Name: _____ Date: _____

The Snow Route Planner Ranks the Roads

Circle group

When a big snowstorm is coming, a city has a problem. It has hundreds of streets to clear. But it has only so many plows and drivers. Someone must choose which roads go first. That person is a snow route planner.

The planner begins by ranking the roads. Main roads with the most cars come first. So do the streets that lead to hospitals, fire stations, and police stations. Then come the roads that buses use. Quiet side streets with only a few cars are last. This order helps emergency vehicles and workers get around while the storm is still going.

Next, the planner draws a route for each plow. A good route has no wasted trips. The plow drives a smooth loop and does not go back over roads that are clear. Steep hills and sharp curves go early. They are the hardest to clear once ice builds up.

Trucks that spread salt often go with the plows. Salt lowers the temperature at which water freezes. So ice melts or does not form. But salt works poorly in very cold weather. So crews may use sand to help tires grip. During the storm, the planner watches the forecast and listens to drivers. If the snow falls faster than expected, the plan changes.

Questions

1. Which roads does the planner clear first?

_____

_____

2. Which streets are cleared last?

_____

_____

3. What does salt do to water?

_____

_____

4. Why do steep hills go early on a route?

_____

_____

5. Why might crews use sand when it is very cold?

_____

_____

6. Why does the planner watch the forecast during the storm?

_____

_____

Words to know

planner: a person who decides what to do and in what order
ranking: putting things in order from first to last
emergency: a sudden and serious situation that needs fast help
route: the path a vehicle follows from start to end
forecast: a prediction of what the weather will do

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: _____

The Snow Route Planner Ranks the Roads

Triangle group

When a big snowstorm is on the way, a city has a problem. It has hundreds of streets to clear, but only a limited number of plows and drivers. Somebody has to decide which roads go first. That person is a snow route planner.

The planner starts by ranking roads. Main roads that carry the most traffic come first, along with the streets that lead to hospitals, fire stations, and police stations. Next come the roads that buses use. Quiet side streets, which carry only a few cars, are cleared last. This order helps emergency vehicles and workers move through town while the storm is still going.

The planner then draws a route for each plow. A good route has no wasted trips. The plow should cover its streets in a smooth loop and avoid driving back over roads that are already clear. Steep hills and sharp curves are placed early, because they are the hardest to clear once ice builds up.

Plows are often followed or preceded by trucks that spread salt. Salt lowers the temperature at which water freezes, so ice melts or never forms. But salt works poorly when it is extremely cold, so crews may use sand to give tires some grip instead. Throughout the storm, the planner watches the forecast and the reports from drivers, and changes the plan if the snow falls faster than expected.

Questions

1. Which roads does the planner clear first?

_____

_____

2. Which streets are cleared last?

_____

_____

3. What does salt do to water?

_____

_____

4. Why does the planner put steep hills early in a route?

_____

_____

5. Why might crews use sand instead of salt on a very cold day?

_____

_____

6. Why does the planner keep watching the forecast during the storm?

_____

_____

Words to know

planner: a person who decides what to do and in what order
ranking: putting things in order from first to last
emergency: a sudden and serious situation that needs fast help
route: the path a vehicle follows from start to end
forecast: a prediction of what the weather will do

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: _____

The Snow Route Planner Ranks the Roads

Square group

When a major snowstorm is approaching, a city faces a genuine dilemma. It has hundreds of streets that need to be cleared, yet only a limited number of plows and drivers with which to do the job. Somebody has to decide which roads receive attention first, and that responsibility belongs to a snow route planner.

The planner begins by ranking the roads according to their importance. Main roads that carry the heaviest traffic come first, together with the streets that lead to hospitals, fire stations, and police stations. Next come the roads that buses depend on. Quiet side streets, which carry only a handful of cars, are cleared last. This order allows emergency vehicles and essential workers to move through town even while the storm is still raging.

The planner then maps out a route for every plow. A well-designed route contains no wasted trips: the plow should cover its assigned streets in a smooth loop and avoid doubling back over roads that are already clear. Steep hills and sharp curves are scheduled early, because they become the most difficult to clear once ice has built up.

Plows are frequently accompanied by trucks that spread salt. Salt lowers the temperature at which water freezes, so ice either melts or never forms in the first place. Salt performs poorly in extreme cold, however, so crews may spread sand instead to give tires some grip. Throughout the storm, the planner monitors the forecast and the reports from drivers, and revises the plan whenever the snow falls faster than anticipated.

Questions

1. Which roads does the planner arrange to clear first?

_____

_____

2. Which streets are cleared last, and why might that be reasonable?

_____

_____

3. What effect does salt have on water?

_____

_____

4. Why does the planner schedule steep hills early in a route?

_____

_____

5. Why might crews spread sand instead of salt in extreme cold?

_____

_____

6. Why does the planner keep monitoring the forecast during the storm?

_____

_____

Words to know

planner: a person who decides what to do and in what order
ranking: putting things in order from first to last
emergency: a sudden and serious situation that needs fast help
route: the path a vehicle follows from start to end
forecast: a prediction of what the weather will do

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: The Snow Route Planner Ranks the Roads

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

Circle: The Snow Route Planner Ranks the Roads

Easier · 213 words · Flesch-Kincaid grade 3

1. Main roads with the most cars and streets that lead to hospitals, fire stations, and police stations.
2. Quiet side streets with only a few cars.
3. It lowers the temperature at which water freezes.
4. They are the hardest to clear once ice builds up.
5. Salt works poorly in very cold weather, and sand helps tires grip.
6. The snow may fall faster than expected, and then the plan changes.

Triangle: The Snow Route Planner Ranks the Roads

This passage · 231 words · Flesch-Kincaid grade 5.3

1. Main roads with the most traffic and the streets that lead to hospitals, fire stations, and police stations.
2. Quiet side streets that carry only a few cars.
3. It lowers the temperature at which the water freezes.
4. They are hardest to clear once ice builds up.
5. Salt works poorly in extreme cold, and sand gives tires some grip.
6. The snow may fall faster than expected, and the plan may need to change.

Square: The Snow Route Planner Ranks the Roads

Harder · 258 words · Flesch-Kincaid grade 8.5

1. Main roads with the heaviest traffic and the streets leading to hospitals, fire stations, and police stations.
2. Quiet side streets that carry only a handful of cars.
3. It lowers the temperature at which water freezes.
4. They become the most difficult to clear once ice has built up.
5. Salt performs poorly in extreme cold, while sand gives tires some grip.
6. The snow may fall faster than anticipated, which would require revising the plan.