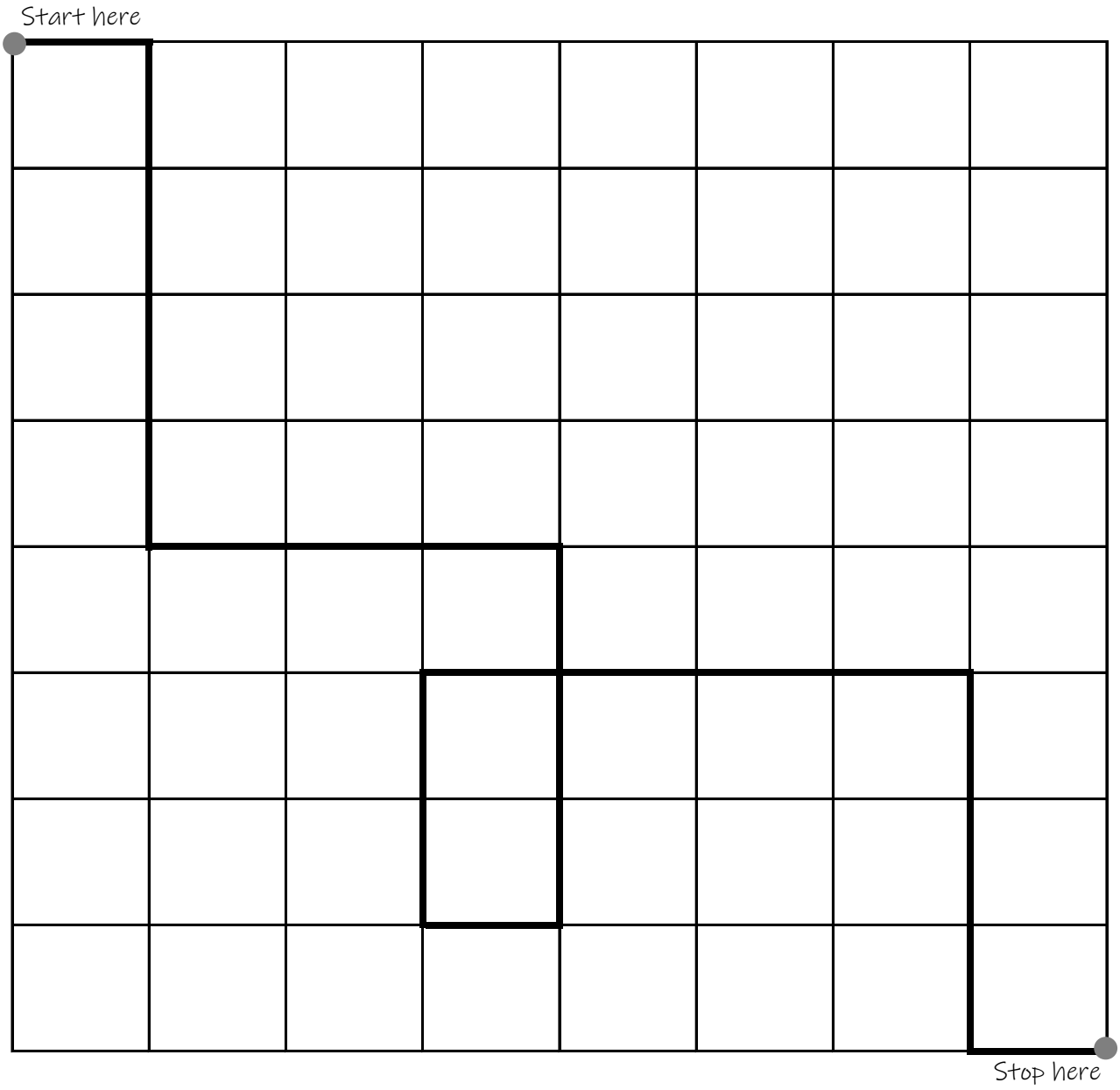
7-8 YEARS | WEEK 03

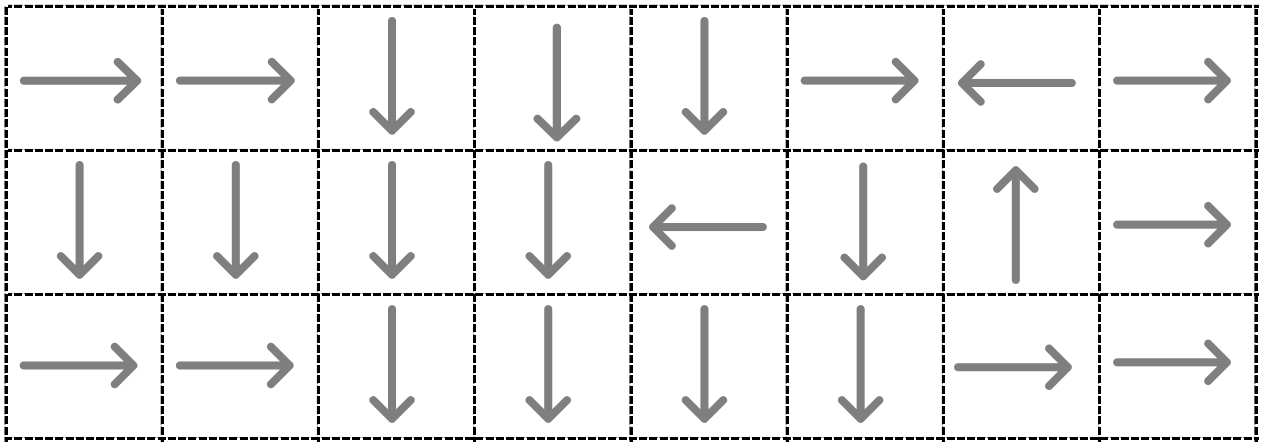
Technology - Algorithms and Robotics

1. Debugging the route
2. Debugging the route
3. Debugging the route
4. Debugging the route
5. Tracing the route
6. Tracing the route
7. Tracing the route
8. Algorithms - Steps to do a task
9. Algorithms - Step by step
10. Algorithm - Error correction
11. Algorithms - Try it out
12. Algorithms - Follow the signs game
13. Draw a robot based on the algorithm
14. Uncode and complete
15. Draw a robot based on the algorithm
16. Robotics - Robot commands
17. Robotics - Assemble a robot
18. Robotics - Robots in movies
19. Robotics - Recycled robot
20. Robotics - Robot hand puppet

DEBUGGING THE ROUTE

The route has been laid out to reach from the starting point to the endpoint. The arrows below show the direction of movement, but someone has placed the arrows in the wrong order or the wrong number of times. Can you help them correct the order of the arrows?





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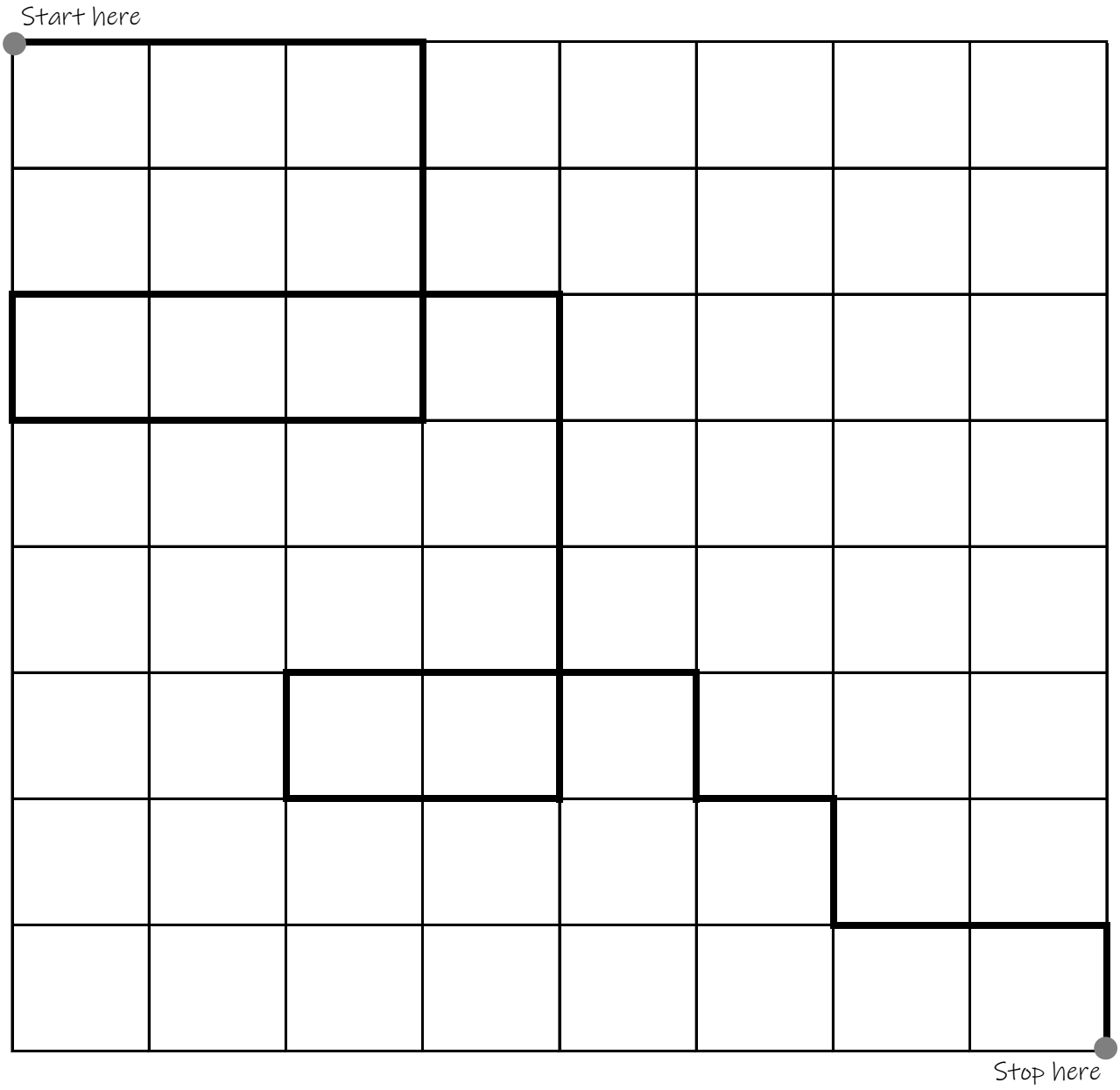
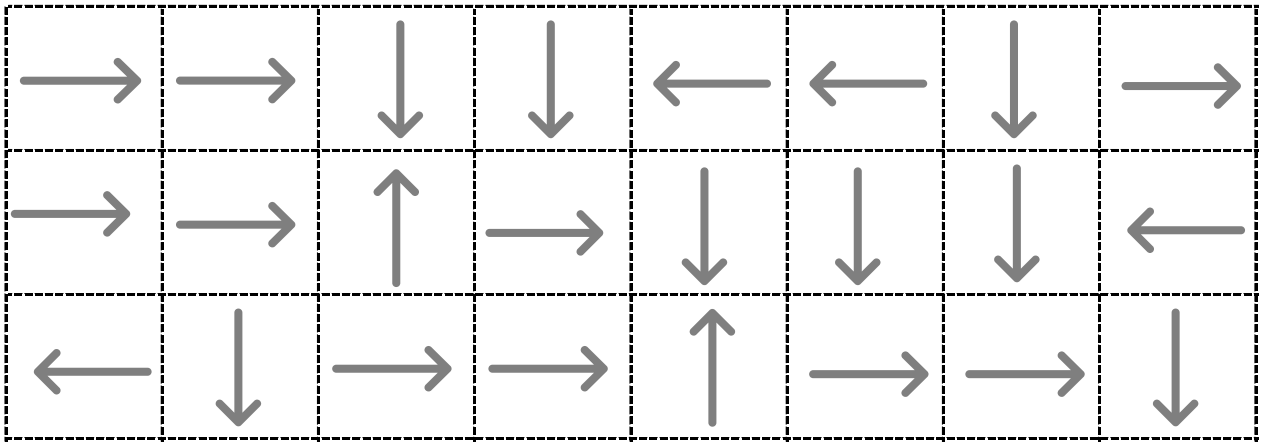
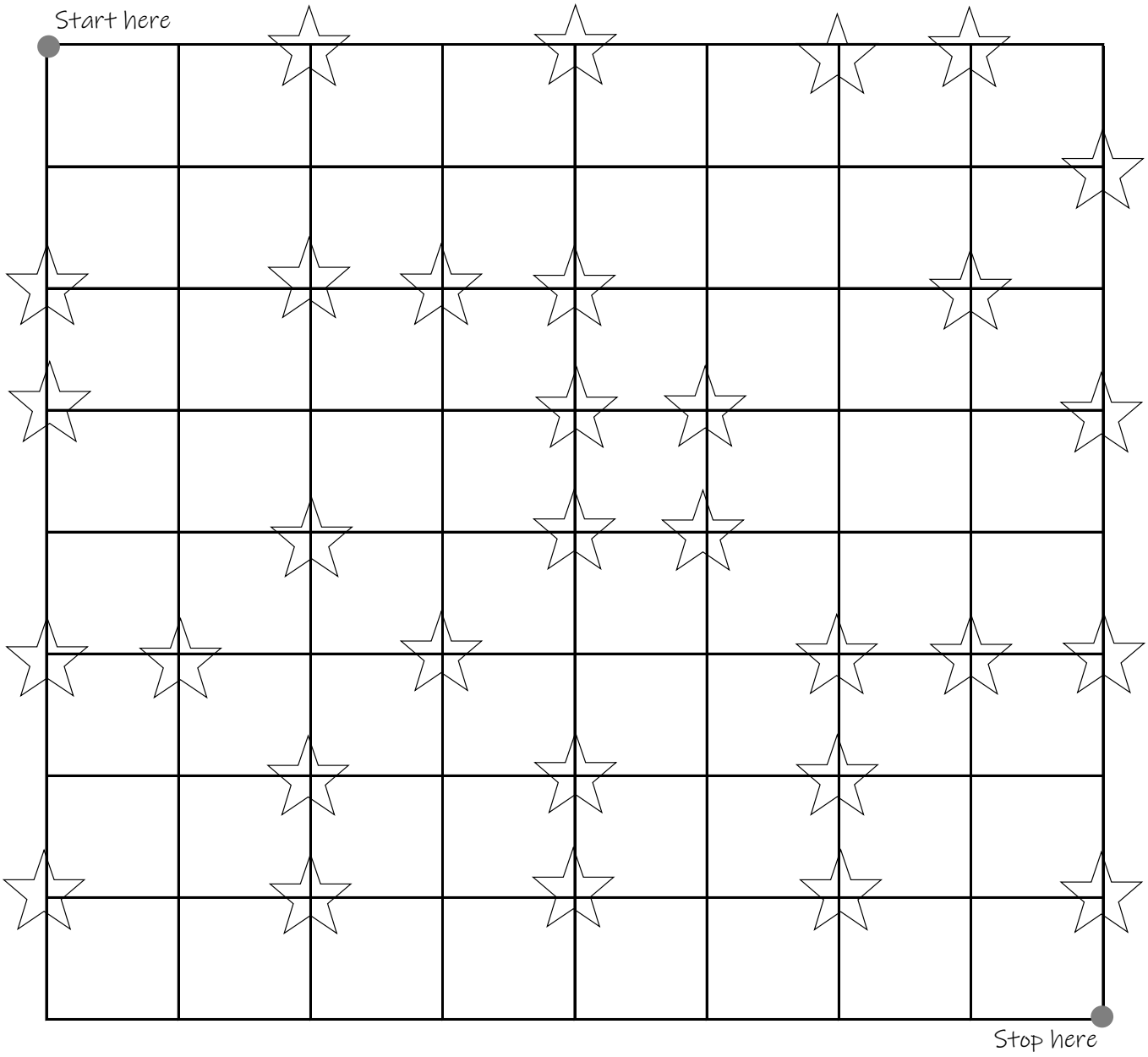
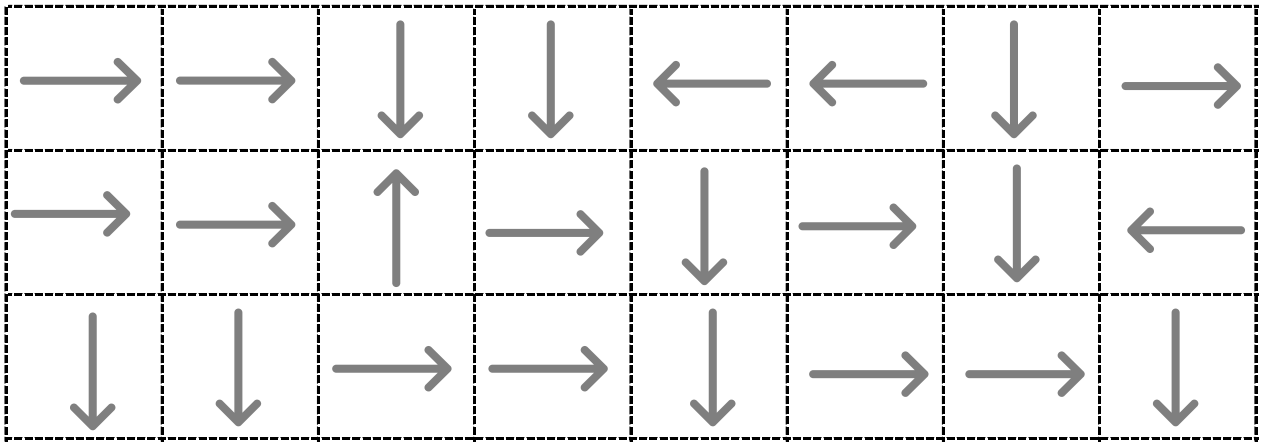




DEBUGGING THE ROUTE

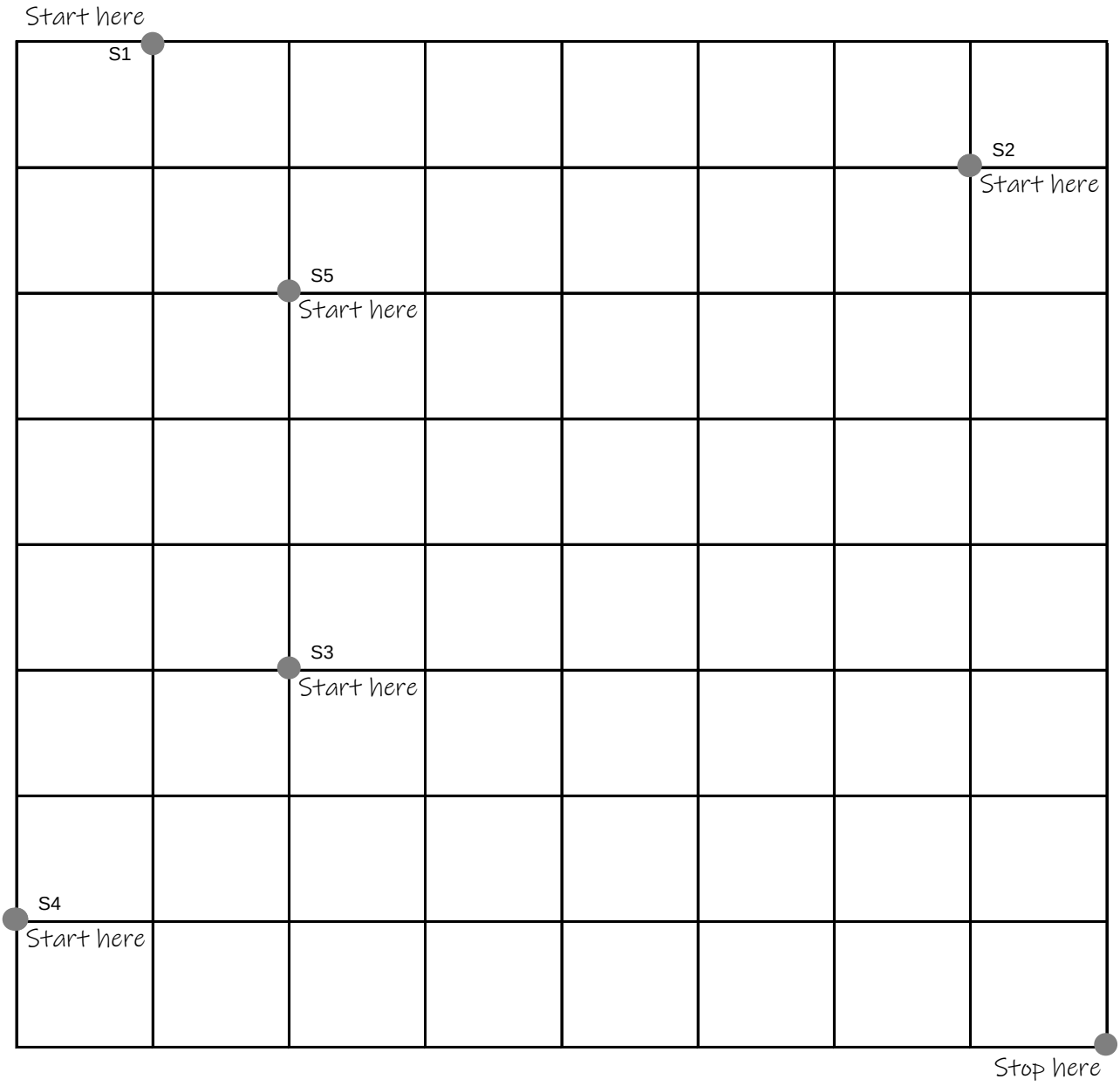
The route has been laid out to reach from the starting point to the endpoint. The arrows below show the direction of movement. Color the stars red, that form part of the route. Color the stars blue, that are not part of the route.

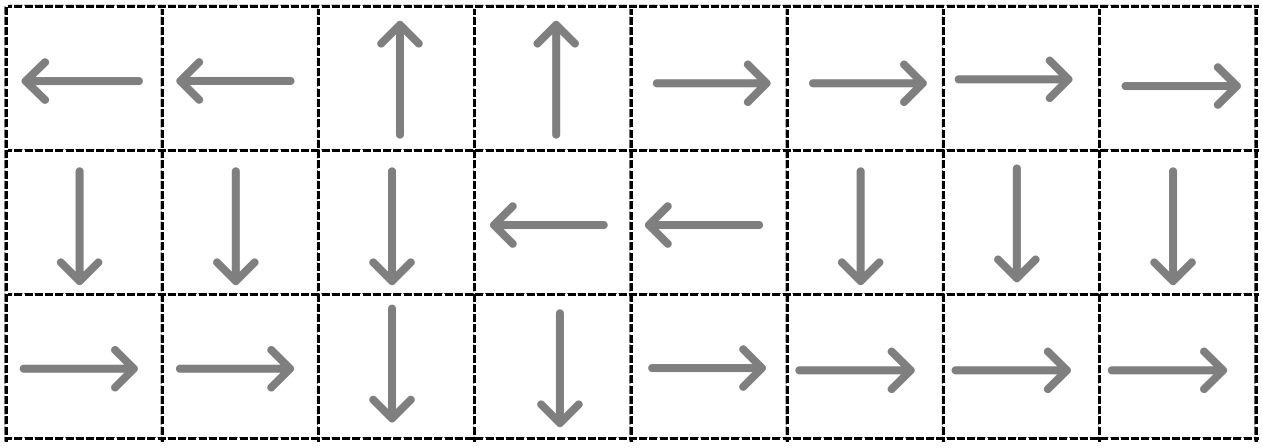




DEBUGGING THE ROUTE

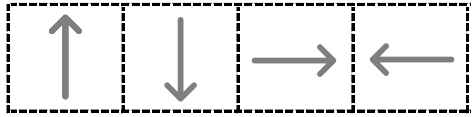
The route has been laid out to reach from the starting point to the endpoint. The arrows below show the direction of movement. What do you think is the starting point S1, S2, S3, S4, or S5 as per the route map?





TRACING THE ROUTE

The route has been laid out to reach from the starting point to the endpoint. The arrows show the direction of movement. Trace the path using these arrows in the white boxe's path. You can also cut out the arrows from the reference sheet and paste them to trace the route!



START							
END							

TRACING THE ROUTE

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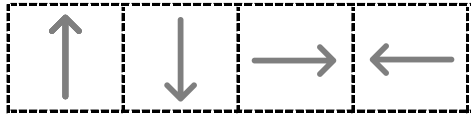

				END			
START							

TRACING THE ROUTE

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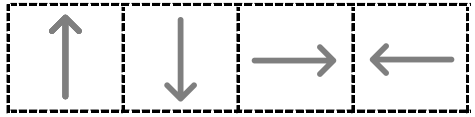
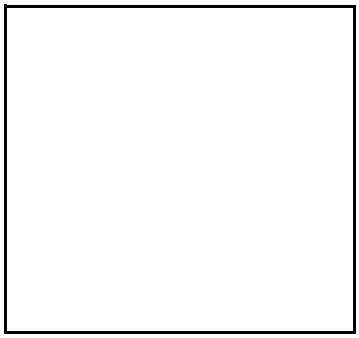
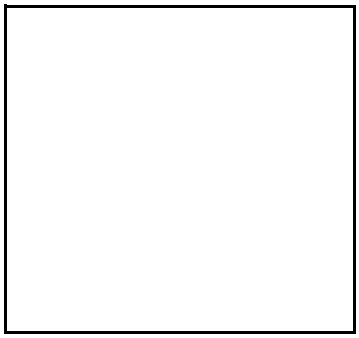
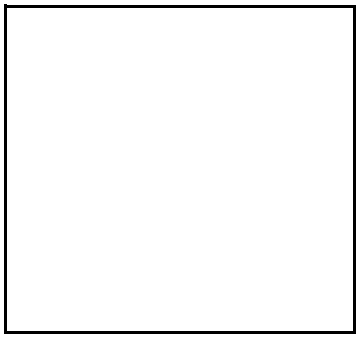


START							
					END		

T: Algorithms - Steps to do a task

An algorithm is the list of steps that you can follow to complete the activity. We all are excited to get back to school. They are images of activity that we do every morning before we leave for school. Cut the pictures along the dotted line and paste them in proper order so that it complete your activity.







Answer Key: brushing teeth bathing getting ready breakfast school bus school

T: Algorithms - Step by step

Hey folks, let us learn to make lemonade. Write down the algorithm steps for each activity by looking at the pictures.

Step 1:

Step 2:

Step 3:

Step 4:

Step 5:

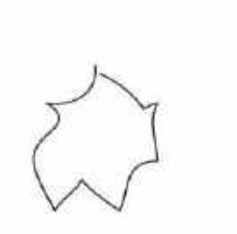
Step 6:

Answer Key: 1:cut the lemon in half. 2: squeeze the lemon. 3: add water to it and stir 4: add sugar to it and stir 5: add ice cubes to it . 6: seve it in a fancy glass

T: Algorithm - Error correction

We can use algorithms to help describe things that people do every day. Here are the steps to make an aeroplane. There are errors. Tick the boxes that have the correct algorithm to make a paper aeroplane.

a.



Cut the center of the paper

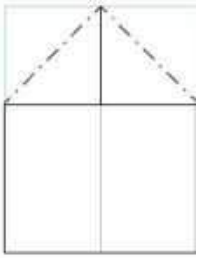
b.

Crease paper down the center

c.

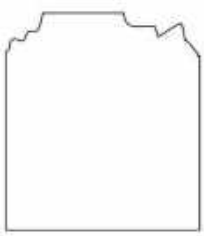
Crumble paper

d.



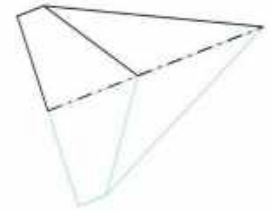
Fold top corners to the center

e.



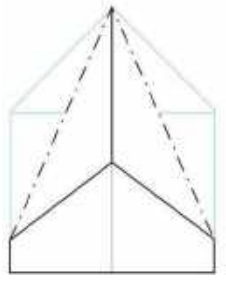
Rip corner of the paper

f.



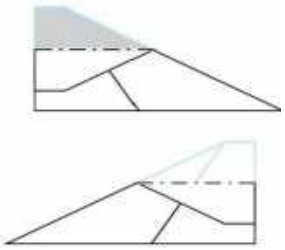
Fold paper in half again

g.



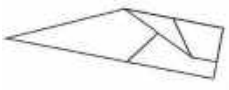
Fold corner sides to to center

h.



Pull sides down

i.



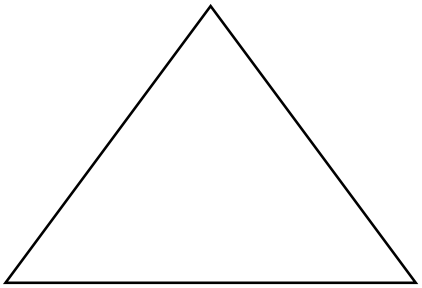
Toss the finished plane

Answer Key: b d f g h i

T: Algorithms - Try it out

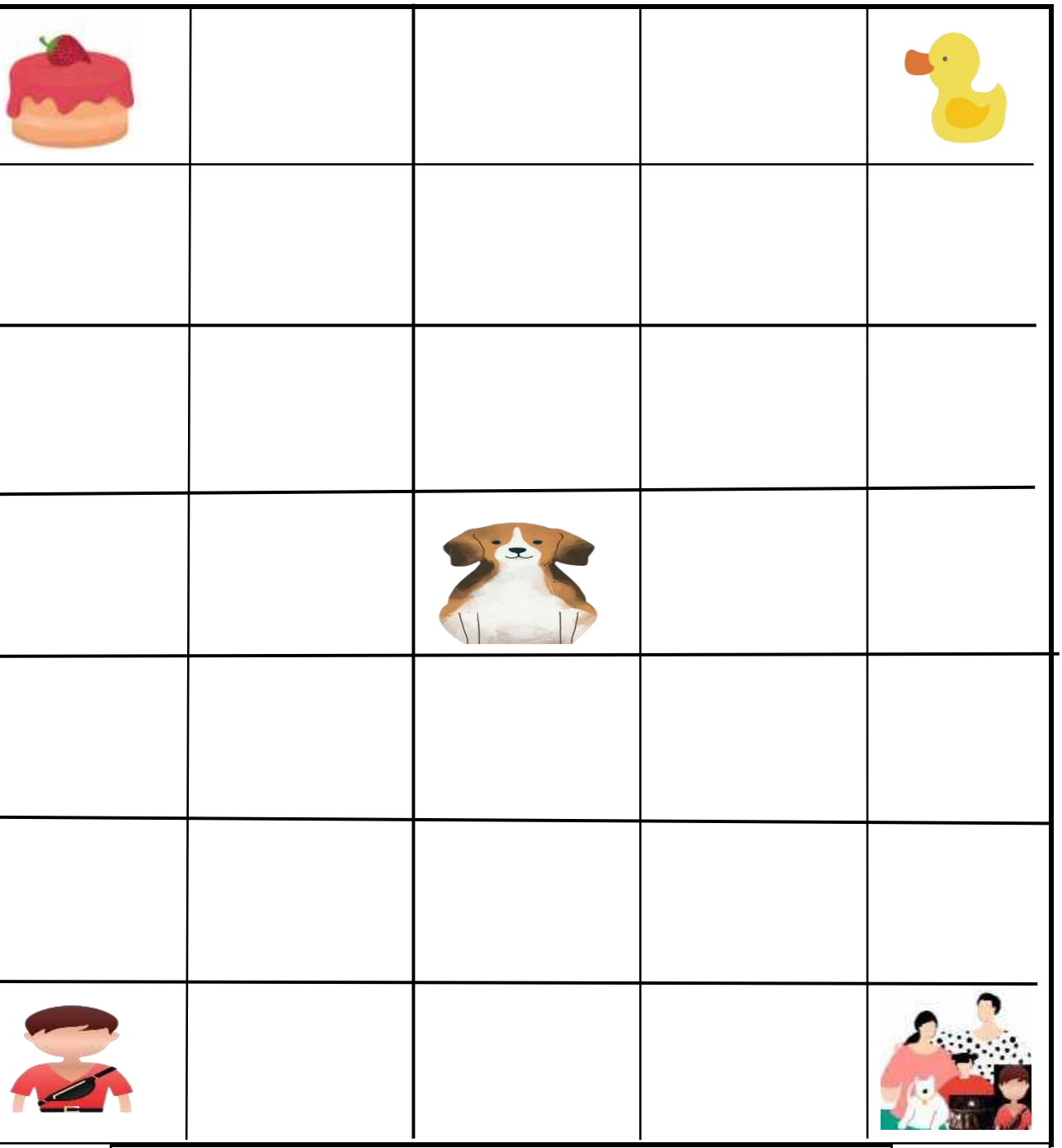
Do you know how to draw a crazy character called tribob? Here are few instructions to follow and complete the algorithm. The first step has been done for you.

Step 1: Draw a triangle for the body.	Step 2: Add any three tiny eyes	Step 3:Add three wings with stripes
Step 4: Add three tiny legs at the bottom	Step 5: Add a tail	



T: Algorithms - Follow the signs game

Hey folks, let us play a board game today. We have a friend here who wants to celebrate his birthday with his family. Use the signs given below and help him reach his family.



Drawing a Robot Based on the Algorithm

Let's use some imagination and creativity. Follow the given steps of the algorithm and design a robot.

when RUN

Draw the robot head

Draw the robot neck

Draw the robot body

Draw the robot hands

Draw the robot legs

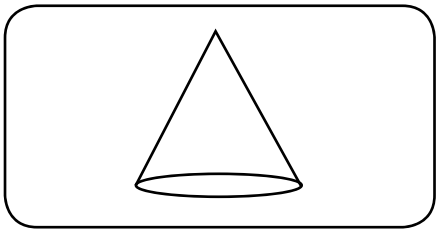
Add details to the robot

MY ROBOT

Uncode and complete

Use the code box to write the letters on the blank spaces below and draw the shapes accordingly.

Example C O N E



A	B	C	D	E	H	I	L	N	O	P	Q	R	S	U
⠁	⠃	⠉	⠙	⠑	⠓	⠊	⠇	⠝	⠕	⠏	⠟	⠗	⠎	⠥

Drawing a Robot Based on the Algorithm

Let's use some imagination and creativity. Follow the given steps of the algorithm and design a robot.

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Add details to the robot

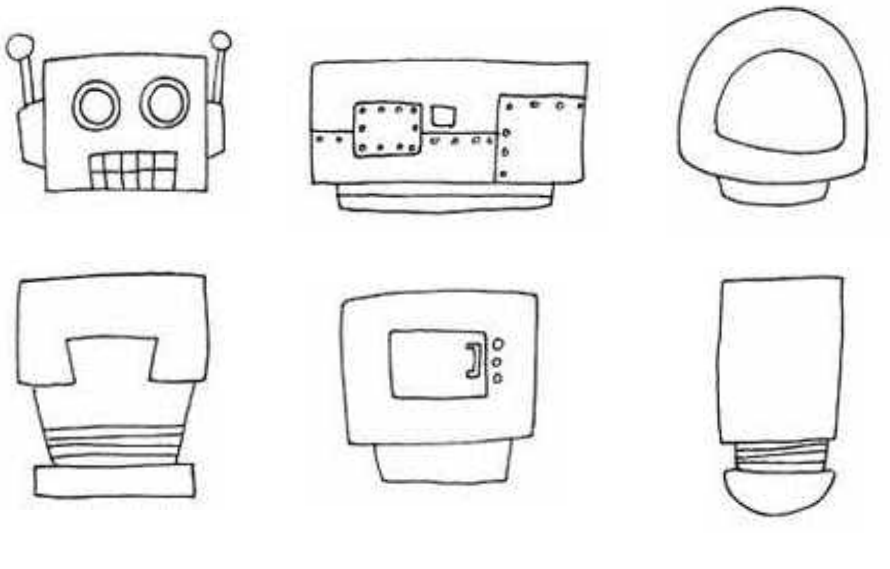
MY ROBOT

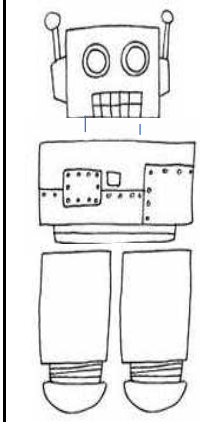
E: Robotics - Robot commands

Robots are automated machines that make human work effortless and easy. Robots are fast and do not make mistakes as they follow commands. Agribot is a robot used in agriculture for reducing human effort. It is playing an important role in agriculture. Let us try to describe how robots in the below images are used in agriculture.

E: Robotics - Assemble a robot

Did you know that there are swarm robots present which look like insects? Even in the army, robots are used to remove bombs and save human lives. Use the given picture as a reference, and draw your own robot in the space given below with the help of some robot parts in the box. You can colour it as well.





E: Robotics - Robots in movies

The term robotics first appeared in a science fiction story Run-around written by Issac Asimov in 1992. The electric arm was first designed by Victor Scheinman and was called PUMA. Let us try to identify the villain characters given below from a famous Hollywood robot-based movie and write the name of the movie and the corresponding characters.

Name of the movie: _____

Character in this movie: _____

Other character in this movie: _____

Name of the movie: _____

Character in this movie: _____

Other character in this movie: _____

Answer Key: 1.Transformers, Megatron, Optimus prime, Bumble bee,2. Big hero 6, Yokai, Baymax, Hiro hamada

E: Robotics - Recycled robot

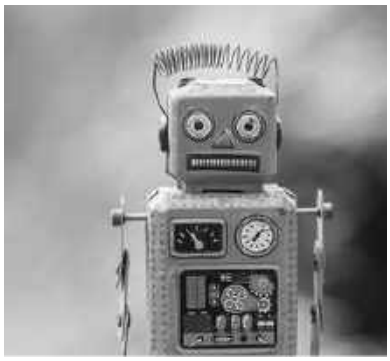
Robots are particularly useful because they can do things that can be dangerous for individuals. Do you like robots? Let us make a robot bank using reusable objects in your home. For this, you can use some cardboard, glues, tins, bottles etc. You can decorate your robots using paint, paint sticks, paper, washi tape, bottle caps, etc.

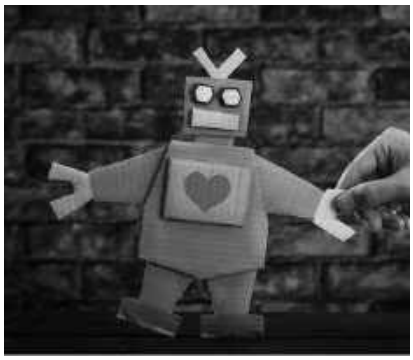
Write down the list of materials you will use to make your robot bank.
1
2
3
4
5
6

Can you write down the procedure to create your robot bank?

E: Robotics - Robot hand puppet

Robots are generally controlled by computer programs or electronic circuitry. Robots come in various shapes and sizes. All robots necessarily do not look like humans. Are you interested in making a robot? Let us try to make a robot hand puppet with the help of something available at home.





Here ia an idea to make your Robot hand puppet.

1. Use some old cardboard, foam sheet, old tins, brown paper grocery bags, etc.
2. You can decorate your robots using paint, sticks, paper, washi tape, bottle caps, play dough etc.
3. Stick a rope on the backside of the robot or insert your hand in the tin and start playing.

Write down the list of materials you will use to make your robot hand puppet.	Can you write down steps on how you make your robot hand puppet?
1	
2	
3	
4	
5	
6	