LOCUS

Teacher notes

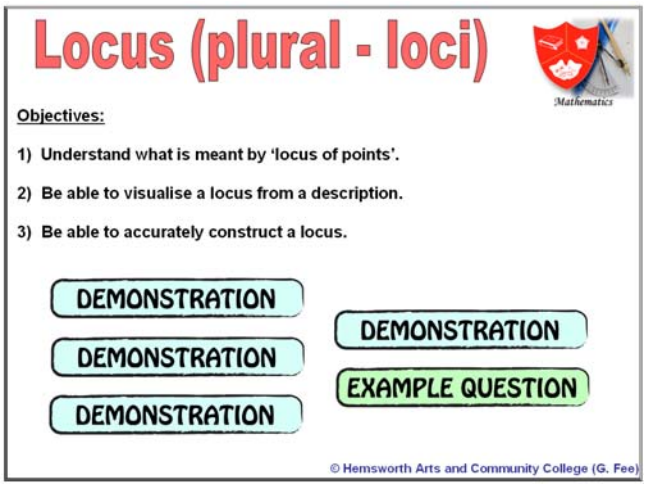
Learning objectives:

1) **Understand what is meant by 'locus of points'.**
2) **Be able to visualise a locus from a description.**
2) **Be able to accurately construct a locus.**

Teacher presentation

The teacher presentation is designed as a focus for whole class teaching by providing:

- visual stimulation / animation to aid understanding
- structure for teacher-led discussion
- opportunities for thinking skills development



The activities on each slide are meant to be used by the teacher to help structure the questioning and class discussion.

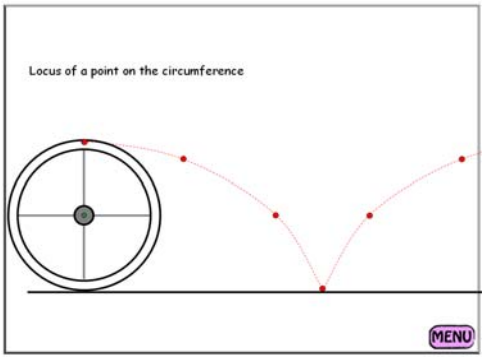
The presentation is menu driven - an outline of each menu item is given below:

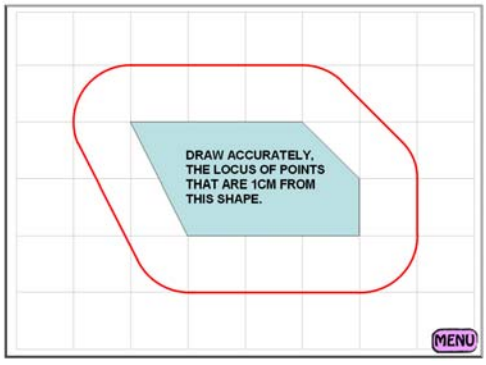
DEMONSTRATION

There are four animated examples to show students.

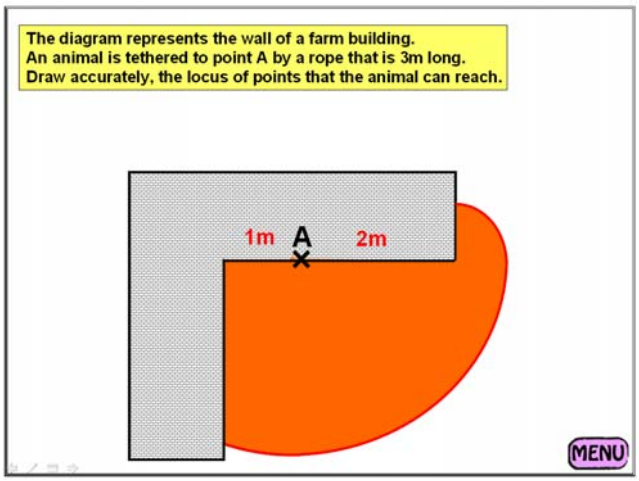
- The locus of a point on a falling rod.
- The locus of the axle point on a wheel as it rolls forward.
- The locus of a point on the circumference on a wheel as it rolls forward.
- The locus of a point that is 1cm from the edge of a shape.

Students can be engaged in discussion about what the locus looks like in each case.





EXAMPLE QUESTION

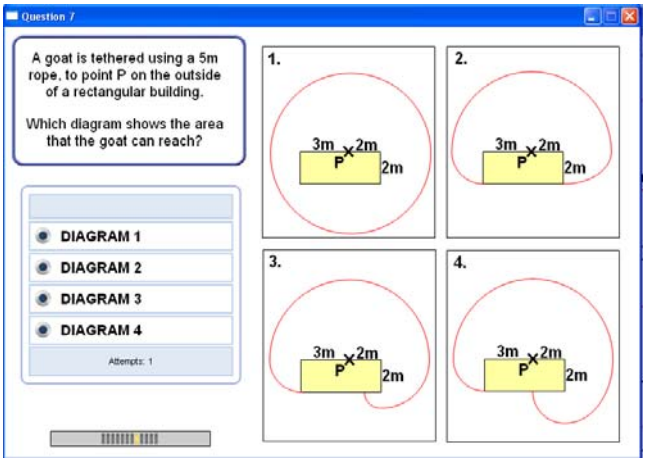


This is a worked example.

The answer is animated and the teacher can control when to show each stage of the construction being shown.

Students can be engaged in discussion about what the locus looks like and how to construct it accurately.

Learning object



This is an interactive learning and assessment tool designed to engage students in solving problems related to the learning objectives.

This is meant to follow the teacher presentation and be used by students to consolidate learning and to practise applying their knowledge and understanding.

This activity includes:

- A revision video – this can be paused and re-played by the students so that they can use it to make their own notes and diagrams based on worked examples.
- 8 multiple choice questions to assess knowledge and understanding.
- 2 questions where students need to plot a described locus on a co-ordinate grid.