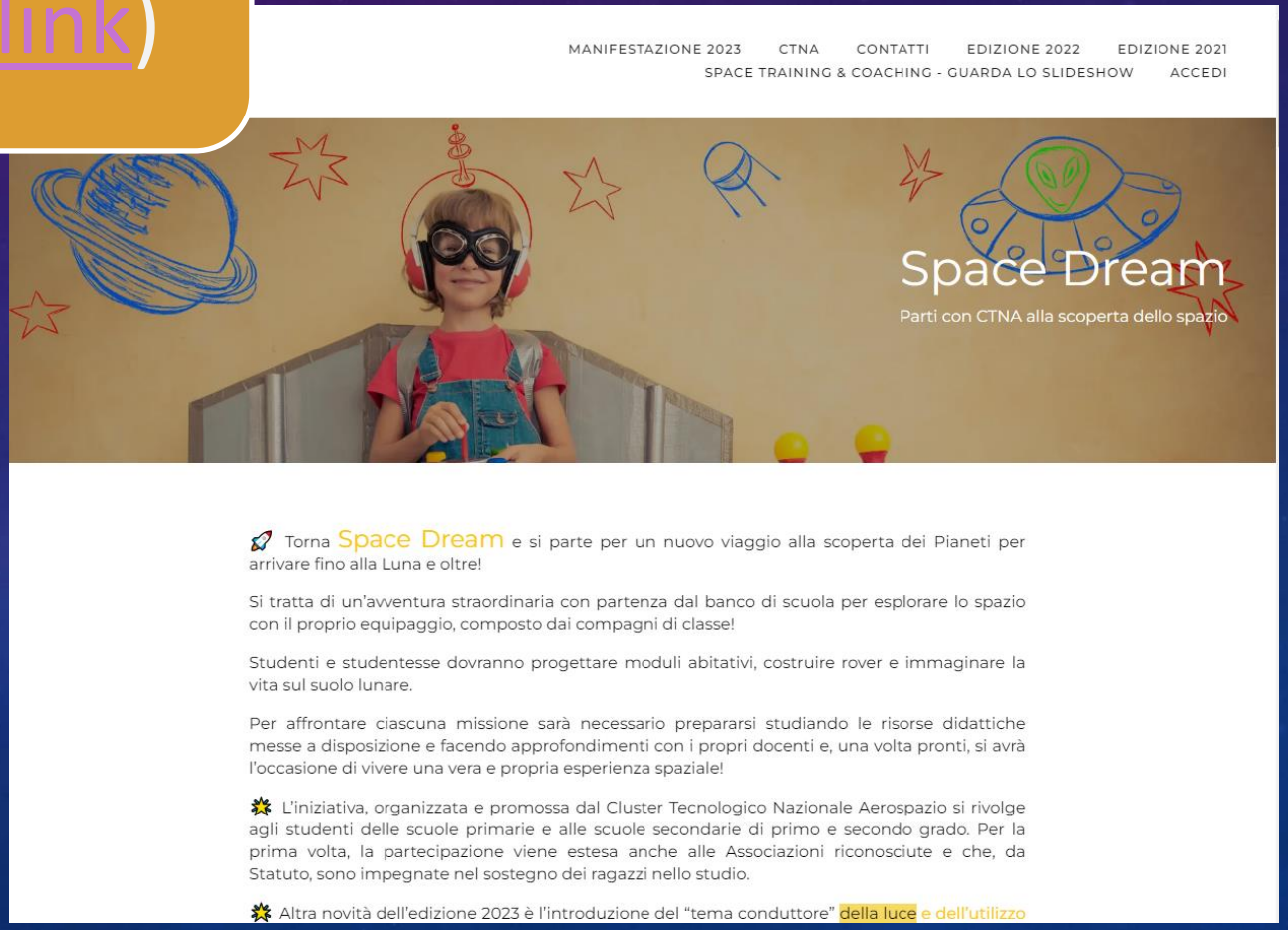
Real level

- Proposta di esperimenti già confezionati e disponibili (on line, testi, …)
- Proposta di un tema e gli studenti autonomamente ricercano, sperimentano, presentano
- Concorsi e progetti – più che la competizione, è la condivisione che ingaggia gli studenti

B – Risorse di rete

Risorse di rete

- SPACEDREAM 2023 (link)



B – Risorse di rete

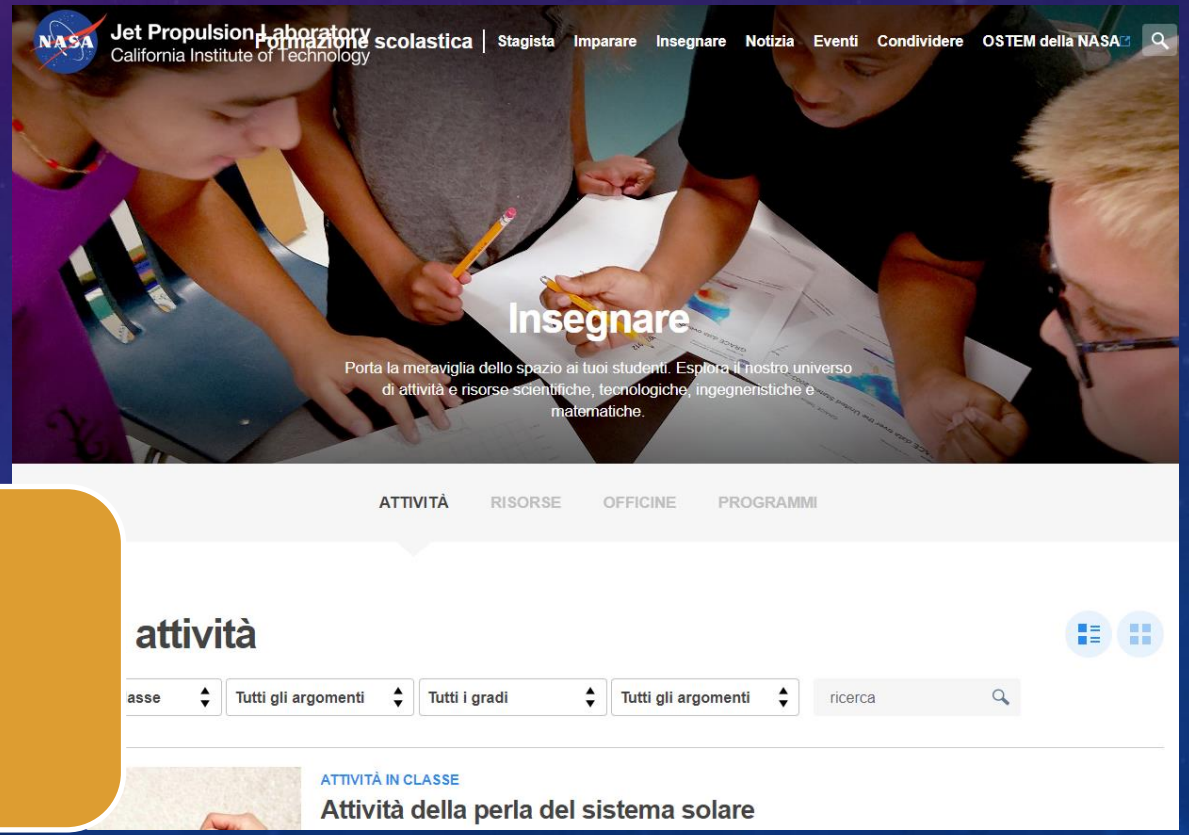
Risorse di rete

- ESA (link)

B – Risorse di rete

Risorse di rete

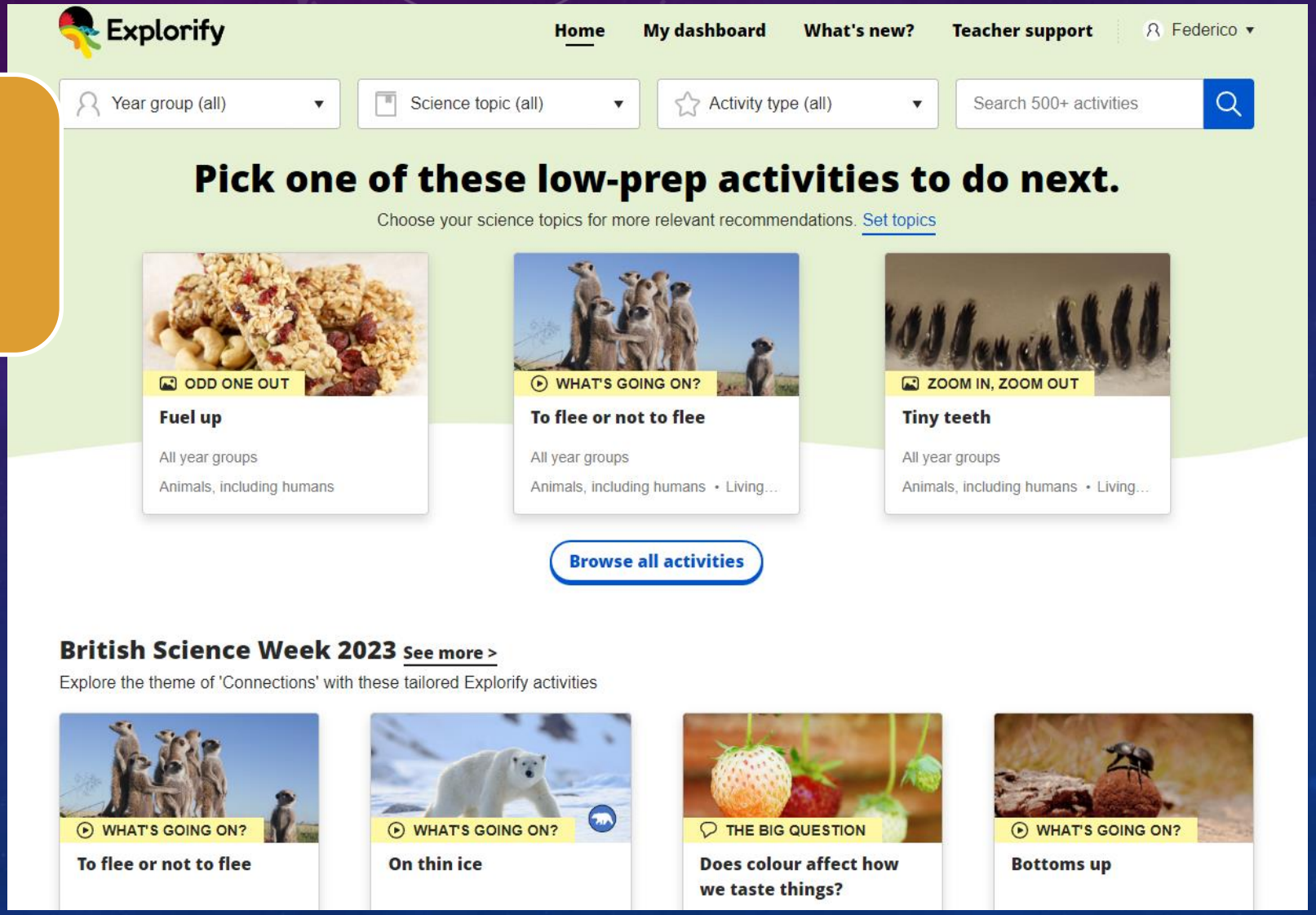
- NASA JPL (link)



B – Risorse di rete

Risorse di rete

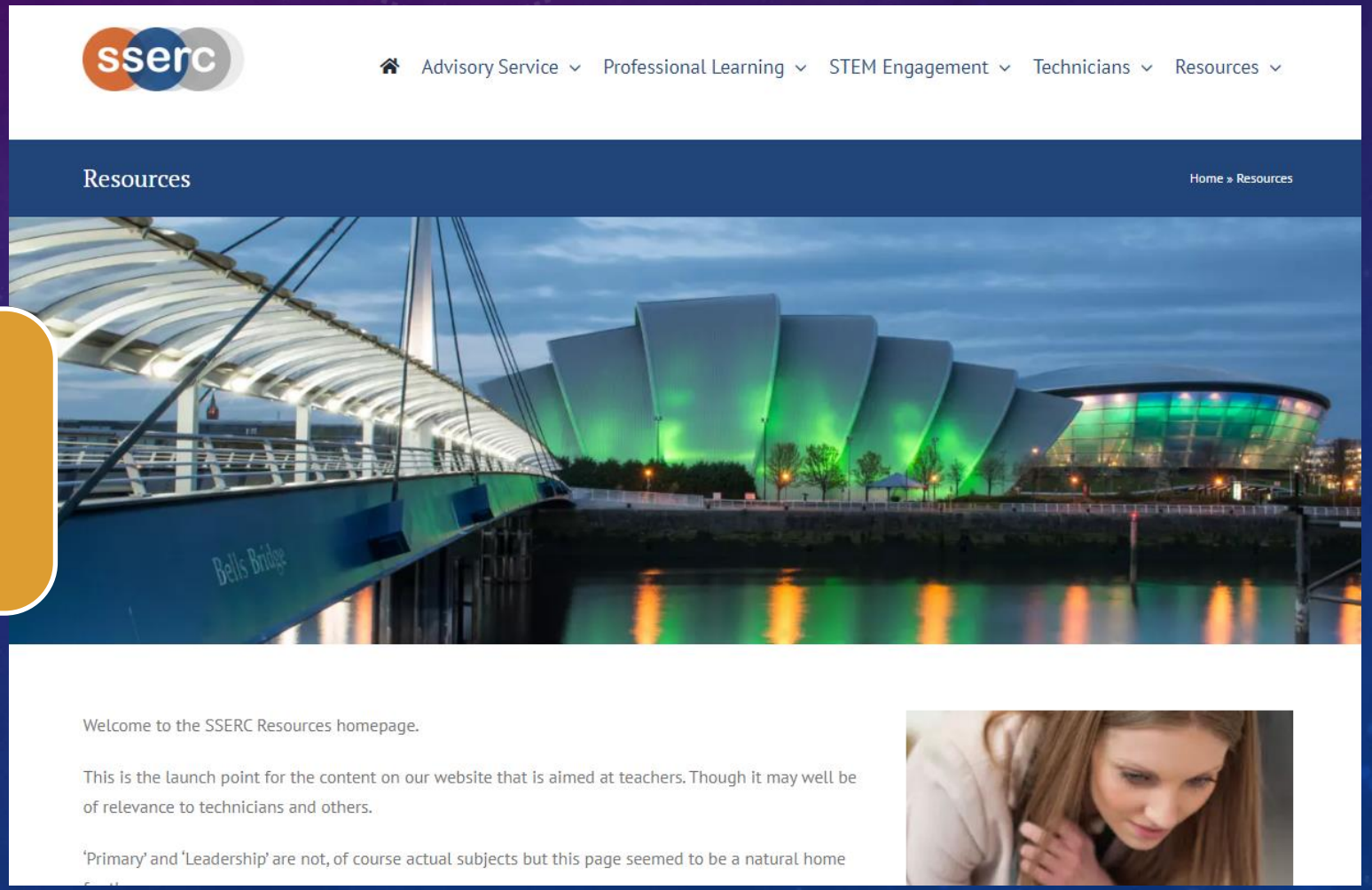
- Explorify (link)



B – Risorse di rete

Risorse di rete

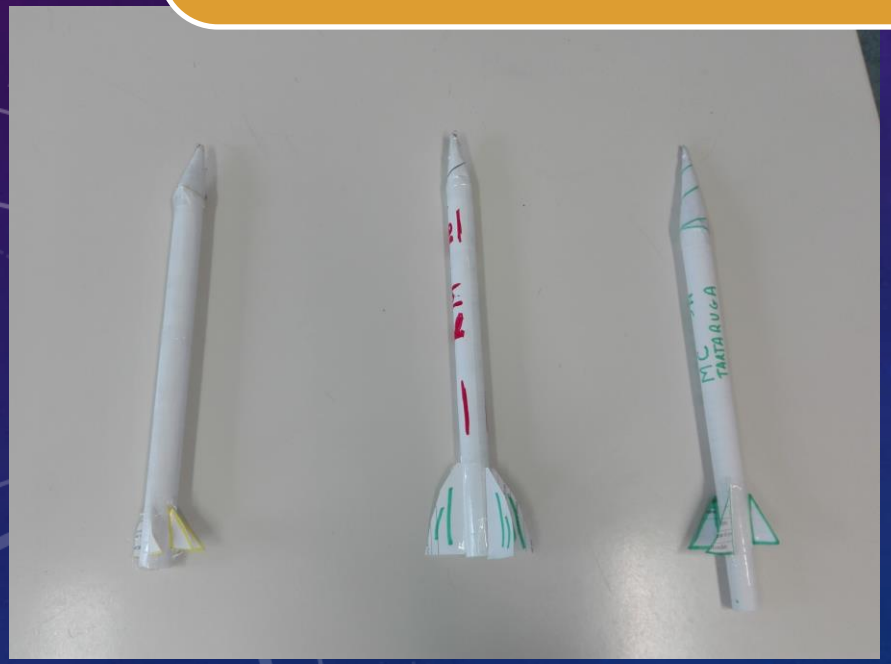
- SSERC (link)

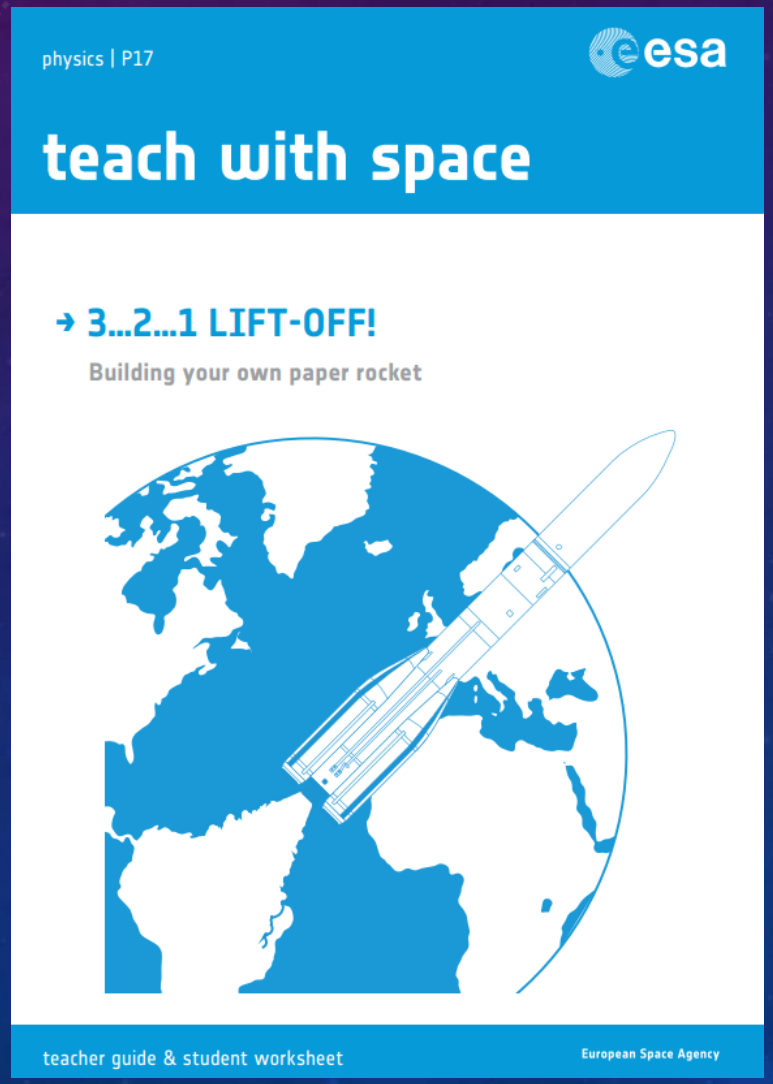


C – Esempi

Esa paper rocket

- From ESA (link)





C – Esempi

Esa paper rocket

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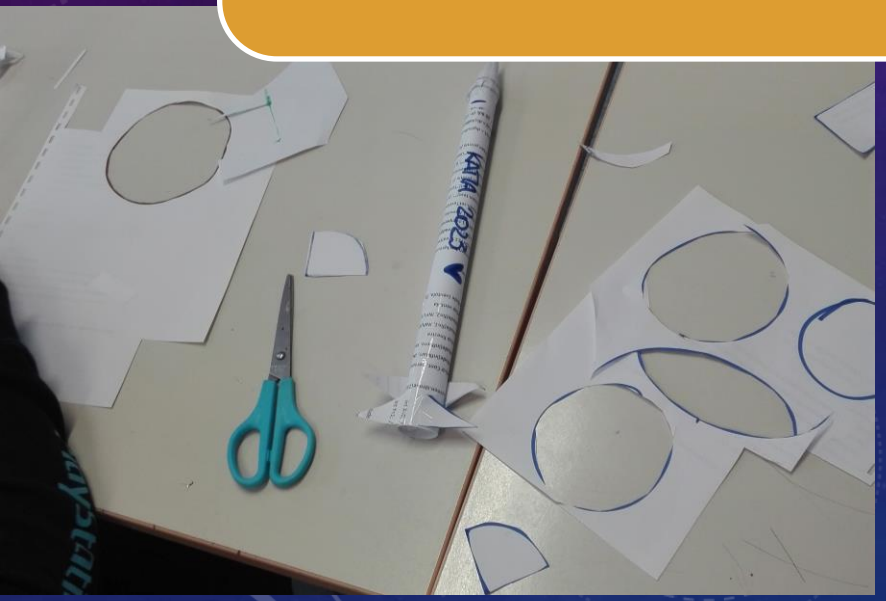
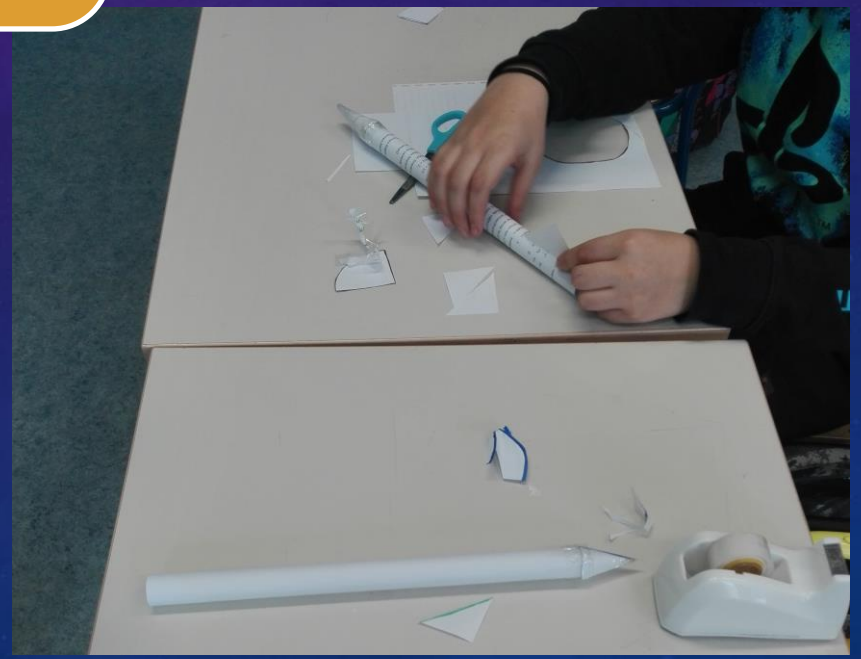
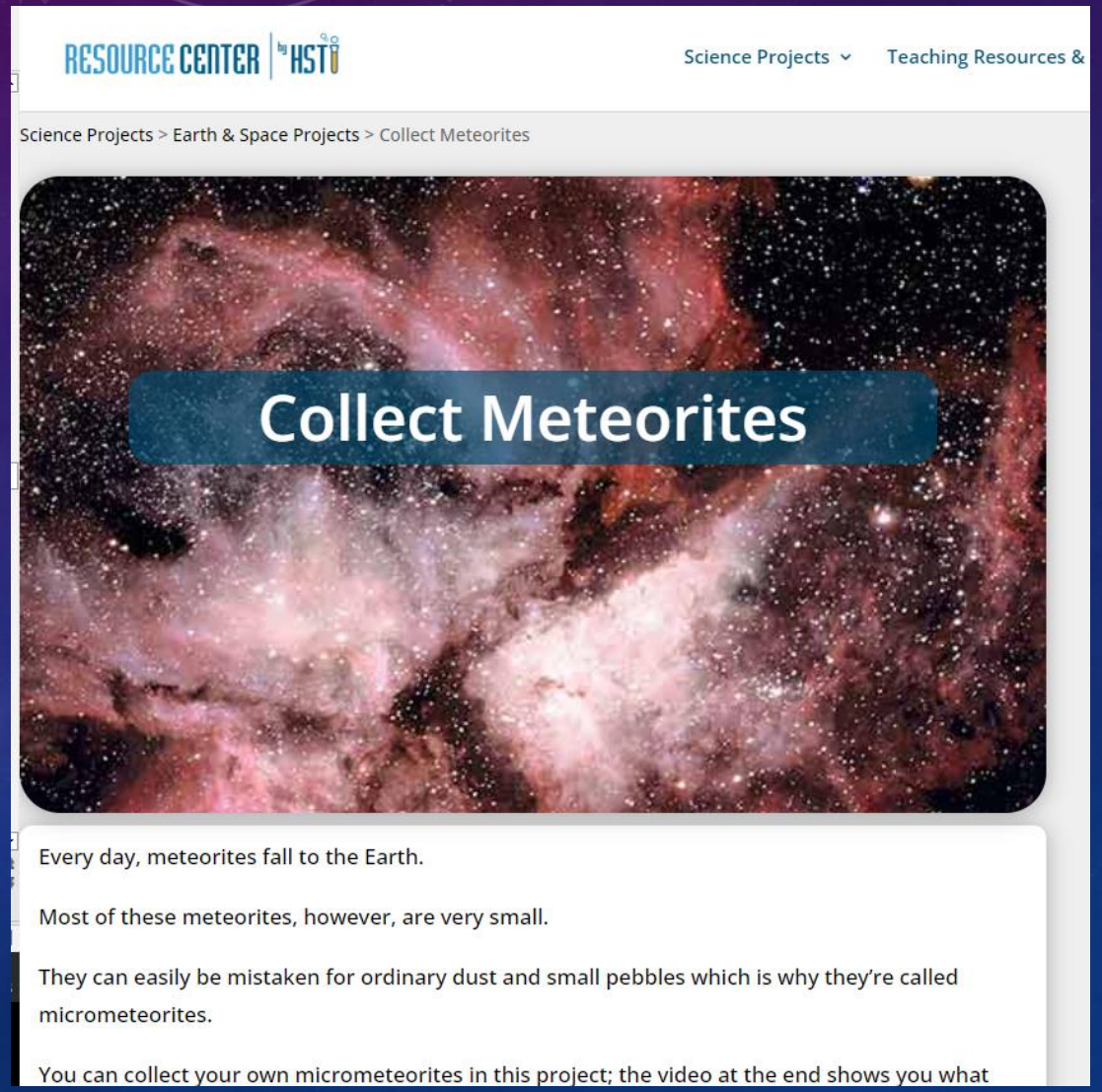




C – Esempi

Meteoriti

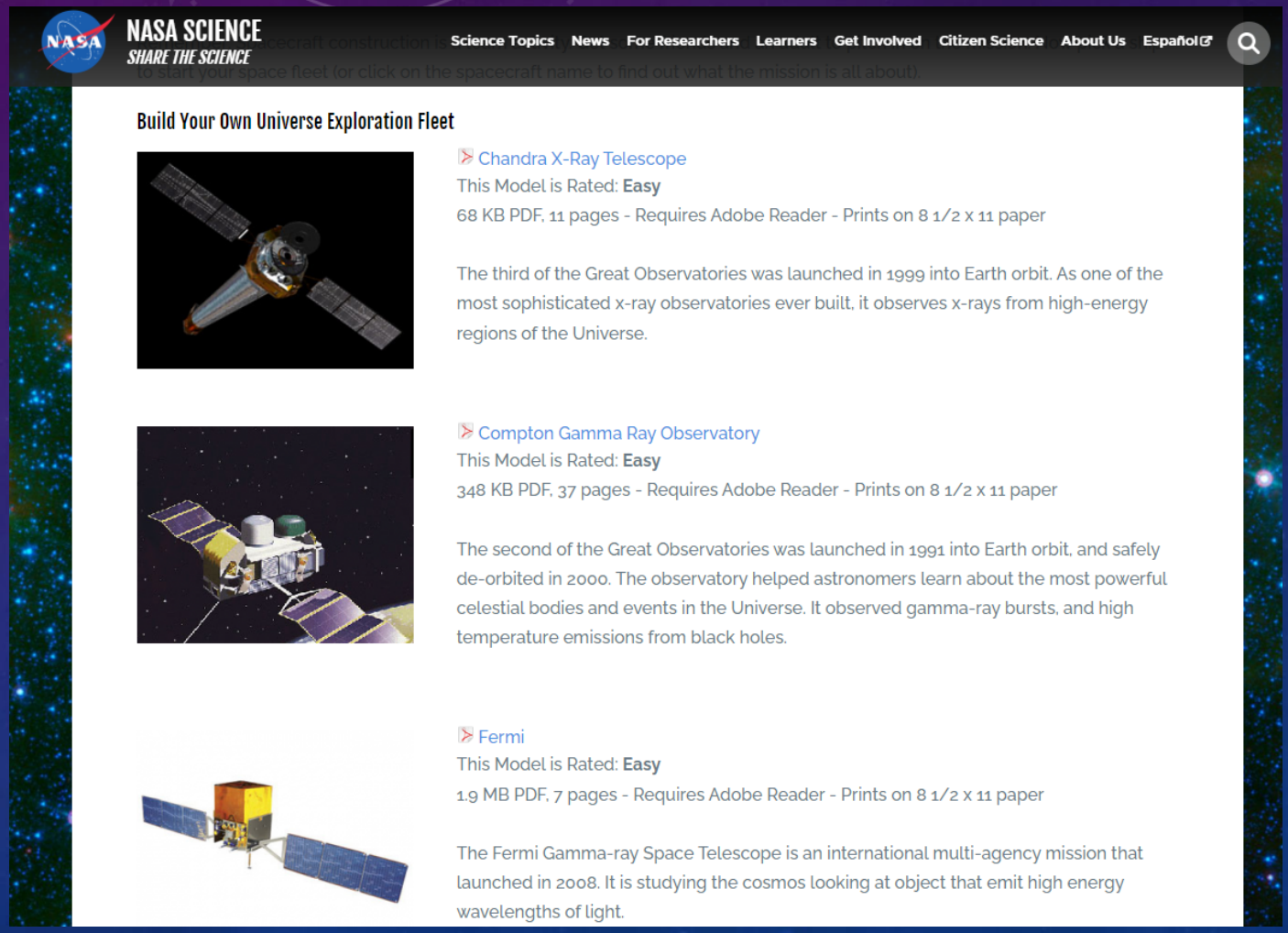
- HST (link)



C – Esempi

Paper model

- NASA (link)

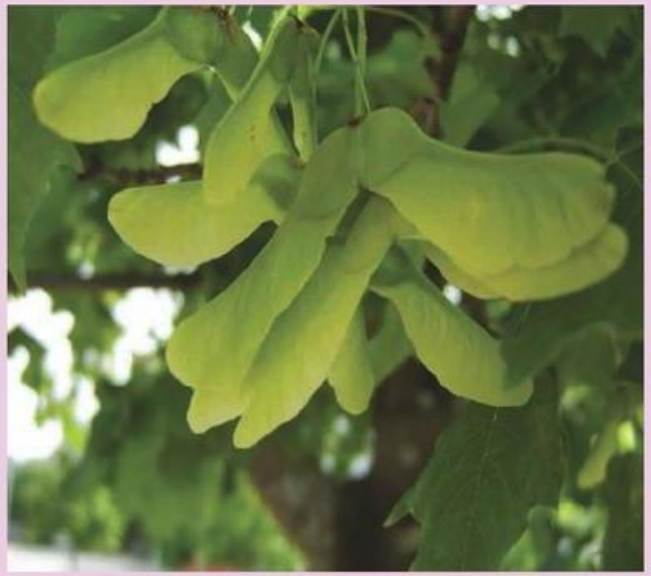


C – Esempi

Semi di acero

- STEM.org (link)

Many species of plants take to the air to **scatter** their seed.

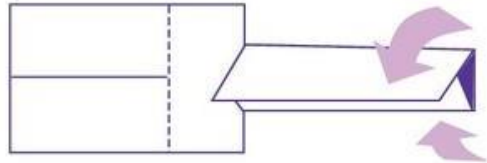


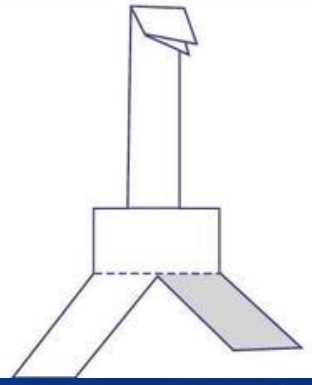
Understanding how seeds spread can be important for growers.

Carefully

- cut out the helicopter template
- cut along the solid black lines
- fold along the dotted lines as shown below.

- Test your helicopter ten times each.
- Record the results and calculate the data for the group.





C – Esempi

Foglie d’albero

- Mathsisfun (link)

The next thing you need to decide is how to measure the leaves, and how accurate your measurements should be:

How to measure?

Keeping your leaves flat, use a ruler to measure the length of each leaf from the pointy part at one end of the leaf to the point where the leaf joins the stalk at the other end. Maybe your leaves bend a bit, but don't follow the main rib of the leaf as this would make measurement too difficult.

Just measure in a straight line as shown in the following diagram:

How accurate?

You should measure the length of each leaf to the nearest millimeter.

Now you're ready to begin.

Contatti …

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