



# POPSICLE STICK KIT

Be prepared for success, take **TECH.**





# MANUFACTURING TECHNOLOGY

TMJ



# CHALLENGE 1

Make a catapult.  
How far can it toss the  
ping pong ball?





# MANUFACTURING TECHNOLOGY

TMJ



## CHALLENGE 2

Create a working  
windmill using the  
blade propeller.





# MANUFACTURING TECHNOLOGY

TMJ



## CHALLENGE 3

Design and build a car  
that moves.





# MANUFACTURING TECHNOLOGY

TMJ



## CHALLENGE 4

Add a DC motor to your  
car build.





# MANUFACTURING TECHNOLOGY

TMJ



## CHALLENGE 5

Add a solar panel to  
your car. How far does it  
go on one charge?





# MANUFACTURING TECHNOLOGY

TMJ



## CHALLENGE 6

Build a bridge:

Level up with expanding  
the span of the bridge (the  
longest distance between  
the main supports).





# MANUFACTURING TECHNOLOGY

TMJ



## CHALLENGE 7

Build a greenhouse and use recycled or common material as the wall sheeting.





# MANUFACTURING TECHNOLOGY

TMJ



## CHALLENGE 8

Design and build a  
phone or tablet holder.





# MANUFACTURING TECHNOLOGY

TMJ



## CHALLENGE 9

Design a working wheel  
barrow. Pick the  
appropriate wheels.





# MANUFACTURING TECHNOLOGY

TMJ



## CHALLENGE 10

Design a pulley system that has a platform that can lift a calculator or similar.





# MANUFACTURING TECHNOLOGY

TMJ



## CHALLENGE 11

Create a maze with  
three elevations and  
have five different  
surfaces to drop a  
marble into a cup.





# MANUFACTURING TECHNOLOGY

TMJ



## CHALLENGE 12

Build a barge that has the popsicle sticks as the platform. You can use recycled materials to build the floating base. How much weight does it hold while floating on water?





# MANUFACTURING TECHNOLOGY

TMJ



## CHALLENGE 13

Redesign a kitchen object/tool. Use the popsicle sticks and kit materials for your prototype.





# MANUFACTURING TECHNOLOGY

TMJ



## CHALLENGE 14

Build a prototype for an electric vehicle charging station using renewable energy sources.





# MANUFACTURING TECHNOLOGY

TMJ



## CHALLENGE 15

Design and create  
a drone.





# MANUFACTURING TECHNOLOGY

TMJ



## CHALLENGE 16

Build a birdhouse to attract these much needed pollinators to your garden.





# MANUFACTURING TECHNOLOGY

TMJ



## CHALLENGE 17

Build an octagon-shaped gazebo. Remember, carpenters measure twice and cut once so double check your side angles.





# MANUFACTURING TECHNOLOGY

TMJ



## CHALLENGE 18

Build a new piece of  
furniture - outdoor  
or indoor.





# MANUFACTURING TECHNOLOGY

TMJ



## CHALLENGE 19

Build a racket and  
backboard that can  
be used with a ping  
pong ball.





# MANUFACTURING TECHNOLOGY

TMJ



## CHALLENGE 20

Build a flower plant holder. Make it functional with proper drainage.

