Name: _____ Date: _____

# From River to Tap: Cleaning Water Step by Step

Circle group

When you fill a glass at the sink, the water may have started in a muddy river. A water treatment plant cleans it in steps before it reaches your tap.

First, the water goes through screens. These strong grates catch sticks, leaves and other big pieces.

Second, workers add a substance that makes tiny bits of dirt stick together. The clumps grow heavy. They are called floc. The water rests in big tanks, and the lumps sink to the bottom. Then they can be taken out.

Third, the water filters down through deep beds of sand and gravel. The smallest bits of dirt get trapped between the grains. The water that drips out the bottom is clear.

Fourth, the plant disinfects the water. A small amount of chlorine, or another treatment such as ultraviolet light, destroys germs that could make people sick. Some chlorine is often left in the water. It keeps the water safe in the pipes.

At last, pumps push the clean water through underground pipes to homes, schools and fire hydrants. The plant tests the water again and again. The next time you turn on a faucet, think of the work that went into that glass.

## Questions

**1. What do the screens at the start catch?**

_____

_____

**2. What is floc?**

_____

_____

**3. What traps the smallest bits of dirt in filtering?**

_____

_____

**4. Why does the plant disinfect the water?**

_____

_____

**5. Why is some chlorine often left in the water?**

_____

_____

**6. Why must the lumps of dirt grow heavy?**

_____

_____

## Words to know

treatment: a process that makes something clean or safe
screens: strong grates that catch large things
disinfects: cleans so that germs are destroyed
gravel: small pieces of rock

## Talk together (every group has these)

1. Find one fact that every group read. How did your sheet say it?
2. What did your sheet tell you that you think another group's did not? Ask them.
3. What is one question about this topic that none of the sheets answered?

Name: _____ Date: _____

# From River to Tap: Cleaning Water Step by Step

Triangle group

When you fill a glass at the kitchen sink, the water may have started as part of a muddy river. Between the river and the tap, a water treatment plant cleans it in a series of steps.

First, the water passes through screens. These strong grates catch sticks, leaves and other large pieces that floated in.

Second, workers add a substance that makes tiny bits of dirt stick together. The clumps grow heavy enough to form larger lumps, called floc. The water then rests in big tanks, and the lumps sink to the bottom where they can be removed.

Third, the water filters down through deep beds of sand and gravel. Even the smallest bits of dirt are trapped among the grains, so the water that drips out the bottom is clear.

Fourth, the plant disinfects the water. A small amount of chlorine, or another treatment such as ultraviolet light, is used to destroy germs that could make people sick. Some chlorine is often left in the water so it stays safe on its way through the pipes.

At last, pumps push the clean water through a network of underground pipes to homes, schools and fire hydrants. The plant tests the water again and again, so people can trust it. The next time you turn on a faucet, remember how much work went into that glass.

## Questions

**1. What do the screens at the start of the process catch?**

_____

_____

**2. What is floc?**

_____

_____

**3. What traps the smallest bits of dirt during filtering?**

_____

_____

**4. Why does the plant disinfect the water?**

_____

_____

**5. Why is some chlorine often left in the water?**

_____

_____

**6. Why do the lumps of dirt need to grow heavier before they can be removed?**

_____

_____

## Words to know

treatment: a process that makes something clean or safe
screens: strong grates that catch large things
disinfects: cleans so that germs are destroyed
gravel: small pieces of rock
network: a system of many connected parts

## Talk together (every group has these)

1. Find one fact that every group read. How did your sheet say it?
2. What did your sheet tell you that you think another group's did not? Ask them.
3. What is one question about this topic that none of the sheets answered?

Name: _____ Date: _____

# From River to Tap: Cleaning Water Step by Step

Square group

When you fill a glass at the kitchen sink, the water you are holding may have begun its journey as part of a muddy river. Between the river and the faucet, a water treatment plant purifies it through a carefully organized series of steps.

First, the water flows through screens. These sturdy grates catch sticks, leaves and other large debris that floated in with the current.

Second, workers add a substance that causes tiny particles of dirt to cling together. The clumps grow heavy enough to form larger lumps, known as floc. The water then rests in enormous tanks, and the lumps sink to the bottom, where they can be removed.

Third, the water filters downward through deep beds of sand and gravel. Even the smallest specks of dirt are trapped among the grains, so the water that trickles out at the bottom is perfectly clear.

Fourth, the plant disinfects the water. A small amount of chlorine, or an alternative treatment such as ultraviolet light, is used to destroy germs that could make people ill. A little chlorine is frequently left in the water so that it remains safe as it travels through the pipes.

Finally, powerful pumps push the clean water through a network of underground pipes to homes, schools and fire hydrants. The plant tests the water again and again, so that people can trust it. The next time you turn on a faucet, consider how much work went into that single glass.

## Questions

**1. What do the screens at the beginning of the process catch?**

_____

_____

**2. What is floc?**

_____

_____

**3. What traps the smallest specks of dirt while the water is filtered?**

_____

_____

**4. Why does the plant disinfect the water?**

_____

_____

**5. Why is a little chlorine frequently left in the water?**

_____

_____

**6. Why must the clumps of dirt grow heavy before they can be removed?**

_____

_____

## Words to know

treatment: a process that makes something clean or safe
screens: strong grates that catch large things
disinfects: cleans so that germs are destroyed
gravel: small pieces of rock
network: a system of many connected parts

## Talk together (every group has these)

1. Find one fact that every group read. How did your sheet say it?
2. What did your sheet tell you that you think another group's did not? Ask them.
3. What is one question about this topic that none of the sheets answered?

# For the teacher: From River to Tap: Cleaning Water Step by Step

Each student sheet carries a shape, not a level. The same topic and facts, written three ways.

### Circle: From River to Tap: Cleaning Water Step by Step

Easier · 199 words · Flesch-Kincaid grade 3.6

1. Sticks, leaves and other big pieces.
2. Lumps made when tiny bits of dirt stick together.
3. Beds of sand and gravel.
4. To destroy germs that could make people sick.
5. It keeps the water safe in the pipes.
6. Heavy lumps sink to the bottom of the tank, where they can be taken out.

### Triangle: From River to Tap: Cleaning Water Step by Step

This passage · 226 words · Flesch-Kincaid grade 5.6

1. Sticks, leaves and other large pieces.
2. Lumps made when tiny bits of dirt stick together.
3. Beds of sand and gravel.
4. To destroy germs that could make people sick.
5. It keeps the water safe as it travels through the pipes.
6. Heavy lumps sink to the bottom of the tank, where they can be taken out.

### Square: From River to Tap: Cleaning Water Step by Step

Harder · 245 words · Flesch-Kincaid grade 7.3

1. Sticks, leaves and other large debris.
2. Larger lumps formed when tiny particles of dirt cling together.
3. Deep beds of sand and gravel.
4. To destroy germs that could make people ill.
5. It keeps the water safe as it travels through the pipes.
6. Heavy lumps sink to the bottom of the tank, where they can be taken out.