



Practicing Computational Thinking



Hello digital explorer!

Let's discuss possible smart moves to solve the following problems!

Remember, to be a computational thinker, we need to identify the problem, work in steps, work with the data, and try, try again.

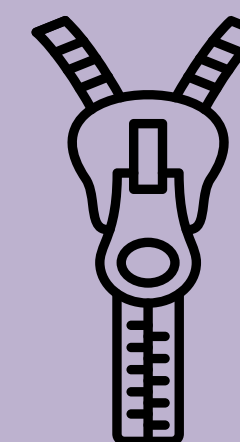
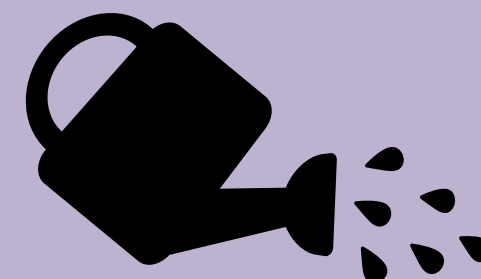
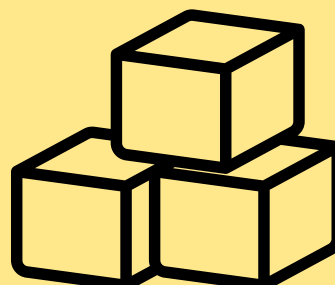
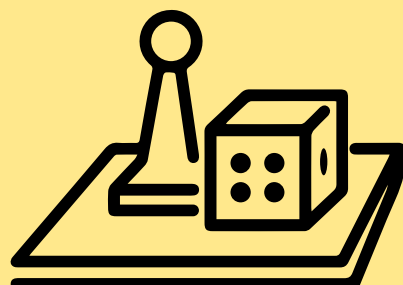
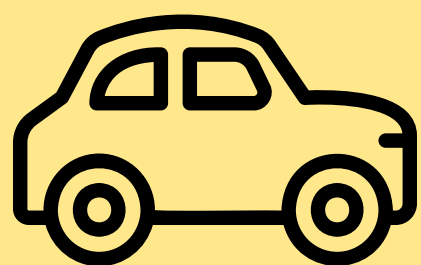
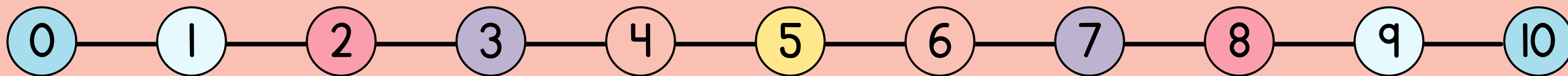
Hint: Some situations might have more than one solution!

Situation themes

- Everyday challenges
- Games & creative play
- Little "bugs" in systems

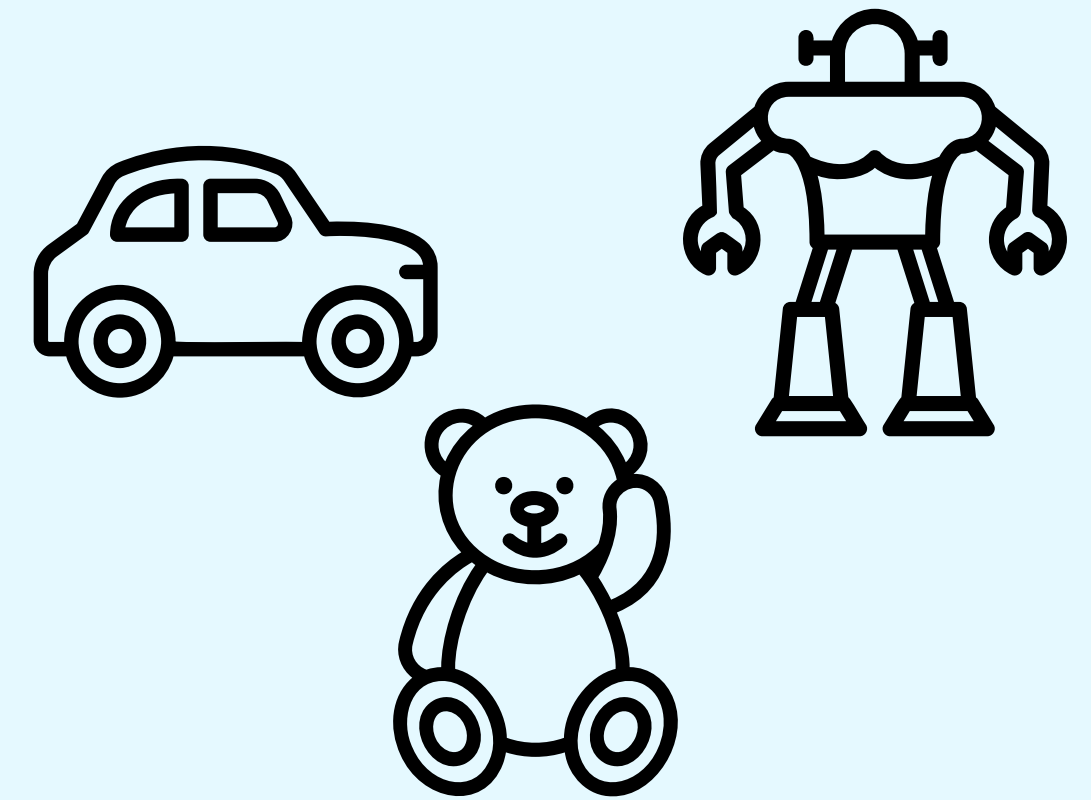


Everyday Challenges



1

The Lost Toy: Your favorite toy fell behind the couch. You can see it, but you can't reach it.
What steps can you take to get it back?

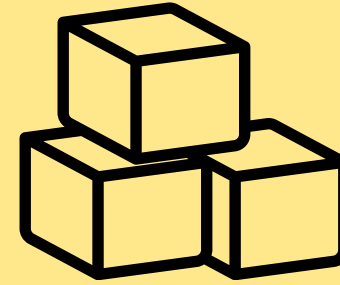


Hint: Think about tools, reaching, and moving obstacles.

Step by step:



2



Hint: Focus on stability and stacking order.

Building a Tower: You have a pile of blocks. You want to build the tallest tower you can. What's the first step? What do you do next?

Step by step:



3

Making a Sandwich: You're hungry and want to make a peanut butter and jelly sandwich. List all the steps you need to follow.

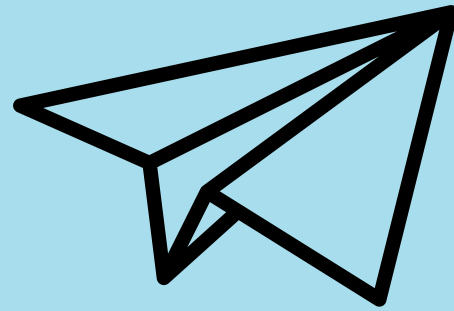
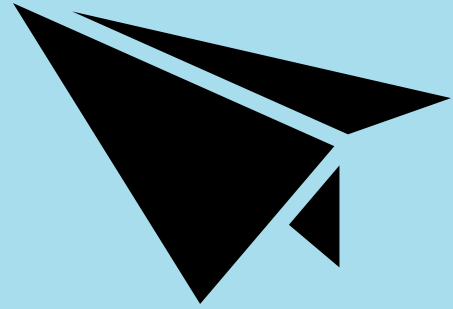
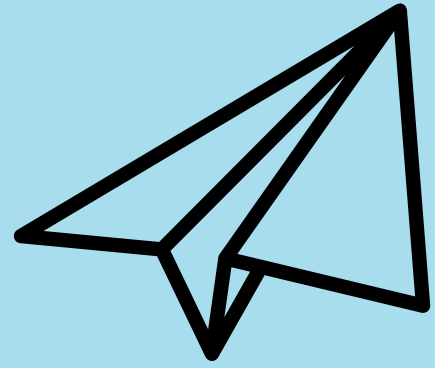


Hint: Emphasize order, ingredients, and spreading.

Step by step:



4

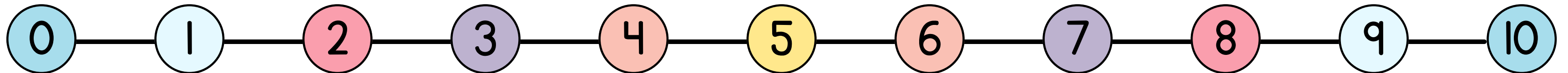


Hint: Following instructions, accuracy.

Making a Paper Airplane:

You want to make a paper airplane that flies far. What are the steps to fold it?

Step by step:

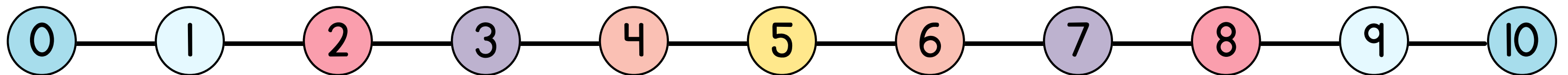


5 Drawing a Favorite Animal: You want to draw a cat. What shapes will you use? What parts do you draw first? What details come next?



Hint: Break down the complex shapes and the order of drawing them.

Step by step:



6

Getting Ready for School:

It's morning and you need to get ready for school. What's the order of things you do before you leave the house?

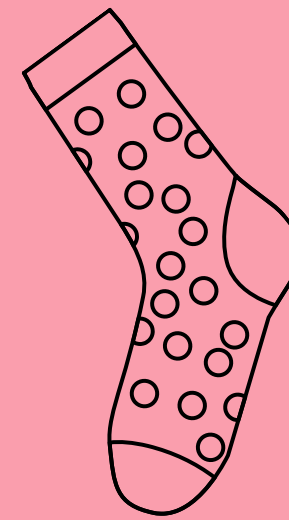
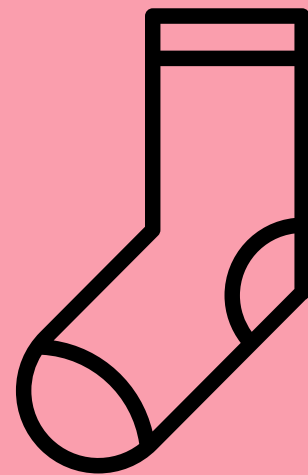
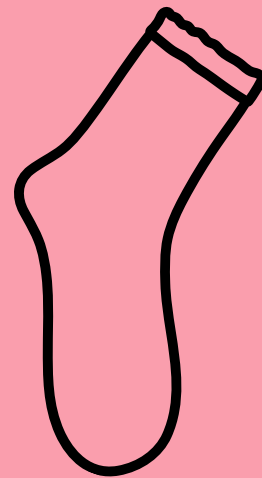


Hint: Hygiene, dressing, breakfast, and packing.

Step by step:



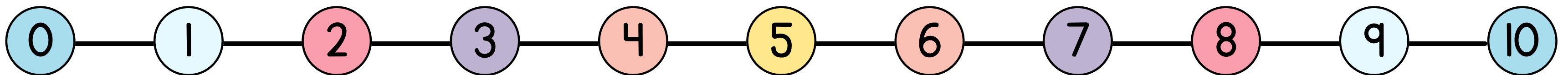
7



Hint: Ordered searching and checking common places.

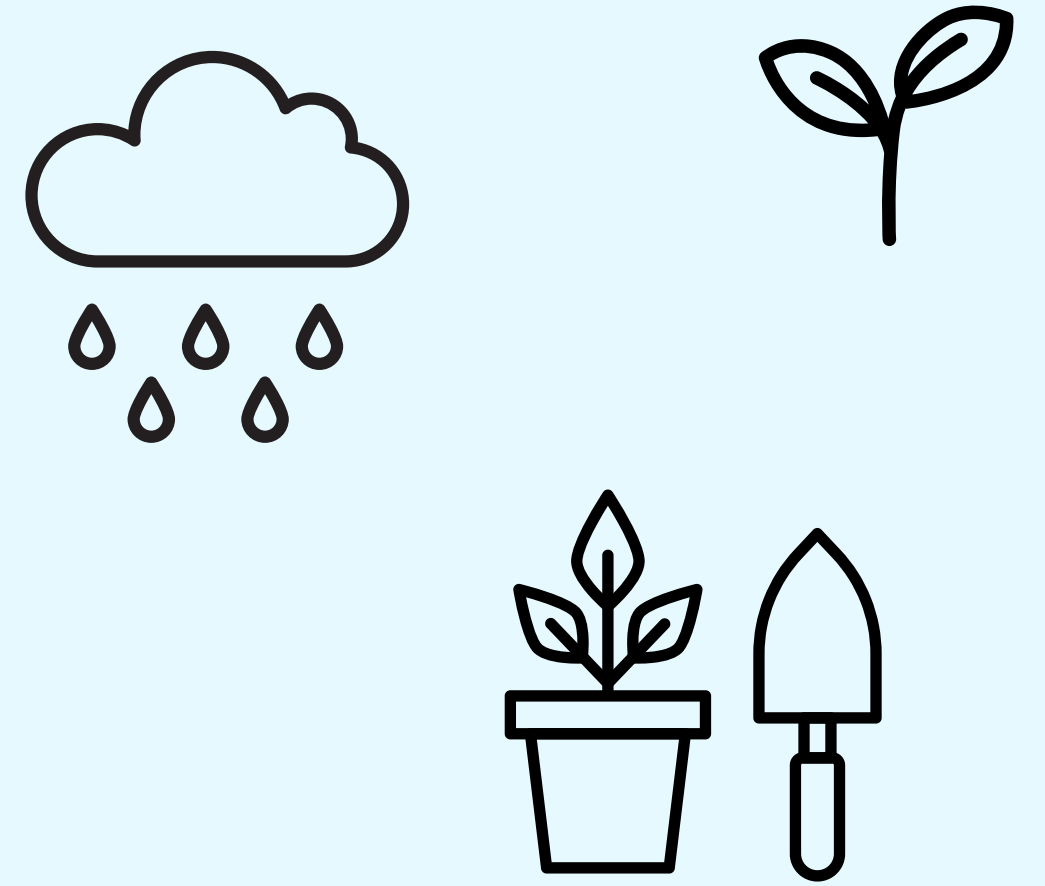
Finding a Missing Sock: You have one sock, but you can't find its match. Where do you look? What's your strategy to find it?

Step by step:



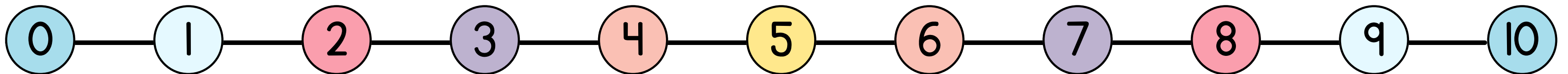
8

Watering a Plant: Your plant looks thirsty. How do you give it water without making a mess? What do you need?



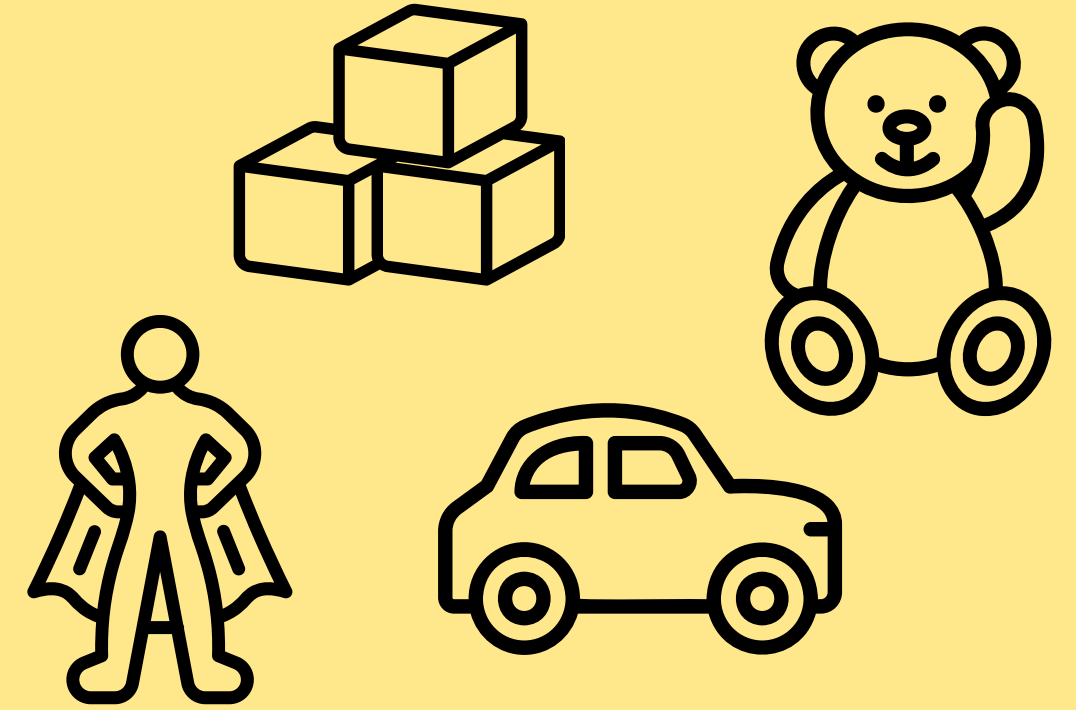
Hint: Gathering tools, careful actions.

Step by step:



9

Putting Away Toys: It's clean-up time! You have blocks, dolls, and cars all mixed up. How do you put them away neatly?

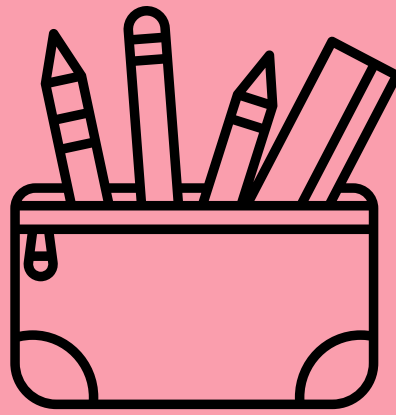
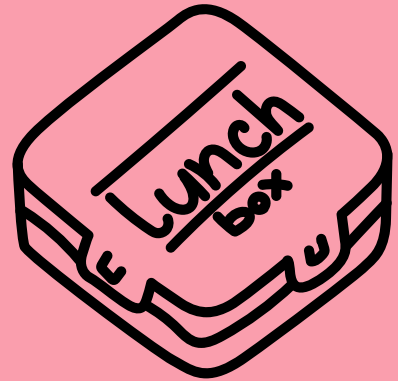


Hint: Think about sorting, ranking, and where they belong.

Step by step:



10

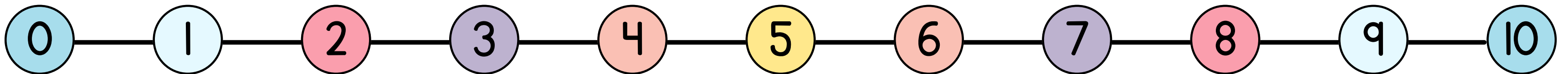


Hint: Think through how you sort your items, what can go on the bottom, and what needs to be on top.

Packing a Backpack:

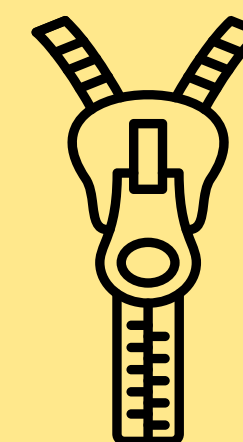
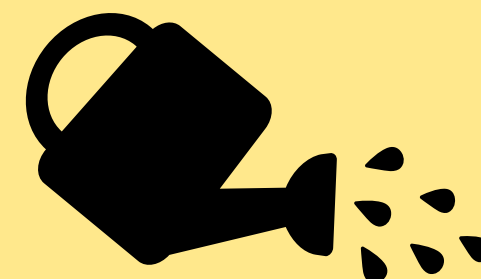
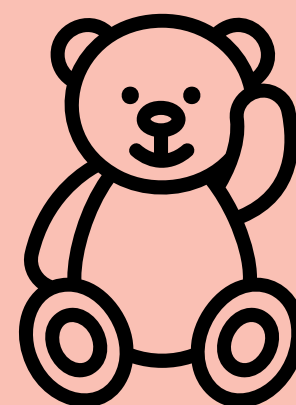
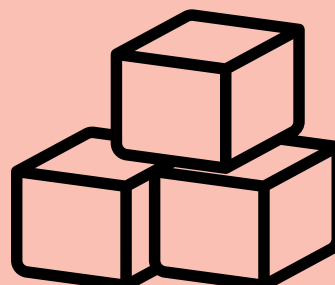
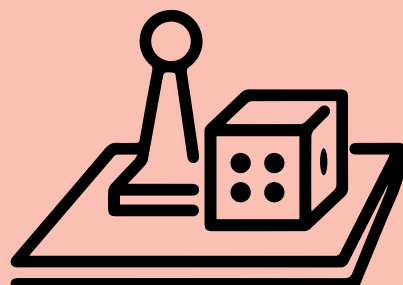
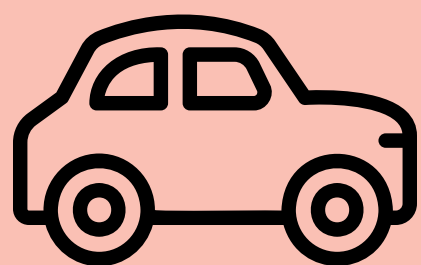
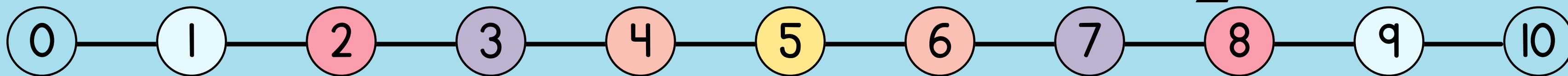
You need to pack your backpack for school tomorrow. What items go in first? What goes on top?

Step by step:



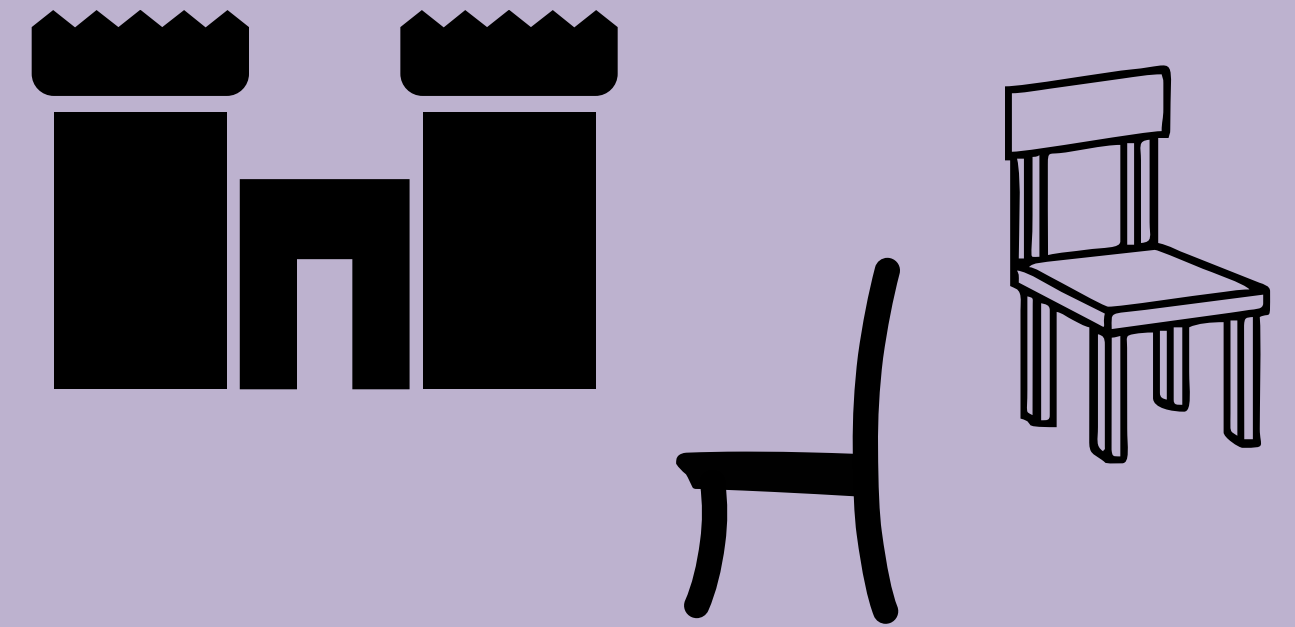


Games & Creative Play



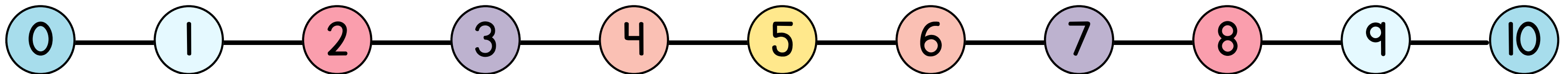
11

Building a Fort: You want to build a fort using blankets and chairs. What's your plan? What do you need to do first to make it stand up?



Hint: Think about what the fort will look like when built. Plan the chair placement based on that, then try and try again.

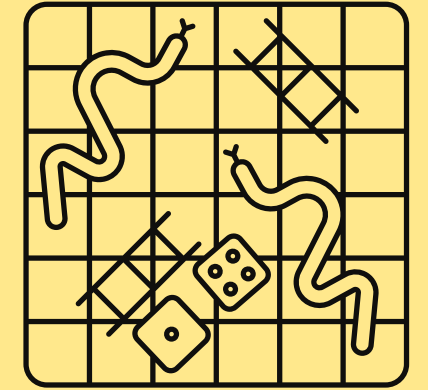
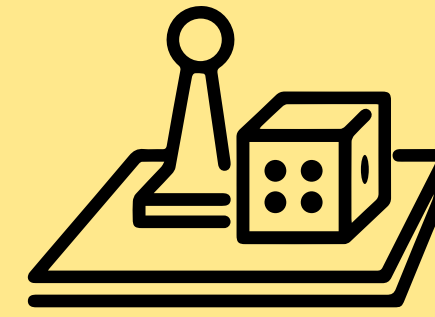
Step by step:



12

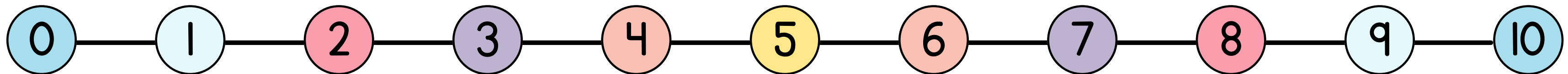
Playing a Board Game:

You're playing a board game.
It's your turn. What's the first
thing you do? What comes
next?



Hint: What game are you
playing? What are the rules?
How do you know it is your
turn? Think of the steps you
take to play.

Step by step:



13

Creating a Dance: You want to teach a friend a dance. What are the different moves? What order will you teach them in?

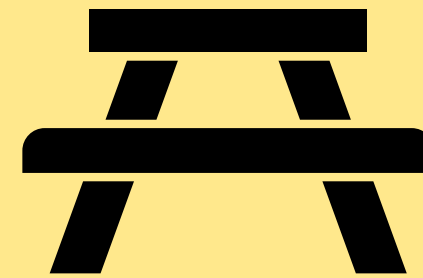
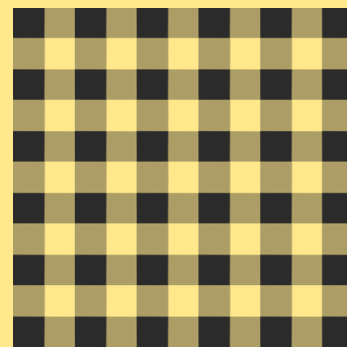


Hint: Think about how to break down a move, step by step.

Step by step:



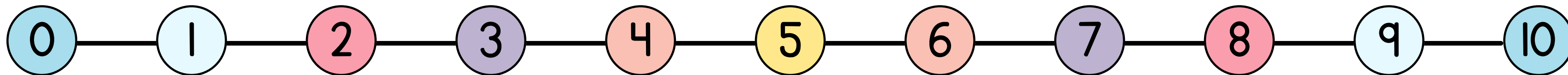
14



Hint: Think about what you need and how to arrange it all.

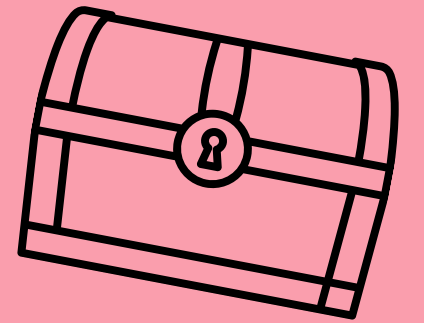
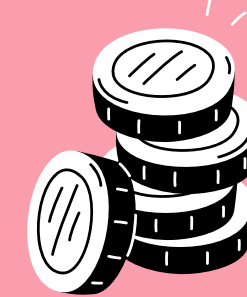
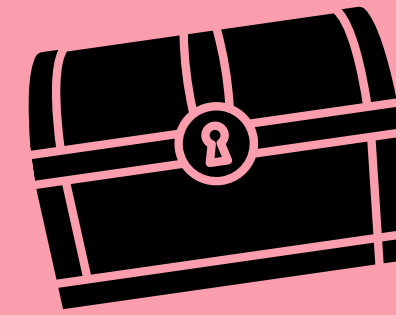
Setting up a Picnic: You want to have a pretend picnic outside. What do you need to gather? How do you set it up?

Step by step:



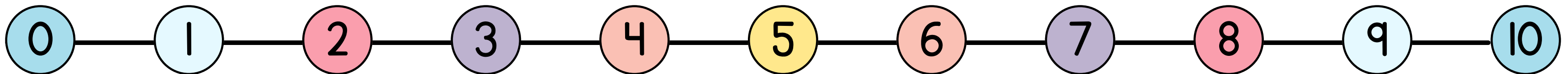
15

Hiding a Treasure: You want to hide a "treasure" (a gift) for a friend to find. How will you tell them where it is using clues?



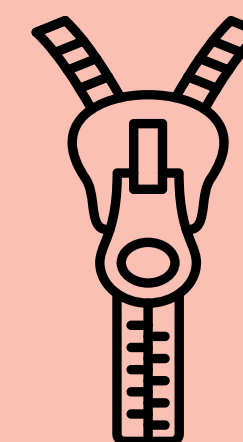
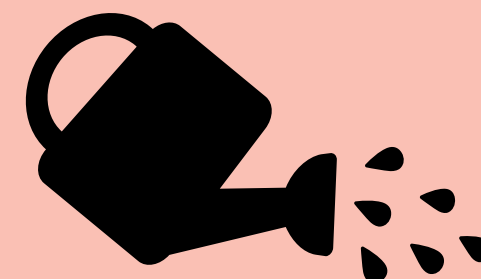
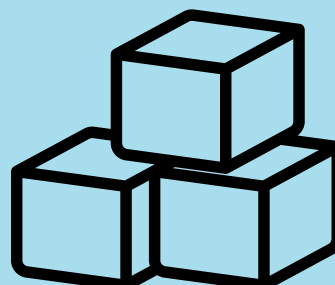
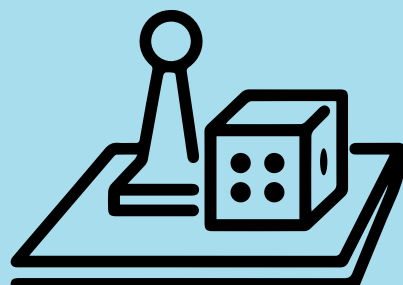
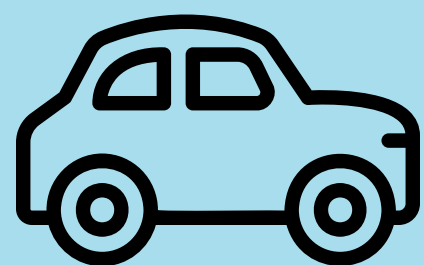
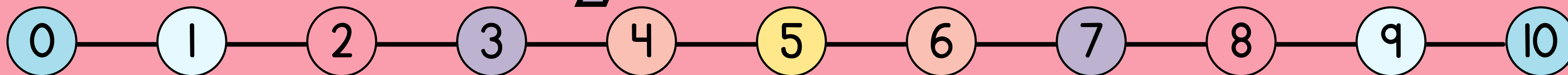
Hint: Think about the directions you could give them. Make them clear, in order, and detailed.

Step by step:

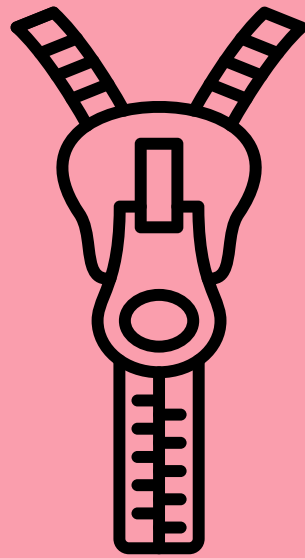




Little “Bugs” in Systems



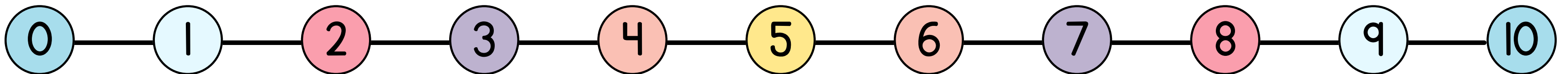
16



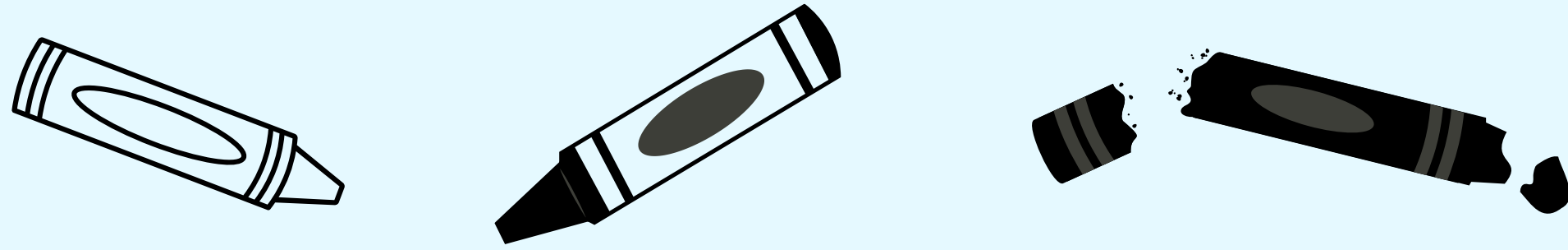
Hint: Try, try again,
small changes can go
a long way.

The Stuck Zipper: Your
jacket zipper is stuck. What
are some things you can try
to unstick it?

Step by step:



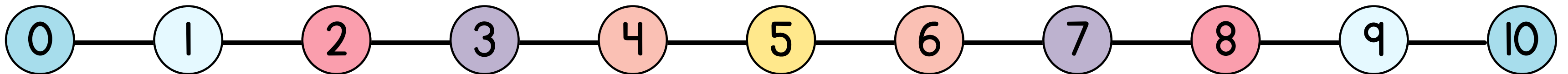
17



Hint: How else can it be used? Think of a solution despite a "problem".

The Broken Crayon: Your crayon broke into two pieces. How can you still use it?

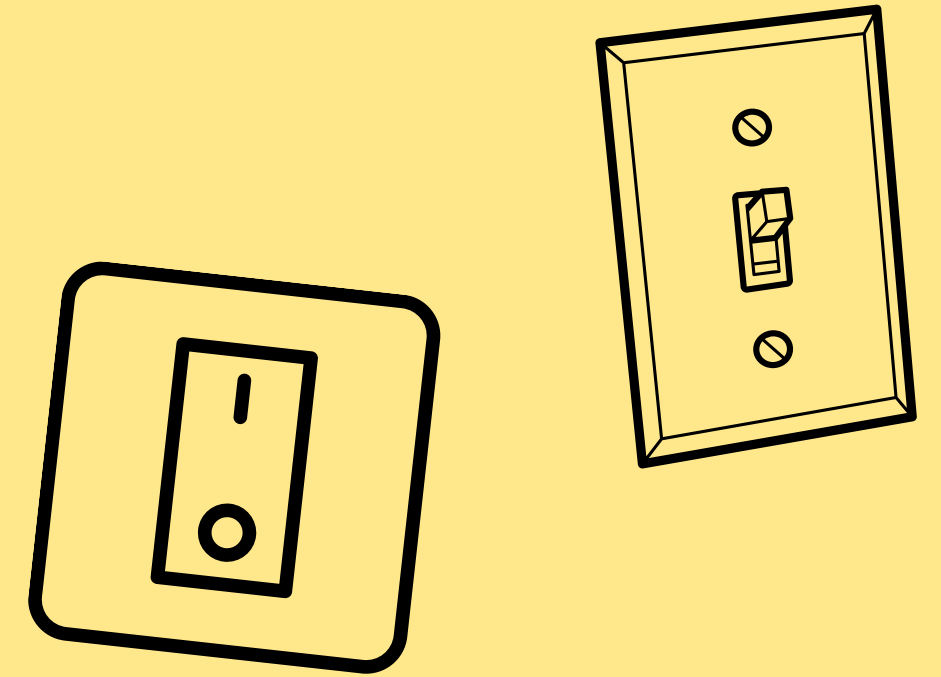
Step by step:



18

The Light Switch Doesn't Work:

You flip the light switch, but the light doesn't turn on. What are some reasons why it might not be working? What could you check?



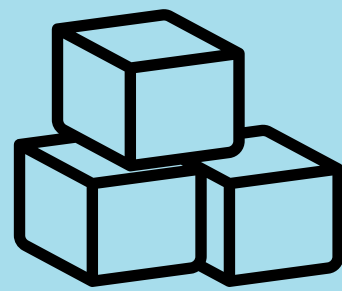
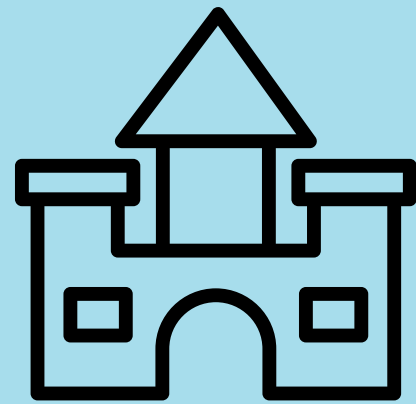
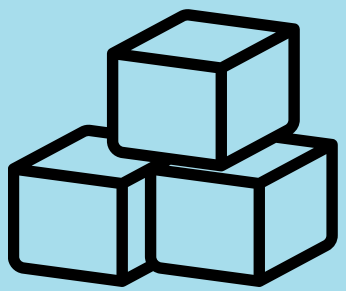
Hint: Identify possible causes and check simple solutions.

Step by step:



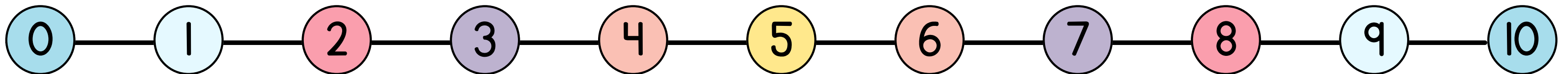
19

The Tower Falls Down: You built a tall block tower, but it keeps falling over. What might be going wrong? How can you make it stronger?



Hint: Explore the failure, make changes, and reinforce.

Step by step:

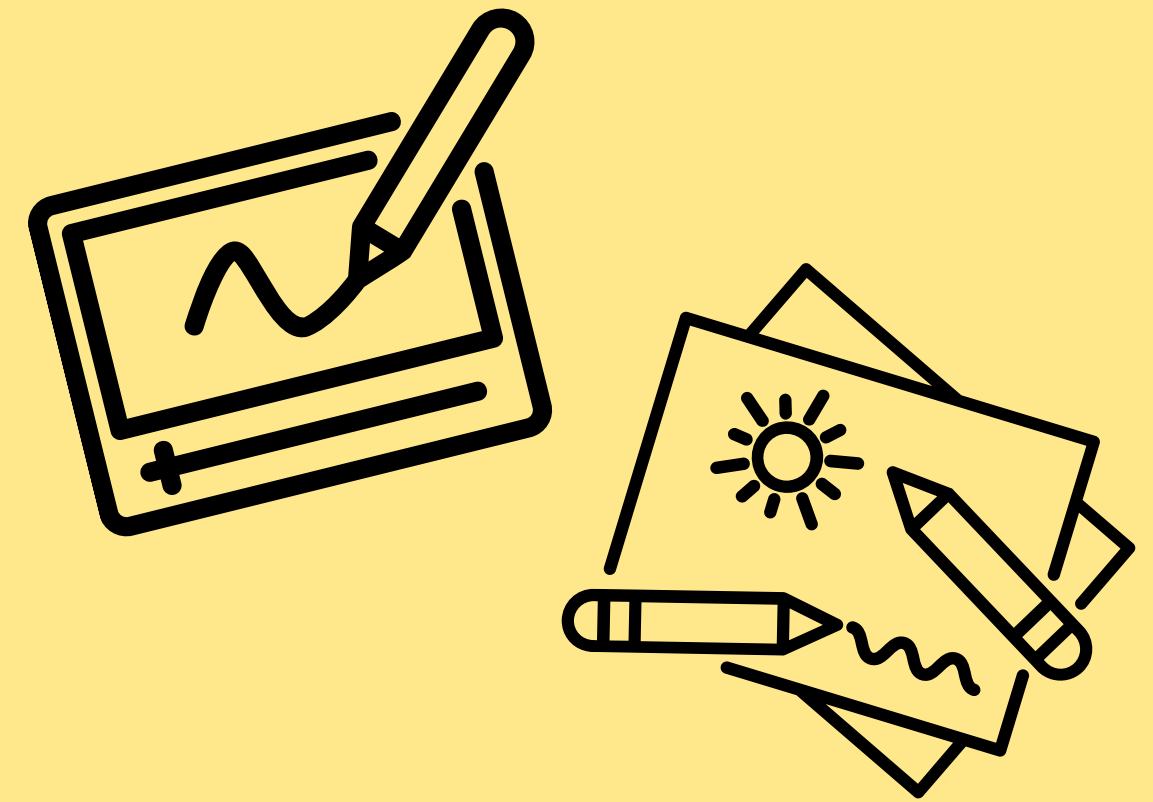


20

The Unfinished Drawing:

You're drawing a picture, but you're not happy with it.

What part could you change or add to make it better?



Hint: Identify what you are not happy with. Can something be improved? Who can help?

Step by step:

