Name: _____ Date: _____

# Green Bananas and the Gas That Ripens Them

Circle group

Most bananas are picked while they are hard and green. They ride in cool ships to far-off countries. They get to the store still looking green. Then, in about a week, they turn yellow and sweet. What makes this happen?

Many fruits make a gas called ethylene. You cannot see or smell it. It works like a message that tells the fruit to ripen. When the gas builds up, the banana changes in three ways. The starch in the fruit breaks down into sugar, so it tastes sweeter. The firm flesh turns soft. The green coloring in the peel fades, and the yellow shows.

Workers use this fact to get bananas ready for shoppers. They keep the fruit in special rooms where the air is carefully controlled. When stores need ripe bananas, workers let in a small amount of ethylene to start the ripening. They keep the room cool so it does not happen too fast.

You can use the same idea at home. If your bananas are too green, put them in a paper bag. The bag traps the ethylene. The fruit ripens faster. Add an apple to the bag, and it helps more, since apples give off the gas too. To slow ripening down, keep the bananas away from other fruit.

## Questions

**1. Why are most bananas picked while still green?**

_____

_____

**2. What is the gas that makes fruit ripen called?**

_____

_____

**3. What happens to the starch in a ripening banana?**

_____

_____

**4. What happens to the green color in the peel?**

_____

_____

**5. How does a paper bag help a banana ripen faster?**

_____

_____

**6. How could you slow down ripening at home?**

_____

_____

## Words to know

ethylene: a gas that fruit gives off which tells it to ripen
ripen: to become ready to eat as fruit softens and sweetens
starch: a plain substance in plants that can turn into sugar
peel: the outer skin of a fruit
controlled: kept steady by careful watching and adjusting

## 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: _____

# Green Bananas and the Gas That Ripens Them

Triangle group

Most bananas are picked while they are still hard and green. They travel to far-off countries in cool ships, and they arrive at the store looking just as green as when they left the farm. Then, within a week or so, they turn yellow and sweet. What makes the change happen?

Many fruits make a gas called ethylene. You cannot see or smell it, but it works like a message that tells the fruit to ripen. Once the gas builds up, the banana begins to change in several ways. Starch in the fruit breaks down into sugar, so the banana tastes sweeter. The firm flesh turns soft. The green coloring in the peel fades away, and the yellow underneath shows up.

Workers use this fact when they get bananas ready for shoppers. They keep the fruit in special rooms where the air is carefully controlled. When the stores need ripe bananas, the workers let in a small amount of ethylene to start the ripening, and they keep the temperature cool enough that it does not happen too fast.

You can use the same idea at home. If your bananas are too green, put them in a paper bag. The bag traps the ethylene, so the fruit ripens faster. Adding an apple to the bag helps more, since apples give off the gas too. To slow ripening down, keep the bananas away from other fruit.

## Questions

**1. Why are most bananas picked while still green?**

_____

_____

**2. What is the name of the gas that makes fruit ripen?**

_____

_____

**3. What happens to the starch in a ripening banana?**

_____

_____

**4. What happens to the green coloring in the peel?**

_____

_____

**5. How does a paper bag help a banana ripen faster?**

_____

_____

**6. How could you slow down the ripening of bananas at home?**

_____

_____

## Words to know

ethylene: a gas that fruit gives off which tells it to ripen
ripen: to become ready to eat as fruit softens and sweetens
starch: a plain substance in plants that can turn into sugar
peel: the outer skin of a fruit
controlled: kept steady by careful watching and adjusting

## 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: _____

# Green Bananas and the Gas That Ripens Them

Square group

Most bananas are harvested while they are still firm and green. They cross the ocean in refrigerated ships bound for distant countries, and they reach the store looking just as green as when they departed the farm. Then, within roughly a week, they turn yellow and sweet. What brings about this transformation?

Many fruits produce a gas called ethylene. It is invisible and odorless, but it functions like a message instructing the fruit to ripen. Once the gas accumulates, the banana changes in several ways. The starch in the fruit breaks down into sugar, so the banana tastes sweeter. The firm flesh becomes soft. The green coloring in the peel gradually fades, revealing the yellow underneath.

Workers take advantage of this fact when they prepare bananas for shoppers. They store the fruit in special rooms where the air is carefully controlled. When stores need ripe bananas, the workers introduce a small amount of ethylene to begin the ripening, and they keep the temperature cool enough that the process does not proceed too quickly.

You can apply the same principle at home. If your bananas are too green, place them in a paper bag. The bag traps the ethylene, so the fruit ripens faster. Adding an apple to the bag helps even more, since apples release the gas as well. To slow the ripening down, keep the bananas away from other fruit.

## Questions

**1. Why are most bananas harvested while still firm and green?**

_____

_____

**2. What is the gas that causes fruit to ripen called?**

_____

_____

**3. What happens to the starch in a ripening banana?**

_____

_____

**4. What happens to the green coloring in the peel?**

_____

_____

**5. How does a paper bag help a banana ripen faster?**

_____

_____

**6. How could you slow the ripening of bananas at home?**

_____

_____

## Words to know

ethylene: a gas that fruit gives off which tells it to ripen
ripen: to become ready to eat as fruit softens and sweetens
starch: a plain substance in plants that can turn into sugar
peel: the outer skin of a fruit
controlled: kept steady by careful watching and adjusting

## 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: Green Bananas and the Gas That Ripens Them

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

### Circle: Green Bananas and the Gas That Ripens Them

Easier · 214 words · Flesch-Kincaid grade 3.3

1. They travel a long way and ripen later.
2. Ethylene.
3. It breaks down into sugar.
4. It fades so the yellow shows.
5. It traps the ethylene around the fruit.
6. Keep the bananas away from other fruit.

### Triangle: Green Bananas and the Gas That Ripens Them

This passage · 235 words · Flesch-Kincaid grade 5

1. They need to travel a long way and ripen later.
2. Ethylene.
3. It breaks down into sugar.
4. It fades away so the yellow shows.
5. It traps the ethylene around the fruit.
6. Keep them away from other fruit that give off ethylene.

### Square: Green Bananas and the Gas That Ripens Them

Harder · 231 words · Flesch-Kincaid grade 6.9

1. They must travel a long distance and can ripen later.
2. Ethylene.
3. It breaks down into sugar.
4. It gradually fades, revealing the yellow underneath.
5. It traps the ethylene around the fruit.
6. Keep them away from other fruit that release ethylene.