Small is beautiful

1. Read the text and choose the best title, A, B, or C.

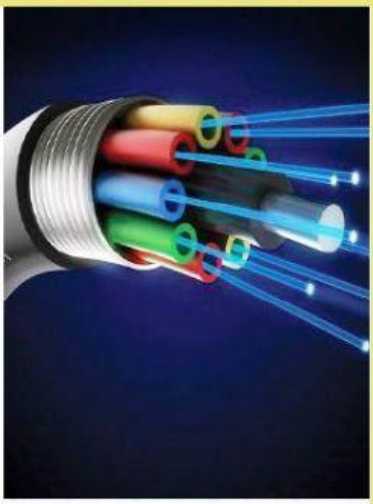
   A The history of cabling and telecommunications

   B A short introduction to optical fibres

   C Uses of glass in industry and technology

2. Read the text and match the headings with the paragraphs (1-5).

Optical fibres started to replace some uses of copper cables in the 1970s. They are made from glass and are usually about 120 **micrometre**s in **diameter**. Some of the most common everyday uses are in telecommunications, close-circuit television (CCTV), and cable television.



1 _____

Optical fibres carry signals more **efficiently** than copper cable and with a much higher bandwidth. This means that fibres can carry more channels of information over longer distances.

2 _____

Optical fibre cables are much lighter and thinner than copper cables with the same bandwidth. This means less space is needed in underground cabling **ducts**.

3 _____

It is difficult to steal information from optical fibres. They are not harmed by electromagnetic interference, for example from radio signals or lightning. They don't **ignite** so they can be used safely in **flammable** atmospheres, for example in petrochemical plants.

4 _____

Optical fibres are more expensive **per** metre than copper. However, one optical fibre can carry many more signals than a single copper cable and the longer transmission distances mean that fewer expensive repeaters are required. Also, copper cable uses more electrical power to deliver the signals.

5 _____

Optical fibres can't be spliced as easily as copper cable. Employees need special training **to handle** the expensive **splicing** and measurement equipment.

LIVEWORKSHEETS

3. Complete the definitions below

1. A_____ is one millionth of a metre.
2. The_____ is the distance across a circle.
3. A_____ substance is one that burns easily.
4._____means joining the ends of two cables together
5. To_____ means to start to burn.
6._____ are tubes for carrying cables.
7._____ is a common short way of saying “for each”.
8._____ means to touch with your hands.
9._____ means in way that produces a good result.

LIVEWORKSHEETS