

## Introduction

The Passport bridging activity is intended to show a clear progression from the Year 6 targets to the Year 7 targets opposite. 'Golden ratio' is one part of the Science Passport unit. It is an investigation activity that fills pages 8, 9, 10, and 11 of the Science Passport. This activity should be accessible to a wide range of abilities.

## Running the activity

### Year 6

Use *W/S The Golden ratio* to introduce the activity. Discuss with the class how to measure facial features accurately, highlighting repeated measurements and averaging.

*W/S Measuring your face*

Pupils can supply their own photographs but measurements are more accurate if you prepare a series of digital photos of the class, and print them out. They can be printed in black and white for the purposes of these activities. The intention of this activity is to practice and improve measurement and analysis skills. There may be a need to explain what is meant by "bridge" (of nose).

*W/S Ratios*

Pupils should be able to use the calculators to calculate a ratio. Encourage the pupils to work to 3 significant figures.

*W/S Comparing faces*

Pupils should swap data with nine classmates and compare the results.

*W/S Comparing faces (2)*

Pupils should analyse their results. They could construct bar charts to display their results. This section could be integrated with reading and learning about the history of the Ancient Greek civilisation and its contribution to scientific thought.

*W/S Comparing faces (3)*

*W/S Face beautiful?*

Pupils extend the pattern seeking to adults and adults they consider to be attractive.

### Year 7

*W/S Beautiful school?*

Pupils apply the idea of a golden ratio to classical buildings and their new school. Year 7 information for their 'Personal data' Passport section can now be completed and used as a stimulus for Year 7 Variation work.

## Safety

Low hazard activities.

Discourage use of pointed callipers near faces.

## Learning outcomes

### Year 6 and 7

This Sc1 focused activity enables pupils to progress in measurement of physical parameters and pattern analysing ability.

- Make relevant observations and measure quantities such as length and use a simple range of equipment
- Provide explanations for simple patterns in recorded measurements.
- Select equipment and make a series of measurements that are adequate for the task.
- Record measurements in tables.
- Identify patterns in data.
- Make a series of appropriate measurements with precision.
- Repeat measurements and offer explanations for differences.
- Record systematically and draw conclusions that are consistent with the evidence.

## Where the activity fits in

Sc1 skills applicable to all QCA units.

## Skills

Sc1 skills for Obtaining evidence using systematic methods.

Measurement, communication, numeracy.