Reception numeracy – lesson 40

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## Video transcript

Welcome reception learners. My name's Olivia and this is lesson 40. If you've been joining in with our other lessons, you'll know that we've been talking about things like length, mass and capacity. These are all words that we use when we're talking about measurement. You might remember that we've been talking about how length is how long something is. That mass is how much something weighs and that capacity is how much something can hold. Learning intention for today is to identify the measurable attributes of objects. Let's warm up our maths brains together. I've brought some things here today to tune in our thinking. Let's start thinking about capacity. Remember, capacity is how much something can hold. I'm wondering which has the bigger capacity: this glass or this glass. Can you see?

Using your eyes, have a guess. Which one do you think would have the most capacity? How could we find out? Let's do some measuring. I've brought some of these coloured felt balls today and we're going to use these to measure the capacity of these glasses. Which one did you guess: this glass or this glass? Let's see. Let's put some felt balls in this glass. Right up to the top so that it's filled up to its capacity. Squeeze one more in there. Do you think this glass is going to hold more or less than this one? Let's tip them in and compare. In they go. There's still some spare space, isn't there? Can you see that this glass has a bigger capacity than this glass? This glass could hold more. Let's see how many more.

Put some more in on the top. More felt balls fit in this glass than this one. This has the bigger capacity. Let's switch our thinking. Let's think about length. I have two pieces of paper here. Can you remember what we need to do in order to compare the length of an object? Think back. If you've seen other lessons, you might remember we were talking about a running race with your friends where you have to start at the starting line. Mathematicians call the starting line, the baseline. Let's use a baseline to see which is the longest.

Start them at the same spot. Can you see which one's the longest? That's right. It's the pink one. Now, let's switch our thinking again and this time we're thinking about mass. Can you remember what mass means? You might have heard the word, weight. Mass is how heavy an object is. I have a flower here and I have a rock. I wonder how can we tell which one has the greater mass. Which one's the heaviest? We need to compare them, don't we? We can hold objects in our hand and feel which one is heavier.

Can you guess, or estimate, which object you think will be heavier? Is it the flower or would it be the rock? Hmm, let's see. Did you guess the rock? The rock is definitely heavier. It has a greater mass. Now that we've got our brains nice and warm, I just need your help with one more thing.

I have this letter from my friend, Joe. Dear Olivia, I found these in my shed and I need to work out where to put them. I was getting all muddled up and wondered if you could help. Can you help me find out which one has the most capacity? Which one is the longest? and which one is the heaviest? This will help me know where to put them at my house. Your friend, Joe. And, I've got this parcel that I found on my doorstep. Let's have a look what's inside.

Joe sent a rolling pin, a mug, a plastic container, a spoon, another container, and lucky last, a long piece of string. All these interesting objects from Joe. Can you remember what she needed help with? We need to find out which object is the longest, we need to find out which object is the heaviest and which one has the most capacity. Where should we start? Let's start thinking about length. Which object do you think will be the longest? We have a rolling pin, a mug, container, a spoon, another container and a string. Oh, hang on. This is all rolled up. Let's pull it out and see how long it is.

Which one do you think might be longest? Could it be the rolling pin or maybe the string? Let's compare and use our baseline. Rolling pin. Line up our string. Oh, goodness. I can already see it's much longer than the rolling pin so the string is the longest object from Joe. Let's tell her that the string is the longest. Okay, what's next? What do we need to find out? We found out which one is the longest.

Let's see if we can tell which one's the heaviest. Would it be the rolling pin, the container, the spoon, the small container or the mug? How do we tell? Can you remember? That's right. We need to do some hefting again, don't we? We need to compare. Let's compare the spoon and the rolling pin. Which one do you think would be heavier? The rolling pin is heavier than the spoon. Maybe the mug is heavier. Should we try? We'll compare the mug and the rolling pin. No, the rolling pin is still heavier.

I know containers are quite light but I'm going to check anyway. Yes, still the rolling pin. So we can tell Joe that the rolling pin has the greatest mass or is the heaviest object in her parcel. So far, we've decided which was the longest and which has the greater mass. We have one more job to do. Can you remember? That's right. We need to find out which one has the greatest capacity. Remember, capacity is how much something can hold. Let's look at what we have left. Can you estimate? Which one do you think will have the greatest capacity? The mug, the container, the spoon or the bigger container?

I can tell using my eyes and just by looking at them that the spoon doesn't have the greatest capacity. I think the spoon has the smallest capacity so I'm going to put that one aside. Hmm, how could we tell which one of these has the greatest capacity? How could we test or measure? Maybe we could use the water that I've got here now. I put some green food colouring in to help you see. Which one should we start with? Perhaps we'll start with the smallest container and find out the capacity. I need to fill it up right up to the top. Do you think that this will be the same amount of liquid that we will fit in this container? Let's check. There's still a lot of space left, isn't it? It's definitely not this container. We can put that one aside. Which one has the greatest capacity? Is it the mug or is it the bigger plastic container? I think I'm going to tip this water back in so that we can compare.

Have you made an estimation? Have you had a guess? Which one do you think will have the biggest capacity? Let's start with the mug. Carefully pour and fill it all the way to the top. Oh, do be very careful. Do you think all of this liquid will fit into this container? Should we try? Pour carefully.

It fits and there's still some room left. We can fit some more liquid in so we know that this container has the greatest capacity. Thanks for your help. I can tell Joe the string is the longest object, the rolling pin has the greatest mass and this plastic container has the biggest capacity. Then she'll know where to put these things in her home. You might have some containers at home that you could compare and measure the different attributes. They might be cups, they might be spoons, maybe some things in your sandpit or even in your bath. Today we have learned that comparing different attributes means that sometimes we get different results. We've talked about length, capacity and mass. Thanks for joining us. Bye.

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