WHO INVENTED THE HELICOPTER?

The engineer Henrick Focke developed the first usable helicopter in the 1930s. In this unit, children learn about the inventor and entrepreneur Henrich Focke and handcraft a helicopter themselves.

SUBJECT ANALYSIS

In a helicopter, the lift is not provided by rigid wings but generated by rotating rotor blades. Already in the 15th century, Leonardo da Vinci made the first fundamental considerations about the principle of a helicopter. But it wasn't until the beginning of the 20th century that some helicopter pioneers made a technical breakthrough. A big advantage of the helicopter is that they can take-off and land vertically and therefore need little space for take-off and landing. Another advantage is that they can fly on the spot. The first helicopter that could take off and land vertically without any aids and stay in the air for several minutes was developed by the Bremen engineer Henrich Focke. It successfully took off for the first time in 1936.

MATERIAL

- Paper, pencils
- Ruler, scissors
- Paperclips
- Glue

COMPETENCIES & SKILLS

- The students to practice meaningful reading.
- They will get acquainted with an important designer and his most famous invention.
- They will build a simple helicopter themselves and recognize the principle of the rotating rotor blades.
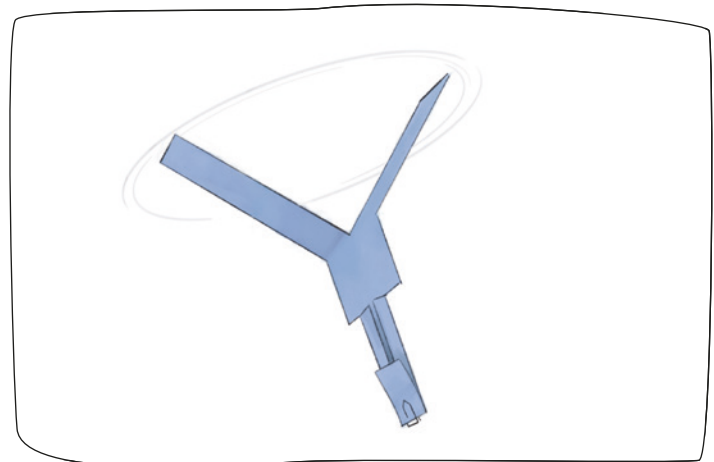
COURSE OF INSTRUCTION AND METHODOLOGICAL NOTES

- **Entry/Activation**
  The teacher throws a pre-built paper helicopter into the air and asks the students what it is. What is special about a helicopter as opposed to a plane? What are helicopters mainly used for today and why?

- **Work phase**
  The students receive the text "Who was Henrich Focke?" and read it either alone or in partner work. With the worksheet, the teacher indicates that the right side with the writing lines can be used for active reading (writing down unknown or difficult words, notes,…). The text will be discussed in class and any questions clarified. It would also be possible to ask questions for text comprehension. Afterwards the children receive the building instructions for the paper helicopter; each child builds their own helicopter and write their name on it.

- **Closing**
  Finally, all students take their paper helicopter outside or in a larger space to fly. How do you throw the helicopters so they fly well? Which ones fly well and which ones are not so good?? How slanted are the wings aligned in each case?

ADDITIONAL MATERIAL

➜ Idea card as PDF
➜ Worksheet
➜ Building instruction

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WHO INVENTED THE HELICOPTER?

Tip: You can write down unknown or difficult words or make notes on the writing lines.

WHO WAS HENRICH FOCKE?

Henrich Focke was born in 1890 in Bremen. Even as a young boy, he was interested in how to build airplanes, and he kept trying it again and again. He then tested his self-constructed models of aircrafts on the Weser, the River where Bremen is located.

His aircraft models got better with time and so he started to build airplanes with his friend Georg Wulf. When Henrich was 22 years old, the two of them succeeded in their first flight in a motorized aircraft. He and Georg then founded a company in Bremen that built airplanes.

The first small plane that Henrich and Georg developed was even used as a rescue plane once: on the island of Wangerooge, a man had been injured during a storm. The small plane took him off the island where there was no hospital, to a hospital on the main-land in Bremen.

Henrich's company successfully built many planes. Finally, he built an aircraft that could take off vertically upwards: the helicopter. The first successful flight of his helicopter was in 1936.
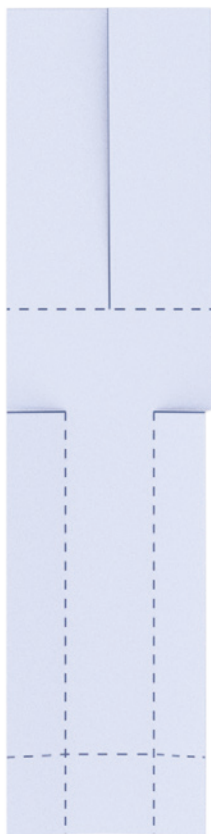
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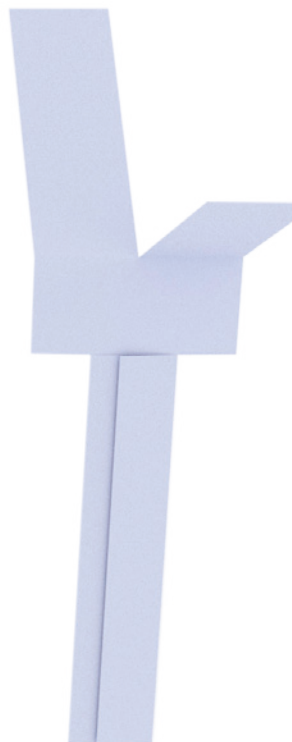
BUILDING INSTRUCTION PAPER HELICOPTER

MATERIAL

- Paper DINA4
- Paper clip
- Ruler
- Pencil
- Scissors
- Glue

- Cut out the template for the helicopter on the next page
- Cut the solid line
- Bend the rotor blades (A + B) in the opposite direction until they are horizontal (Submission a)
- Fold the lower parts (C + D) towards the middle and glue them together (pattern b)
- Fold the bottom end over and attach a paper clip (template c)

Now your helicopter is ready for take-off .
Grab it by the paper clip and throw it upwards.

(a)   (b)   (c)

A   B

C   D