

# Bringing Science Research Topics into the Classroom:

## An Example Using Unmanned Aerial Vehicles (UAVs)

Brent Wright and Martin Wood, Kanazawa Institute of Technology

### Goal

Stimulate and engage student interest using current research at our school

### Implementation

Students interacted with text.

Completed a variety of comprehension activities.

Produced poster and present to classmates.

Script

Introduction:

\* UAV stands for \_\_\_\_\_ it means \_\_\_\_\_

\* The key word is \_\_\_\_\_ it means \_\_\_\_\_

\*\* \_\_\_\_\_

History:

\* The first UAV was \_\_\_\_\_ it means \_\_\_\_\_

\* The key word is \_\_\_\_\_ it means \_\_\_\_\_

\*\* \_\_\_\_\_

Applications:

\* Some applications of UAVs are \_\_\_\_\_ it means \_\_\_\_\_

\* The key word is \_\_\_\_\_ it means \_\_\_\_\_

\*\* \_\_\_\_\_

Challenges:

\* UAVs need \_\_\_\_\_ it means \_\_\_\_\_

\* The key word is \_\_\_\_\_ it means \_\_\_\_\_

\*\* \_\_\_\_\_

What's Next?:

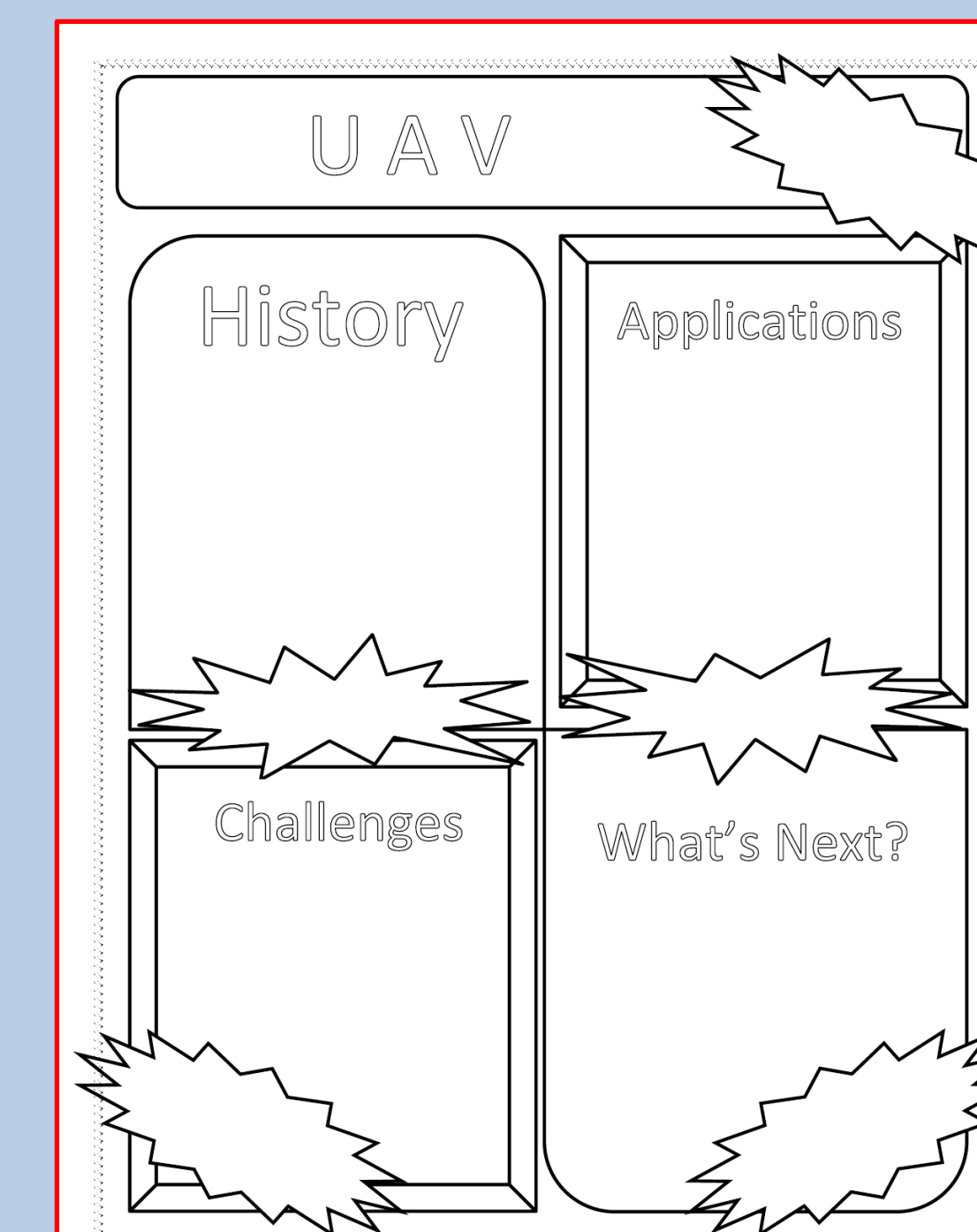
\* In the future, UAVs might be used for \_\_\_\_\_ it means \_\_\_\_\_

\* The key word is \_\_\_\_\_ it means \_\_\_\_\_

\*\* \_\_\_\_\_

\* You can use this sentence.

\*\* Write your own sentence for an extra challenge!



### Reflections and Suggestions

More than time should be allocated for poster production and presentation.



Most students were not aware of UAV research.

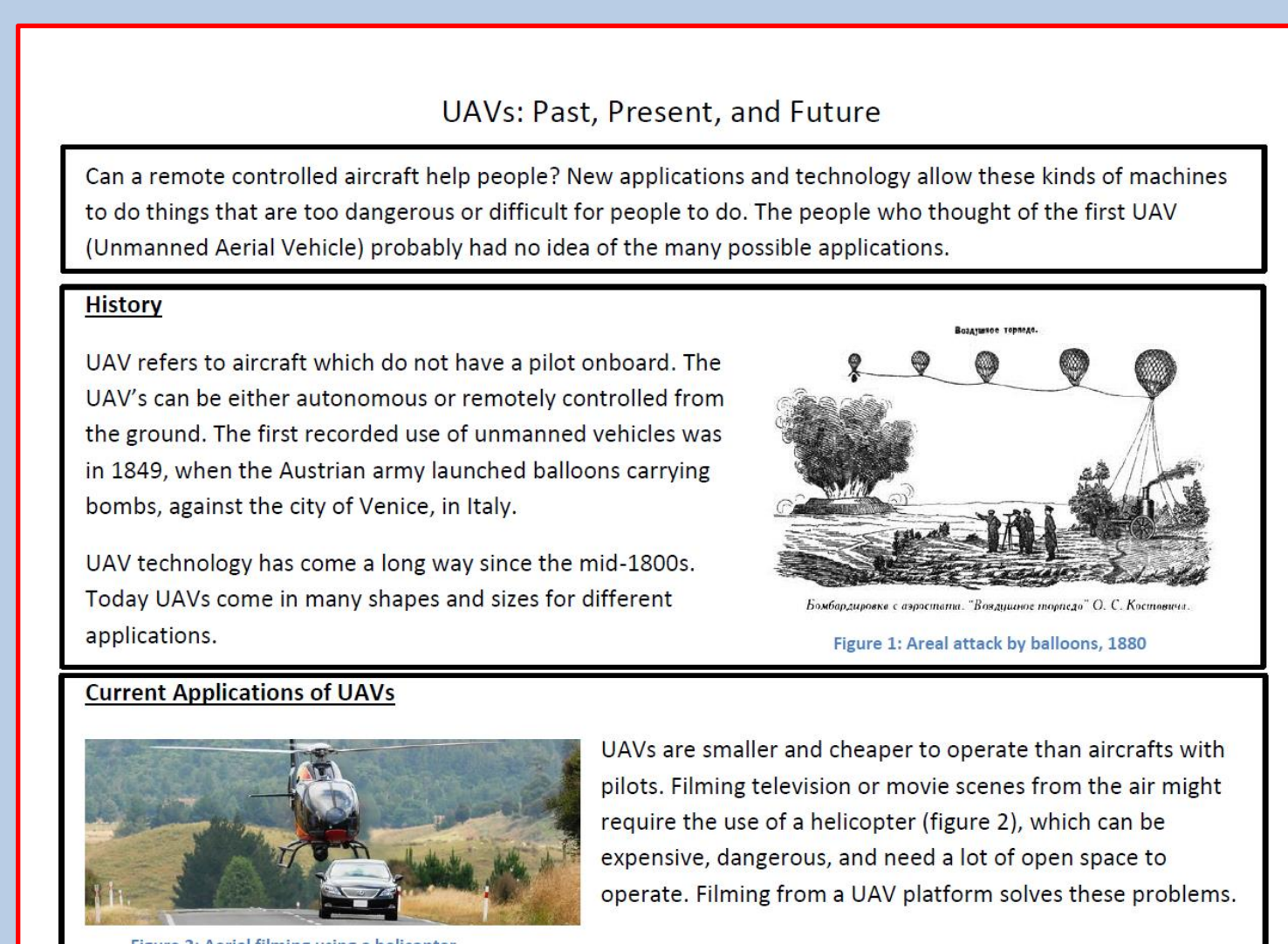
Students expressed interest in **other** fields of research, such as,

- Wireless communication
- Biofuels
- Satellites
- Mag lev
- Student competitions (Solar car, fuel efficient car, robot challenge)

If students give presentations based on their **own** field of study, they...

- have background knowledge
- are interested in the subject matter
- can talk more in-depth about the content
- can apply experience to future presentations
- have the opportunity to hear other presentations in similar areas

### Materials Development



Text components were produced based on knowledge gained from an expert in the field of UAV research.

An interview with the expert was scripted and recorded as a listening activity for the students.



A poster template was produced as scaffolding for student presentations.



### Student Responses

Summarized comments from the students

- Good to have different outputs than regular quizzes
- Producing a poster and giving presentation was enjoyable
- Interesting to see other people's posters
- Interested to learn more about research (in both their own field of study and other fields)