



Craft
Ages 9–12
45 minutes

Rubber Band Car

Description

Create a rubber band car with templates adapted from the book *Amazing Rubber Band Cars* by Mike Rigsby

Space Considerations

A large space where participants have access to a table to spread out their craft supplies

Competencies

- Creative and imaginative thinking
- Development of fine motor skills
- Following directions
- Organization and planning
- Problem solving

Materials

- Corrugated cardboard (from cardboard boxes)
- Scissors
- Push-pins
- Two round pencils per participant
- Glue
- 2 rubber bands per participant
- Markers or paint (optional)

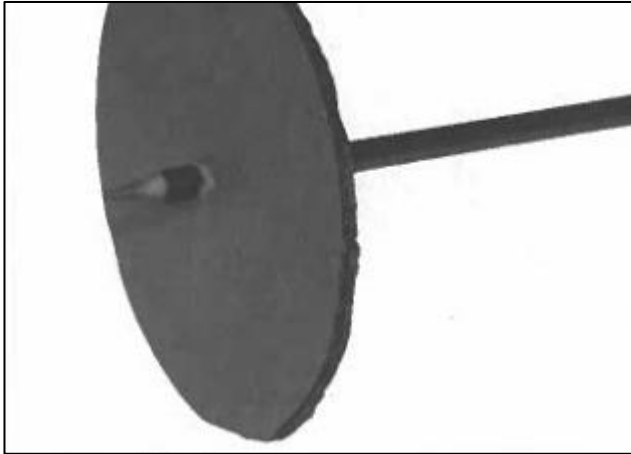
Preparation

- Prepare the room for a program that uses glue or paint

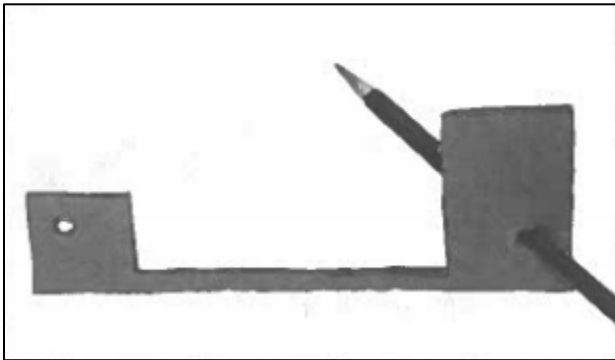
Implementation

1. Copy the templates onto cardboard—you will need one floor (1a), two frames (1b), two side rails (1c), and four wheels (1d)

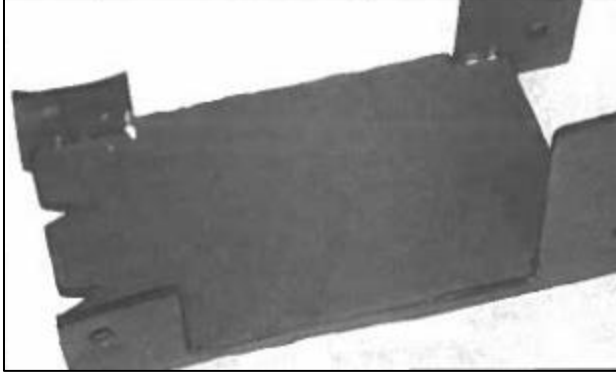
2. Cut all the pieces out of the cardboard, taking care to make the wheels as round as possible in order for the car to move well
3. Use a push-pin to mark the centre point of the wheels, using the hole on the template as a guide
4. Push a pencil into the centre point of one wheel, pushing it through the cardboard, as pictured (When making the holes in the wheels, you want a snug fit, so when the pencil turns, the wheel should turn as well)



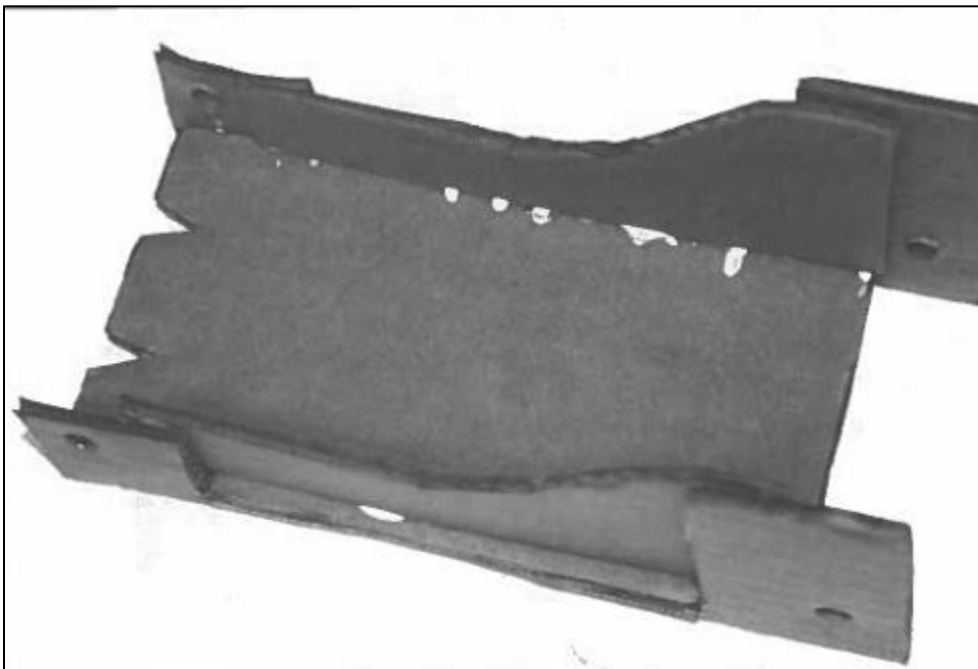
5. Remove the pencil once you make the hole
6. Make the axle holes in the frame pieces
7. Move the pencil in all directions to make the axle holes bigger, so the pencils will turn freely in the frame



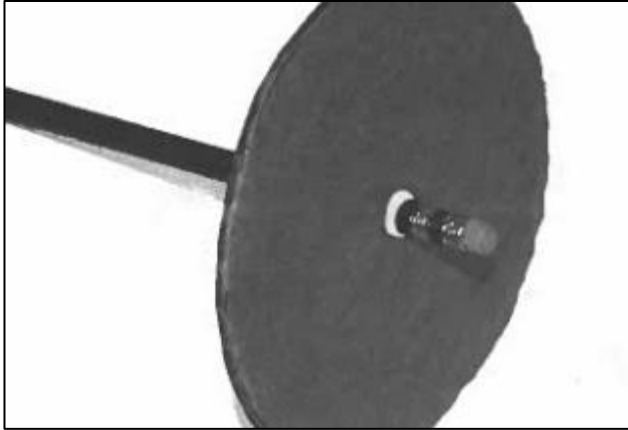
8. Remove the pencil once you make the hole
9. Glue the floor to the two frame pieces by placing an ample amount of glue wherever the cardboard pieces touch



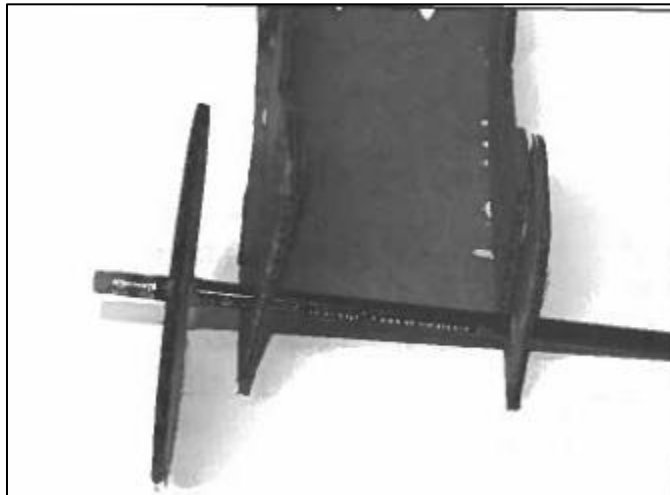
10. Glue the side rails to the inside of the frame, on both sides



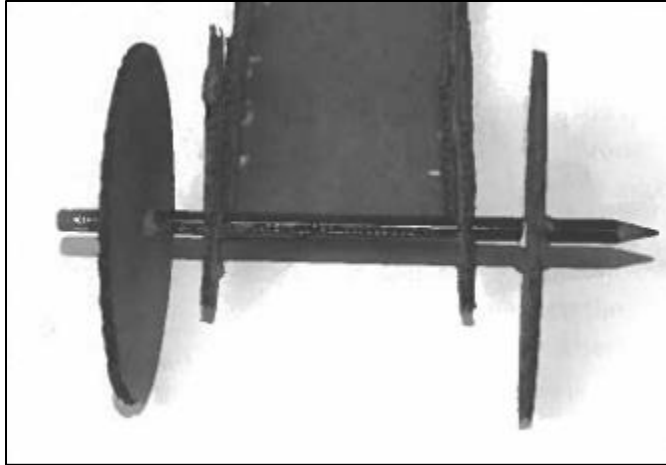
11. Attach the wheels to the axles by pushing one of the wheels over a pencil and sliding it close to the eraser end



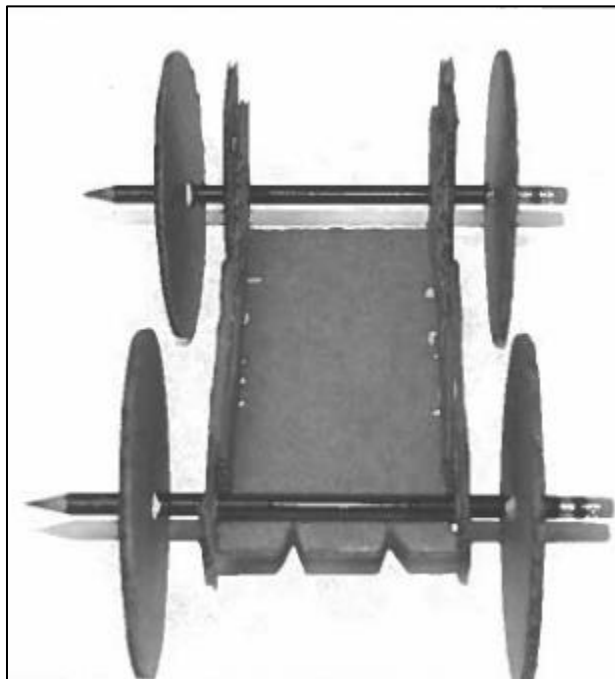
12. Place a little bit of glue (or masking tape) around the pencil for a secure connection to the wheel
13. Insert the wheel and pencil through the axle holes at the back of the car frame (the higher part of the frame)



14. Push a second wheel onto the other end of the pencil and glue it into place



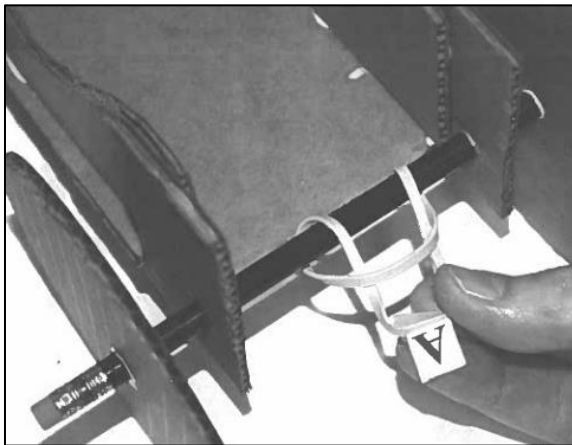
15. Now assemble the front wheels and axles in the same way as the back (push a wheel onto a pencil until it moves through to the eraser end, glue or tape it securely, insert the pencil through the frame's front axle holes and then add the final wheel onto the other end of the pencil, gluing it securely)



16. Allow the glue to dry (usually about 10 minutes)
17. Place one rubber band under the rear pencil (In the image below, a tab labelled A is included just for orientation—you do not need to create this tab or label your rubber band)



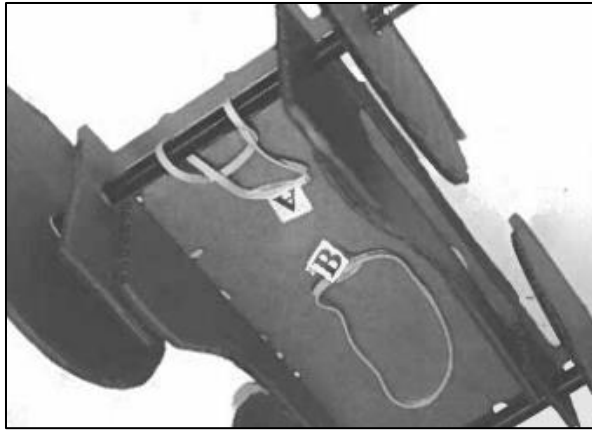
18. Pull the end of the rubber band over top of the pencil and through the other end of the band:



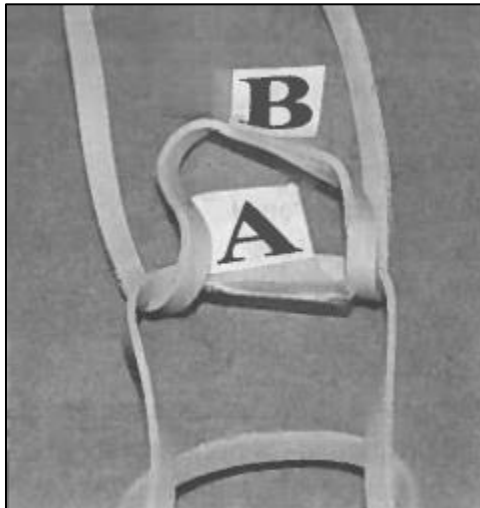
19. Pull the rubber band up over the pencil and lay it on the floor of the car:



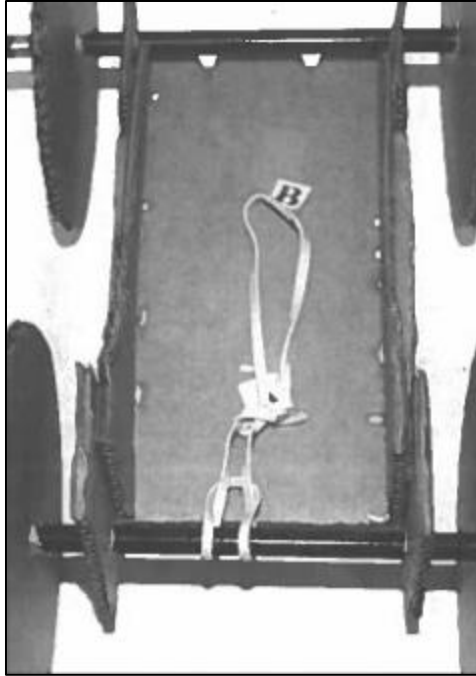
20. Place a second rubber band on the floor of the car (This one is labelled with a tab B, but again, this is just for your orientation—you do not need the tab)



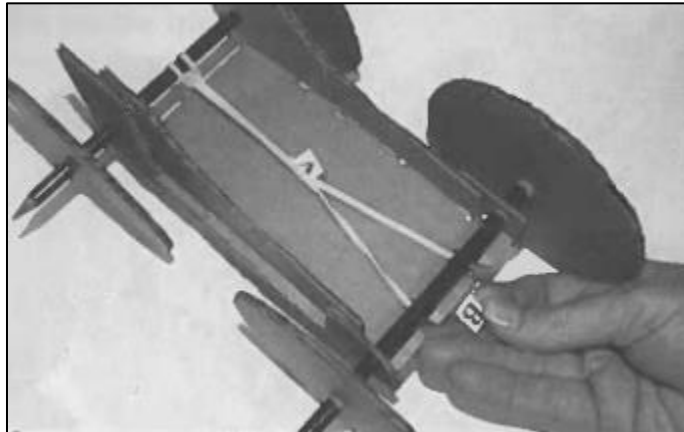
21. Move the second rubber band so that it is under the first rubber band, then pull it through the first rubber band



22. Pull the tab B end of the rubber band under and through the forward end of the other rubber band, which will ensure the two rubber bands are tightly linked together



23. Stretch the tab B end of the rubber band toward the front of the car
24. Loop the tab B end over the v-shaped slits at the front of the car



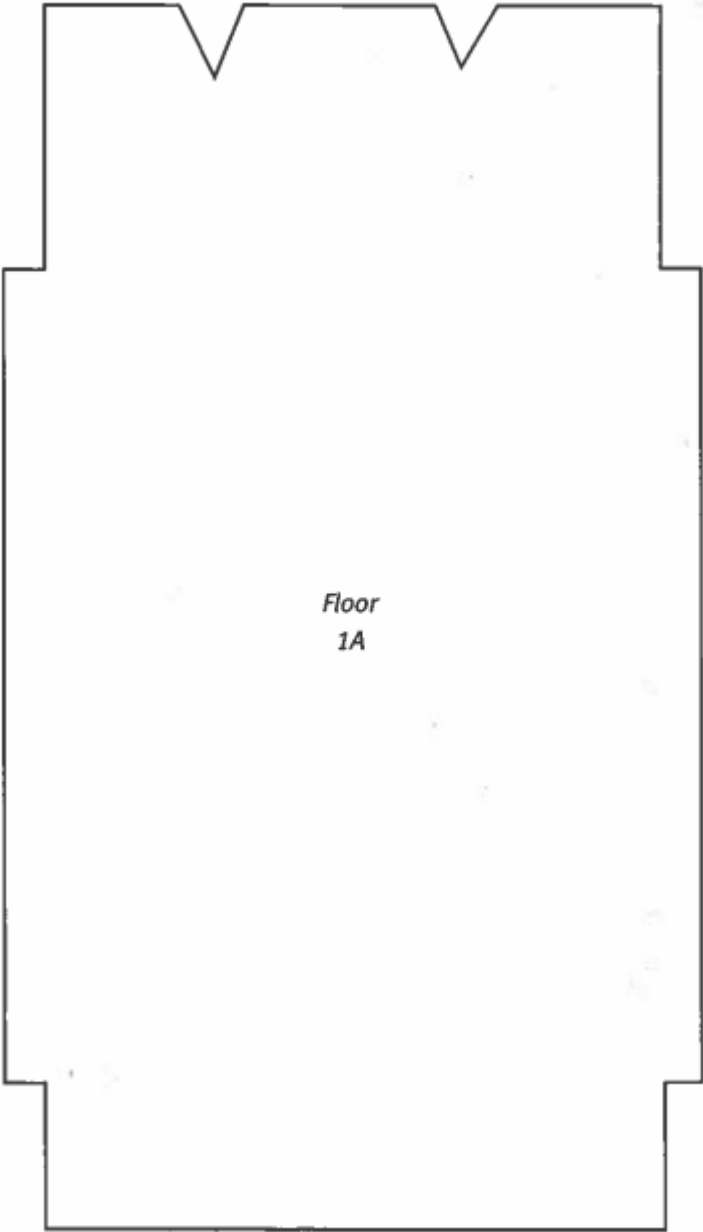
25. Your car is ready for its first trial; wind the rear wheel backward and let it go
26. If desired, decorate your car using markers or paint

Book Suggestions

Mr. Lemoncello's All Star Breakout Game by Chris Grabenstein

The Wildest Race Ever: The Story of the 1904 Olympic Marathon by Meghan McCarthy

Images and Templates



Frame (trace two)
1B



Axle hole



