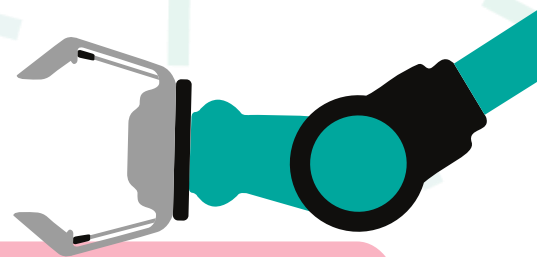




DISCOVERTECH

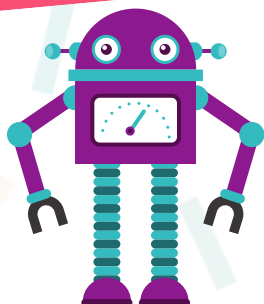


Let's learn about Decomposition!

What is computational thinking?

Computational thinking is a creative way of thinking that allows individuals to be systematic problem solvers. Coding helps children to develop computational thinking skills.

PHP
... C#
HTML



What is Decomposition?

Decomposition is the breaking down of a computing task or problem into smaller parts so that it is easier.

Share with your child that decomposition occurs in our daily lives. Even simple everyday activities such as brushing your teeth, reading a book and making breakfast can be broken down into smaller steps.

Help your child develop this coding concept at home!

Share with your child that decomposition occurs in daily activities such as brushing one's teeth, reading a book and making breakfast. All of these can be broken down into smaller steps.

Show your child a picture of a pizza and ask them what are the steps to make it. List down the steps together in sequence and as specifically as possible. Explain that this is decomposition.



References:

1. Heather Lavigne, Ashley Lewis Presser, Deborah Rosenfeld, Marisa Wolsky, And Jessica Andrews. (n.d.). Creating a Preschool Computational-Thinking Learning Blueprint to Guide the Development of Learning Resources for Young Children. National Science Teaching Association. Retrieved October 6, 2021, from <https://www.nsta.org/connected-science-learning/connected-science-learning-april-june-2020/creating-preschool>

2. Computational Thinking Lesson Plan: Decompose! (n.d.). BrainPOP Educators. Retrieved October 8, 2021, from <https://educators.brainpop.com/lesson-plan/computational-thinking-lesson-plan-decompose/>

3. What is decomposition. (n.d.). BBC Bitesize. Retrieved October 8, 2021, from <https://www.bbc.co.uk/bitesize/topics/zkqcn39/articles/z8ngr82>

WATCH ME: CODING FOR KIDS | WHAT IS CODING FOR KIDS?

This video provides a basic introduction of coding and the common coding terms used such as algorithm, sequence, loop, branching and debugging in simple language that can be easily understood by preschoolers.



Scan me to watch the video!

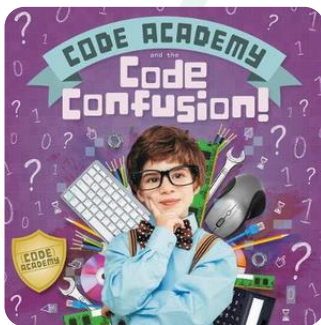


<https://go.gov.sg/introcoding>

References: LearningMole. (2021, February 7). *Coding for Kids | What is coding for kids? | Coding for beginners | Understanding Coding | Coding Words [Video]*. YouTube. <https://www.youtube.com/watch?v=w0PuL73IMQc>

<https://www.youtube.com/watch?v=w0PuL73IMQc>

RECOMMENDED BOOKS



TITLE: CODE ACADEMY AND THE CODE CONFUSION!

AUTHOR: KIRSTY HOLMES

CALL NO: ENGLISH 005.1 HOL



TITLE: AVA IN CODE LAND

AUTHOR: JESS HITCHMAN AND GAVIN CULLEN

ILLUSTRATOR: LEIRE MARTÍN

CALL NO: ENGLISH HIT

LINK: <https://nlb.overdrive.com/media/5294867>

Scan QR code to borrow eBook



<https://go.gov.sg/avaincode>



Scan QR code to borrow eBook

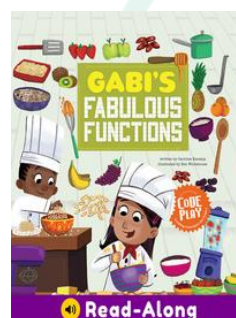


<https://go.gov.sg/breakingdown>

TITLE: BREAKING DOWN TASKS USING DECOMPOSITION

AUTHOR: ELIZABETH SCHERMUND

LINKS: <https://nlb.overdrive.com/media/3916980>



Scan QR code to borrow eBook



<https://go.gov.sg/gabip>

TITLE: GABI'S FABULOUS FUNCTIONS

AUTHOR: CAROLINE KARANJA & BEN WHITEHOUSE

LINK: <https://nlb.overdrive.com/media/4830938>



MATERIALS

- Activity sheet provided below
- Coloured paper or foam sheets cut into basic shapes in different sizes (optional)

COMPUTATIONAL SKILLS:



DECOMPOSITION



DEBUGGING



TIPS FOR PARENTS

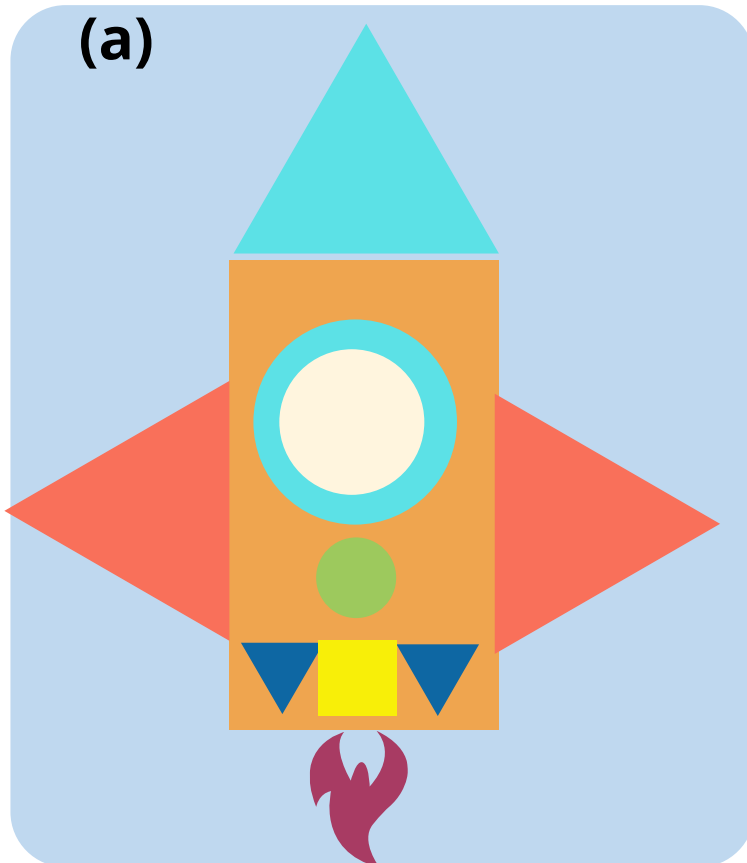
Reiterate the concept of shapes and colours with your child before trying out this activity. For a hands-on approach, you can cut out the shapes needed to make the rocket ship from coloured foam sheets and build the rocket ship for your child to work with

HOW TO PLAY

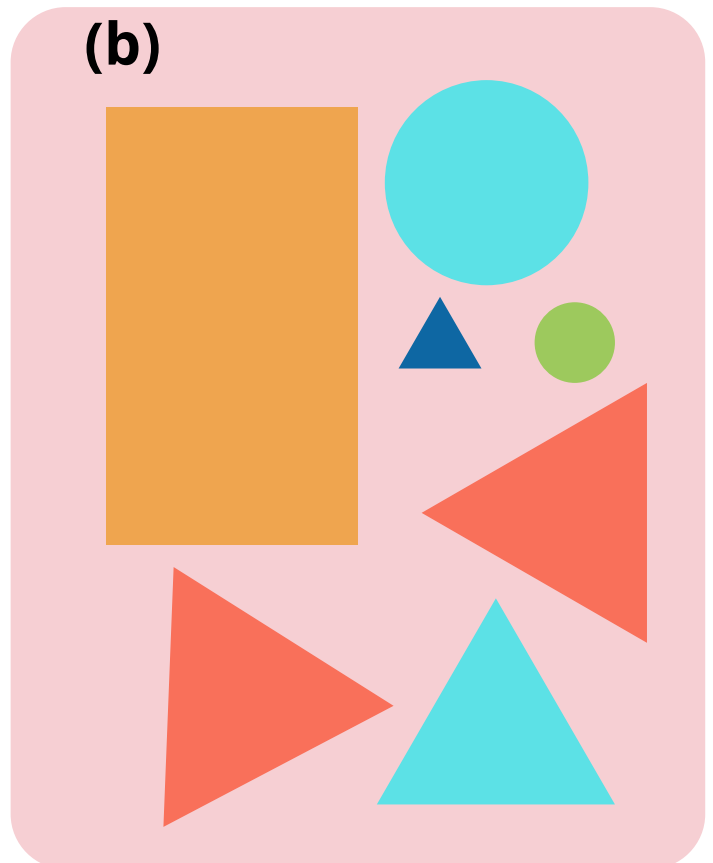
(a) Break down, or decompose, the rocket ship below. Can you identify all the different shapes found on the rocket ship?

(b) Can you identify which parts of the rocket ship are missing?

(a)



(b)



References:

T. (2021, July). Rocket Ship Decomposition Unplugged Coding Activity. Our Family Code. <https://ourfamilycode.com/rocket-ship-decomposition-unplugged-coding-activity/>