

To build your own set of CT Bins you need the following:

Bin	Quantity	Item	Notes
1	24	Cup stack cards	In instruction document
1	40	Mini red solo stacking cups (2 oz)	
1	2	Programming keys	In instruction document
1, 4, 5, 7, 8, 9, 11	50	Pencils	
1, 6, 7, 9	6	Pencil sharpeners	
3, 5, 8, 9, 11	10	Notepads	
3	16	Device history cards	In instruction document
4	3	Vigenère squares	In Instruction document
4	3	Dry erase markers	
4	2	Eraser rags	
4	3	Activity cards	In instruction document
5	6	straws	
5	4	Ziploc bags, each filled with 13 cards of the same suit	
5	1	Deck of cards	
6	18	Colored pencils	
6	3	Student Handouts	
7	2	Enigma machines 2 Pringles cans 2 paper printouts	
8	4	12 inch rods of 3 different diameters	
8	4	Strips of flexible plastic or strips of paper with messages on them	
9	2	Caesar Cipher Wheels	Paper or 3D printed
9	5	Question Worksheets	In instruction document
10	9	Device cards	In instruction document
10	9	Definition cards	In instruction document
11	8	Containers of various masses	
11	2	Role cards	In instruction document
11	1	Balance scale	http://www.eaieducation.com/Product/531140/Elementary_School_Balance_without_Mass.aspx
	10	Men's clear shoe boxes	https://www.containerstore.com/s/closet/shoe-storage/view-all-shoe-storage/our-mens-shoe-box/123d?productId=11000058

	1	Larger container for bin 11	http://www.usplastic.com/catalog/item.aspx?sku=12748&gclid=CjwKCAjwmK3OBRBKEiwAOL6t1FWnnZLENKC12L_B_ITz2Yr3Rp4EE5MaQDzUk147EkMzhW59CXP9jBoCQfsQAvD_BwE
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You will also need all of the PDF files with the instructions for each bin.

Cards: For anything identified in green, you will need to print those pages onto cardstock and cut into pieces. Alternatively, you may print them on plain paper, cut them into separate pieces, and paste them onto index cards. You may wish to laminate them for additional durability.

Specific Instructions for Specific Bins:

Bin 1 – Robotic Buddies

1. Follow above directions for cards.
2. You will need to print out the Programming Key and make copies for students (if desired).

Bin 2 – Price is Right

1. Follow above directions for cards.

Bin 3 – Data Storage Timeline

1. Follow above directions for cards.
2. There are two options for this bin: You may collect all the necessary data device items identified below, or you may use the pictures in the key and print them. Students find it more enjoyable to actually touch and play with the devices.

CD-ROM
Magnetic Tape
High Capacity Magnetic Tape
Floppy Disk 3.5 inch
Compact cassette
Mini (pocket) compact disc
Hard Disk Drive
USB Flash Drive
Digital Data Storage (DDS) Tape
DVD/DVD-R
Punch Card
"Cloud Storage"
Micro SD Card
Zip Disk
Floppy Disk 5.25 inch
Mini disc

Bin 4 – Vigenère Cipher

1. Follow above directions for cards.

2. Note that the dry erase markers and rags are only needed if cards are laminated.

Bin 5 – Card Sort

1. You will need to print out the instruction sheets for each type of sort (in instruction document, 3 different pages). You may wish to laminate these.
2. Make copies of the Hand-out sheet for students.

Bin 6 – Computer Art

1. You will need to print out the instruction sheets for the students. You may wish to laminate these.
2. Print out and make copies of the color sheet.

Bin 7 – The Enigma Machine

1. You will need to build at least 2 Enigma machines. You find the instructions here:

<https://www.themarysue.com/papercraft-engima/>

Print enigma1.pdf and enigma2.pdf without any page scaling on the printer to ensure proper fit. Laminate, cut, and tape so they turn independently.

For the answer key on the worksheet to work, it is important to assemble the enigma machine in the following order from left to right when looking at the chip can:

reflector B, Rotor I, Rotor II, Rotor III, Input/output letters

Other combinations will produce a different cipher

2. Video here for showing how to use: <https://www.youtube.com/watch?v=pZsuxZXN33g>

Bin 8 – Scytale Cipher

1. You will need to make your own Scytale messages and encoder/decoders. To do this you will need 3 dowels of varying diameters and long strips of paper (flexible laminated strips work best). <https://www.youtube.com/watch?v=lwf4rZXVXjw>
2. You can use our messages or create your own.

Bin 9 – Caesar Cipher

1. You will need to make your own Caesar cipher wheels:
 - Cut out the outer circle for the Caesar Cipher wheel (one color paper)
 - Cut out the inner circle for the Caesar Cipher wheel (another color paper)
 - Place the yellow circle on top of the orange circle so it is centered in the middle.
 - Push the brad through both of the circles and fasten in the back.



<https://www.youtube.com/watch?v=TGmVkrR79X4>

Bin 10 – Computers Throughout History

1. Follow above directions for cards.

Bin 11 – Out of Sorts

1. You will need to make or acquire multiple containers of varying mass and the balance.