



03 – Building Colossus

Teachers' Notes – CREST SuperStar Challenge

Introducing Colossus

Tommy Flowers tore up the original blueprint of Colossus for his team of engineers. Students will work in teams to make a scale drawing from a blueprint. They will investigate maps and plans to discuss why Dollis Hill was chosen as the location for a research station.

Background information

- Ten Colossi were built in total. The machines were operated by Wrens (Women's Royal Naval Service).
- The first Colossus was built at Dollis Hill in North London.
- Dollis Hill was chosen as the site for an engineering research station because it was close to the General Post Office headquarters in London, but away from the busy city.
- During the war, a giant camouflage net covered Dollis Hill to hide it from German bomber planes.

Historical context

Colossus helped the Allies on D-Day, a major turning point in the war. A German message, decoded by Colossus, revealed German tanks at the chosen location for a US parachute division. The site was changed to secure D-Day success.

Key words

Prototype | Blueprint | Valve

Learning outcomes

- Develop an understanding of blueprints, size, scale and teamwork.
- Read maps and interpret and analyse information.
- Make decisions about the development of a new research station.

Prepare for the activity

- Download PowerPoint and prepare film clip.
- Print student activity/challenge cards.
- Print the grid sheet onto A4 or A3 paper.
- Arrange the class into five teams.

CREST SuperStar Challenge

Activity Card 04/05: 'Design a secret research station for your school' is a CREST SuperStar Challenge accredited by the British Science Association.

The Challenge asks students to work in teams to locate and design a research station in the school.

Equipment list

Ruler, coloured pencils, A4 or A3 paper for large blueprint.

Run the activity

- Show the film clip.
- Use the PowerPoint to introduce key words, provide knowledge about Colossus and explain valves, blueprints and maps.
- Use the valve activity to introduce concepts of scale.
- See teacher instructions for the 'Scale Up!' activity.
- Top tip: Point out the rural setting. Lead a class discussion about location of Dollis Hill.
- Encourage the students to engage in creative problem solving for 'Activity Card 04 & 05'. They should work in teams for the discussion tasks.

Extension activities

- Activity Card 03: Pace out the size of 'Block A' on your school field. Show a large stride is equal to about 1 metre. Use field markers to help you.
- Activity Card 05: Build the new school research station design out of Lego.

