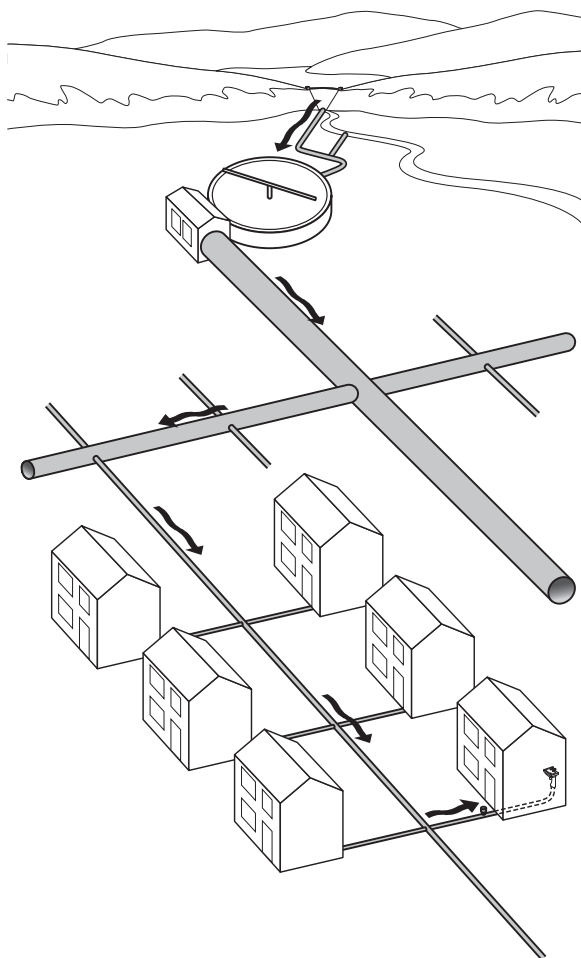


# Water coming and going

Water arrives and departs through separate pipes.



**Q1.** Which kind of water is flowing in the pipes in the diagram above: dirty water or clean water?

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**Q2.** Draw another house and connect it to the correct water pipes.

**Q3.** Which is larger, the water pipes going into a house or the water pipes leading from it?

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**Q4.** Why is rainwater not simply fed into the sewers?

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## Answers

1. **Clean water.**
2. **The connection should be to the small bore pipe and not to the large bore (mains) pipe.**
3. **The pipes leading from it.**
4. **Because the sewers might overflow if they were overloaded by a flash flow of rainwater after a storm.**

**Sewer flow is a known quantity that can be allowed for, rainwater is not. For example, a storm of a centimetre of rain or more in an hour will flood the rainwater drains and spill onto the streets. But this does not matter because the water is not dangerous.**

## Notes

*On this spread we show how three kinds of pipes enter and leave a home. It is very important to show that the incoming pipes can be small bore because they are under pressure, while the large bore pipes are needed when sewage contains solid matter. Large bore pipes are not under pressure – this is an additional reason the pipes have to be large.*

*You may care to bring into the classroom samples of each kind of pipe. Most children will never have seen them. You can get standard 15mm water pipe, drainpipe and sewer pipe (or fittings) from any builder's merchants. They can come in short lengths which are inexpensive.*

*The other point to make is that as pipes converge, the pipe needed to carry the combined flow must be larger.*

*One excellent way of showing sewers is to show a clip from the film *The Third Man*, which shows the sewers in Vienna. Not only do children get a marvellous view of sewer sizes in a dramatic setting, but the whole nature of the film helps them to understand what a complex network of passageways there has to be below the streets.*

**LINK:** *The clip from the film can also be used to link this subject to literacy, using the dialogue and the way language is used to highlight drama. This can be contrasted to the kind of formal language used in a textbook such as *The Water Book*. It is also an excellent opportunity to get children to begin to analyse a film.*