



# Build Santa a New Sleigh

## Suggested Materials

- Cardboard boxes (tissue boxes, etc)
- Scissors
- Plastic straws
- Construction paper
- Craft sticks
- Aluminium foil
- Tape
- Pipe cleaners
- Christmas wrapping paper
- Christmas stickers
- Markers
- Cotton balls
- Toy bells
- Glue
- Santa's bag (zip bag with weighted items, eg. marbles.)



## Instructions

1. Weigh Santa's bag and record the weight on the Student Recording Sheet.
2. Discuss sleigh requirements -
  - The sleigh base may not be sitting on the floor or table. It must be propped up on sleigh rails.
  - The sleigh needs to be able to fit and hold the weight of Santa's bag.
  - There must be a seat for Santa inside the sleigh!

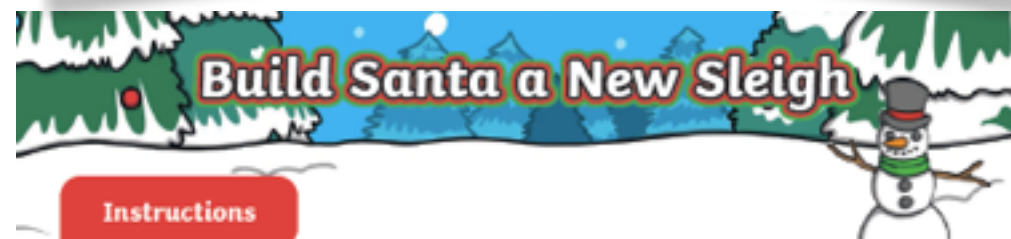
On TRACK to a bright future.



We Value:



The Science, Technology, Engineering and Maths (STEM) MAD Group challenge you to take part in a Christmas themed STEM project at home! Your task is to design and build a NEW SLEIGH for Santa. The sleigh must hold 242 GRAMS in weight - which is the weight of Santa's sack full of presents (scaled down for ease!). We will weigh this at assembly this week. The sleigh should meet design requirements (see instructions 2.) and also be pleasing to look at. Points will be awarded for fulfilment of the criteria and aesthetics! If you like, you can print off and fill in the sheets that accompany the instructions (overleaf) but this isn't necessary. You have been issued this challenge on the 5th of December and the sleigh must be delivered to The View by or on 19th December at 9am. They will be judged and 1st, 2nd, 3rd awarded to both a P1-3 category and a p4-7. Your prize will be house points for your house and a hot chocolate with the Head teacher to discuss your winning design!



# Build Santa a New Sleigh

## Instructions

3. Draw your design in the space on the Student Recording Sheet. Label your design using the names of the materials you are going to use.
4. Make your sleigh by following your design.
5. Santa's sleigh needs to be decorated in a way that represents Christmas to you. Use other materials to decorate your new sleigh.
6. Test your sleigh and record the details on the Student Recording Sheet.



# Build Santa a New Sleigh Recording Sheet

What is the weight of Santa's bag that your new sleigh needs to hold?

242 GRAMS

## Design

Draw and label your design in the space below.



# Build Santa a New Sleigh Recording Sheet

## Prediction

Make a prediction about your new sleigh. Will your new sleigh hold the weight of Santa's bag?

I predict that... \_\_\_\_\_

## Results

### Test 1

1. Did your new sleigh hold the weight in Santa's bag? **Yes/No**
2. What worked well in your design?

3. How could your design be improved?