**Lower Elementary:**

*Question:* Put the following in order from smallest to largest: a giant grasshopper that weighs 245 kilograms, a giant ladybug that weighs 399 kilograms, a giant centipede that weighs 150 kilograms, and a giant peach that weighs 8 tonnes.

**Upper Elementary:**

*Question:* Six friends each eat a kilogram of peach each day. If they’re eating a ***giant*** peach that weighs 8 tonnes and the pit of the peach weighs half a tonne, then how many days will it take for the friends to eat the whole peach?

**Middle School:**

*Question:* A centipede, a glowworm, a grasshopper, and a ladybug all have different favourite foods: curry, hot dogs, noodles, and roast beef. Neither the glowworm nor the grasshopper prefers curry. Neither the centipede nor the ladybug prefers noodles. The ladybug had trouble choosing between hot dogs and noodles as a favourite. The grasshopper almost chose roast beef. Match each bug with its favourite food.

**Algebra and Up:**

*Question:* It takes 13 hours for a flock of seagulls to carry a giant peach 520 kilometres in windy conditions. If the seagulls are flying into the wind, which is slowing their progress by 5 kilometres per hour, then how fast can the seagulls transport the peach in still conditions?

**Lower Elementary:**

*Question:* Put the following in order from smallest to largest: a giant grasshopper that weighs 245 kilograms, a giant ladybug that weighs 399 kilograms, a giant centipede that weighs 150 kilograms, and a giant peach that weighs 8 tonnes.

*Answer:* the centipede, the grasshopper, the ladybug, and the peach

*Solution:* The first thing we need to notice is that even though the peach has the smallest number representing its weight, it’s weighed in tonnes. A tonne is 1000 kilograms, so the peach is by far the heaviest. The smallest is the centipede at 150 kilograms, the next larger bug is the grasshopper at 245 kilograms, and the largest of the bugs is the ladybug at 399 kilograms.

**Upper Elementary:**

*Question:* Six friends each eat a kilogram of peach each day. If they’re eating a ***giant*** peach that weighs 8 tonnes and the pit of the peach weighs half a tonne, then how many days will it take for the friends to eat the whole peach?

*Answer:* 1250 days

*Solution:* First, we need to know how many kilograms of peach the friends are eating. Since a tonne is 1000 kilograms, 8 tonnes is 8000 kilograms. The peach pit weighs half a tonne, which is 500 kilograms, so the friends eat a total of 7500 kilograms of peach. In total, they eat 6 kilograms of peach per day, so we divide 7500 ÷ 6 to find that it will take them 1250 days to eat the whole peach.

**Middle School:**

*Question:* A centipede, a glowworm, a grasshopper, and a ladybug all have different favourite foods: curry, hot dogs, noodles, and roast beef. Neither the glowworm nor the grasshopper prefers curry. Neither the centipede nor the ladybug prefers noodles. The ladybug had trouble choosing between hot dogs and noodles as a favourite. The grasshopper almost chose roast beef. Match each bug with its favourite food.

*Answer:* The centipede prefers curry, the glowworm prefers roast beef, the grasshopper prefers noodles, and the ladybug prefers hot dogs.

*Solution:* To solve this problem, we eliminate possible favourites with each clue. We eliminate the curry as the favourite for the glowworm and the grasshopper first, then we eliminate the noodles for the centipede and the ladybug. Next, we know the ladybug prefers either hot dogs or roast beef, so she can’t have chosen noodles or curry. That leaves curry for the centipede. Since the ladybug had trouble choosing between hot dogs and noodles, she can’t have chosen beef. So, the ladybug likes hot dogs. We know the grasshopper almost and therefore didn’t choose roast beef, so the grasshopper’s favourite must be the noodles. That leaves the roast beef for the glowworm.

**Algebra and Up:**

*Question:* It takes 13 hours for a flock of seagulls to carry a giant peach 520 kilometres in windy conditions. If the seagulls are flying into the wind, which is slowing their progress by 5 kilometres per hour, then how fast can the seagulls transport the peach in still conditions?

*Answer:* 45 kilometres per hour

*Solution:* Since the seagulls’ speed is slowed by 5 kilometres per hour, we can represent their slowed speed as (***x*** – 5) if ***x*** is the speed they fly in still conditions. Since “distance = rate × time,” we can set up the equation:

520 = (***x*** – 5) × 13

When we solve for ***x***, we get 45 kilometres per hour.