

Name: \_\_\_\_\_ Period: \_\_\_\_\_ Date: \_\_\_\_\_

**Lesson 2: What can we find out about greenhouse gas emissions resulting from waste in our school food system?**

**Initial Model:** In the space below draw an initial model of our school food system and where you think waste may occur. Include as much detail as you can think of.



---

## Using Mathematics and Computational Thinking

About how many pounds of food do you think was wasted at school this morning (for breakfast?)

---

---

What data would you need to know to answer this question? How could you get that information?

---

---

---

---

---

---

- A. Estimated amount of food wasted at breakfast (in pounds) \_\_\_\_\_
- B. Estimated amount of food wasted at breakfast (in kilograms) \_\_\_\_\_
- C. Amount of CO<sub>2</sub> emissions (use greenhouse gas calculator) \_\_\_\_\_
- D. Estimated amount of food wasted at lunch (in pounds) \_\_\_\_\_
- E. Estimated amount of food wasted at lunch (in kilograms) \_\_\_\_\_
- F. Amount of CO<sub>2</sub> emissions (use greenhouse gas calculator) \_\_\_\_\_
- G. Estimated amount of food wasted as snacks throughout the day (in pounds) \_\_\_\_\_
- H. Estimated amount of food wasted as snacks throughout the day (in kilograms) \_\_\_\_\_
- I. Amount of CO<sub>2</sub> emissions (use greenhouse gas calculator) \_\_\_\_\_

Total amount of CO<sub>2</sub> emissions from one day of school (C + F + I =): \_\_\_\_\_  
**Actual Estimates on <https://recyclingworksma.com/food-waste-estimation-guide/#Jump10> for a Massachusetts school – you get 1710 kg CO<sub>2</sub> emitted/week using their example ~250 kg/day = 540 lbs/day**

---

How much would greenhouse gas emissions be reduced if we cut food waste in our school?

---

---

What would that mean if reducing food waste was scaled up to the whole Colorado school system? For the entire US school system?

You can have an effect on the greenhouse gases emitted. There are a lot of GHG being emitted, but we have the opportunity, means, and motivation to change the amount of Greenhouse gases we are making.

Are we confident in our estimations? How could we know for sure how much food is wasted? How should we study our school food system to know what should be changed to reduce food waste?

Here are some suggestions: <https://www.fns.usda.gov/school-meals/creative-solutions-ending-school-food-waste>

Also saved as 'Suggestions to reduced food waste'

---

---

---

---

---

---

---

---

---

---

