## **CONGRATULATIONS!**







# You Completed: SIEM toys

You are STEM azing

#### **Be Curious**

How do things move?

We explored how you can you make something move up and down or round and round without touching it with your hands.

When we push or pull something we apply a direct force but we explored creating simple machines to apply the force for us so we could see what happens.

#### **Be Creative**

Using STEM we created Christmas toys that demonstrate different forces at play.

These don't have to be Christmas toys - you can create any design you like and make it move up and down or whizz round and round without touching it.

### **Be Courageous**

This was quite tricky at times and we had to think about how to make it work best.

For example we had to make 'round and round reindeer' as light as possible and ensure the pivot point in the middle didn't stick due to friction.

When we're courageous we try our design and then test it and think about how we could improve it.

BE CURIOUS.
BE CREATIVE.
BE COURAGEOUS.
FLOURISH THROUGH STEM.

#### **STEM Facts**

In this STEM activity we explored how to make things move.

To make an object move we need to apply a force to it. This force has to overcome the forces holding the object back which could be gravity or friction.

Our flying Father Christmas travels up the string when you pull the ends apart as the string is applying a force to the bottom of the straw. Then as you put the ends of the string together Father Christmas comes back down under gravity.

Our round and round reindeer is propelled by the air from the balloon rushing out one way which pushes the reindeer the other way. Newton's Laws of Motion in action!

