

Grade Five Computer Science

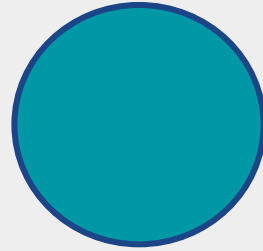


IF you teach THEN they will learn

2013 Over the next 10 years...

Electrical and Computer Engineering

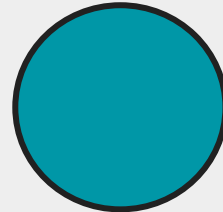
The most promising and
profitable jobs of now and the
future.



There will be
1.4 million
Programming jobs to



With only
400 000
Graduates in
computer science



Leaving
1 million
empty jobs!

Computing jobs are the #1 source of new wages in the US

500,000
current openings

These jobs are in every industry and every state, and they're projected to grow at twice the rate of all other jobs.



There are technology jobs in every field:

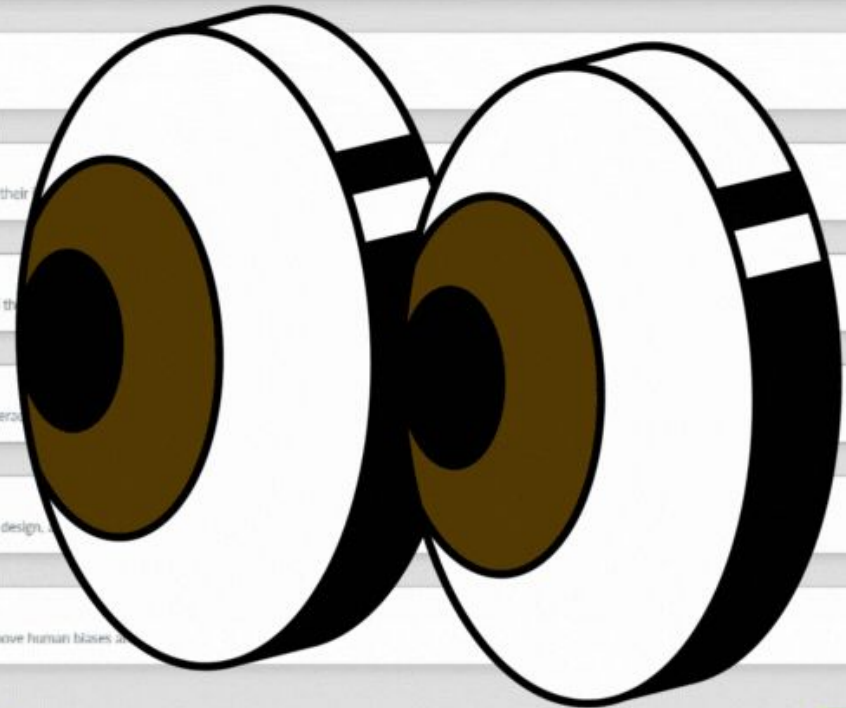


- Home
- Alberta's K-6 Curriculum
- Explore Resources
- Curriculum Implementation Information Hub
- Student Learning Hub
- Printable Curriculum
- Support
- e-Tutoring Hub
- Contact Us

Science Change Subject

Prev Grade 4 Grade 5 Grade 6 Next

- ORGANIZING IDEA
Matter: Understandings of the physical world are deepened through investigating matter and energy.
- ORGANIZING IDEA
Energy: Understandings of the physical world are deepened through investigating matter and energy.
- ORGANIZING IDEA
Earth Systems: Understandings of the living world, Earth, and space are deepened through investigating natural systems and their interactions.
- ORGANIZING IDEA
Living Systems: Understandings of the living world, Earth, and space are deepened through investigating natural systems and their interactions.
- ORGANIZING IDEA
Space: Understandings of the living world, Earth, and space are deepened through investigating natural systems and their interactions.
- ORGANIZING IDEA
Computer Science: Problem solving and scientific inquiry are developed through the knowledgeable application of creativity, design, and computational thinking.
- ORGANIZING IDEA
Scientific Methods: Investigation of the physical world is enhanced through the use of scientific methods that attempt to remove human biases and errors.



Organizing Idea	Computer Science: Problem solving and scientific inquiry are developed through the knowledgeable application of creativity, design, and computational thinking.
Guiding Question	In what ways can design be used to help achieve desired outcomes or purposes?
Learning Outcome	Students apply design processes when creating artifacts that can be used by a human or machine to address a need.

Knowledge	Understanding	Skills & Procedures
<p>A computational artifact is anything created by a human using a computer, such as</p> <ul style="list-style-type: none"> • computer programs and code images • audio video • presentations • web pages <p>Design can be used to create algorithms and translate them into code.</p> <p>Code is any language that can be understood by and run on a computer.</p> <p>There are many ways to code, including using visual block-based languages.</p> <p>Visual block-based languages are a form of code in which prepared chunks of instructions are in drag-and-drop blocks that fit together like puzzle pieces to design a program.</p> <p>A computer cannot think for itself and must rely on code for all that it does. A loop is a repetition of instructions used in an algorithm.</p>	<p>Design can be used by humans or machines to meet needs.</p>	<p>Engage in the design process to create computational artifacts.</p> <p>Relate a block of code to an outcome or a behaviour.</p> <p>Explain what will happen when single or multiple blocks of code are executed.</p> <p>Translate a given algorithm to code using a visual block-based language.</p> <p>Design an algorithm that includes a loop and translate it into code.</p>

Organizing Idea	Computer Science: Problem solving and scientific inquiry are developed through the knowledgeable application of creativity, design, and computational thinking.	
Guiding Question	In what ways can design be used to help achieve desired outcomes or purposes?	
Learning Outcome	Students apply design processes when creating artifacts that can be used by a human or machine to address a need.	
Knowledge	Understanding	Skills & Procedures
<p>Design process can be influenced by various factors, including</p> <ul style="list-style-type: none"> • safety • functionality • usability • reliability • efficiency • aesthetics <p>Functionality is the quality of being useful to do the job for which something was designed.</p> <p>Usability is the degree of ease with which something can be used to achieve an outcome.</p> <p>Design processes that support the development of multiple iterations include</p> <ul style="list-style-type: none"> • enhancing • refining <p>Design can be improved through collaboration.</p>	<p>Design can better meet needs through the development of multiple iterations.</p>	<p>Discuss examples of designs that have been enhanced or refined to better meet needs.</p> <p>Evaluate an artifact based on various factors. Design an artifact to meet a need.</p> <p>Propose enhancements and refinements to an artifact in collaboration with others.</p> <p>Develop multiple iterations of an artifact.</p>



Creativity

ORIGINALITY

Creative thinking often results in ideas or solutions that are unique and haven't been thought of before. It involves breaking away from established patterns and norms.

RISK TAKING

Creative thinkers are often willing to take risks by exploring unconventional ideas or challenging the status quo.

IMAGINATION

Imagination is at the core of creative thinking. It involves the ability to visualize and conceptualize ideas and scenarios that don't currently exist.

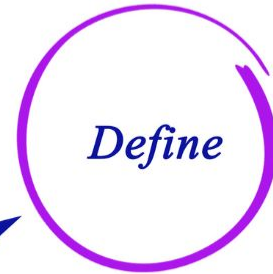
FLEXIBILITY

Creative thinkers are open to exploring various possibilities and are willing to adapt their thinking when confronted with new information or challenges. They can switch between different modes of thinking.

Design Thinking Process



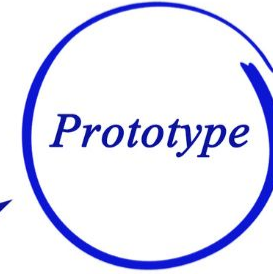
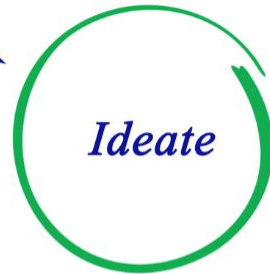
*Learn About
Your Audience*



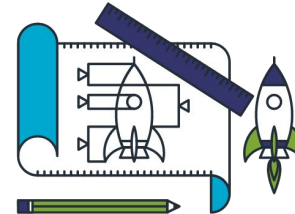
*Construct Point
of View Based
on User Needs*



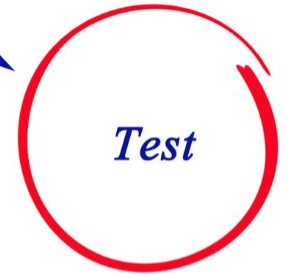
*Brainstorm and
Come up with
Creative Solutions*

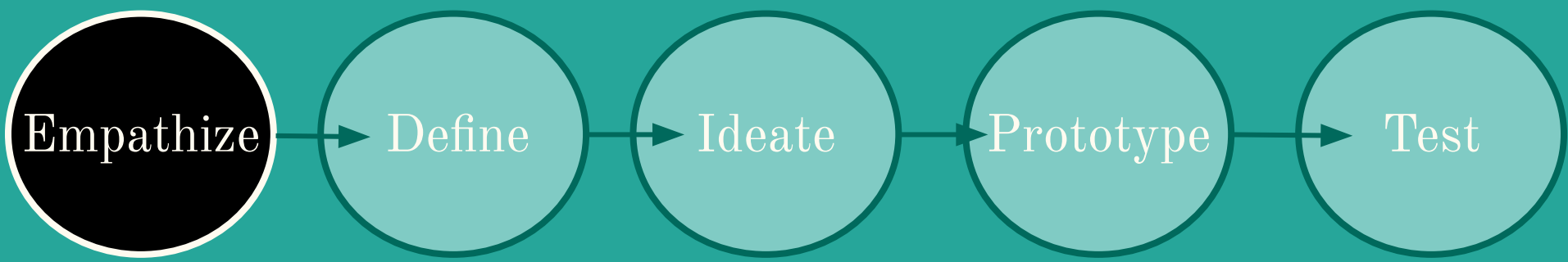


*Build
Representation
of Your Ideas*



Test Your Ideas





—



Learn about the audience for whom you will be designing.

Walk a mile in their shoes.

Empathize

As you watch the video, start to think about what this person needs. Also be prepared to talk about how the video made you feel.

Think about...

- How you would feel in Mandy's position?
- What kind of person does Mandy seem like?
- What qualities does the video show you about Mandy?



Define

What is Mandy's problem?

Tip: It's not that she is deaf.

This is an impairment that cannot be fixed and Mandy has figure out how to sing even though she cannot hear.

How does Mandy currently deal with her problem?

She sings in her stocking feet so she can feel the vibrations.



Earrings with wireless to sense vibrations



Shoes with no soles or holes to feel



Something to wear under clothes connected to speakers



A chair that picks up the vibrations



Bracelet



Hair accessories



Empathize

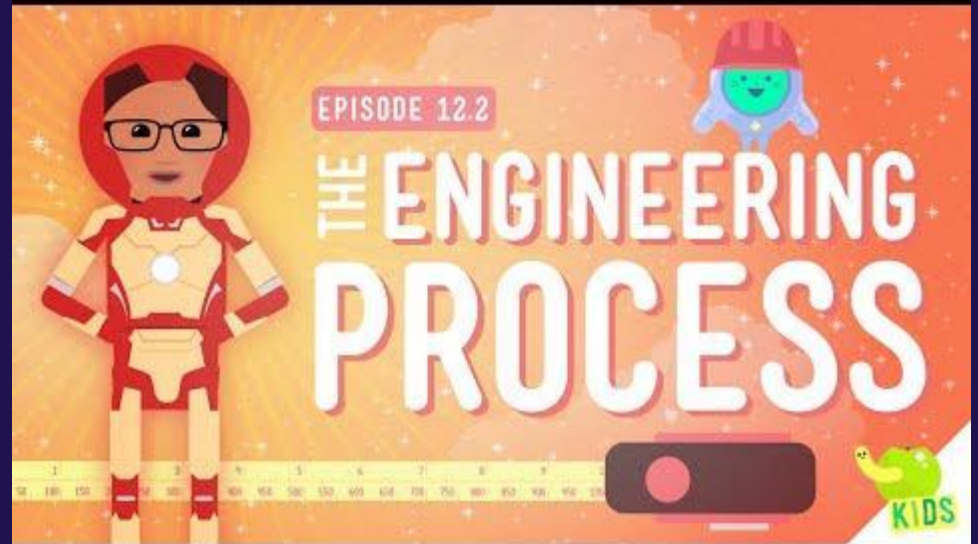
Define

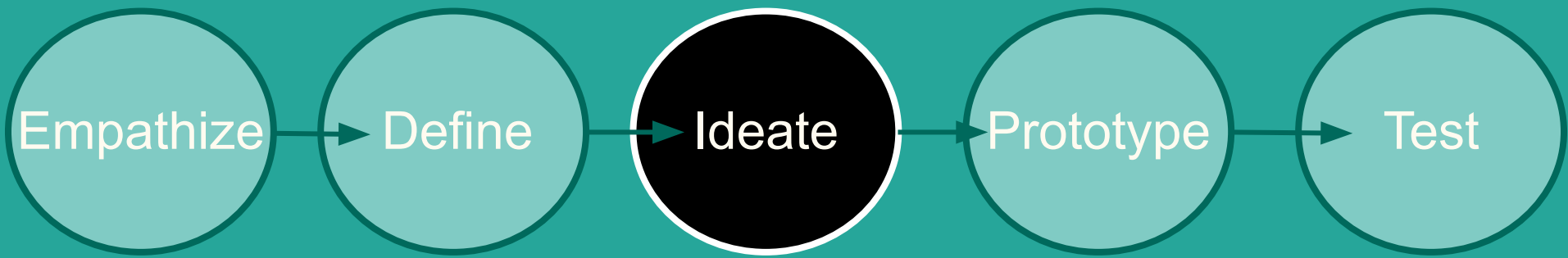
Ideate

Prototype

Test

Use what you know about your audience to determine exactly — what the problem you are going to solve is.





*There are
NO bad
ideas!*

—
*Think about
your
audience's
needs!*



*Quantity
over
Quality!*

*Ideas!
Ideas!
Ideas!*

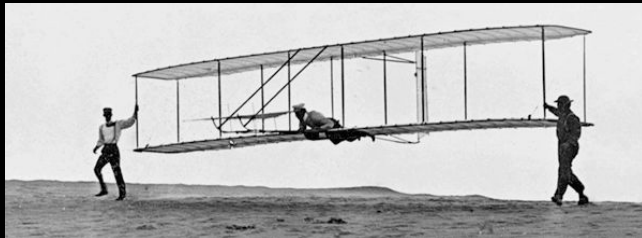
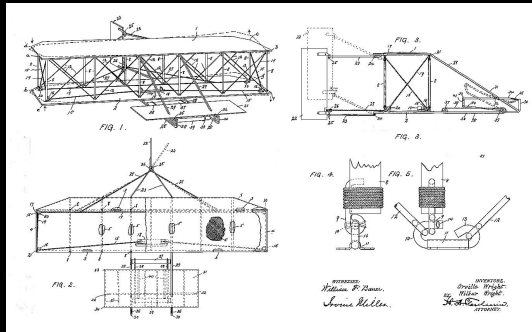
Empathize

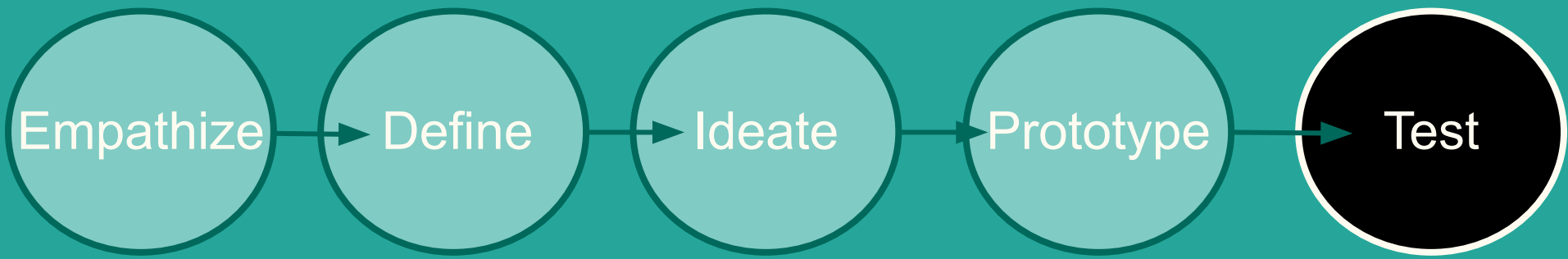
Define

Ideate

Prototype

Test





If at first you don't
succeed,
TRY
TRY
Again...and again...
and again.

**Did you know? The
Wright Brothers had 2
failures before they were
successful with flight.**



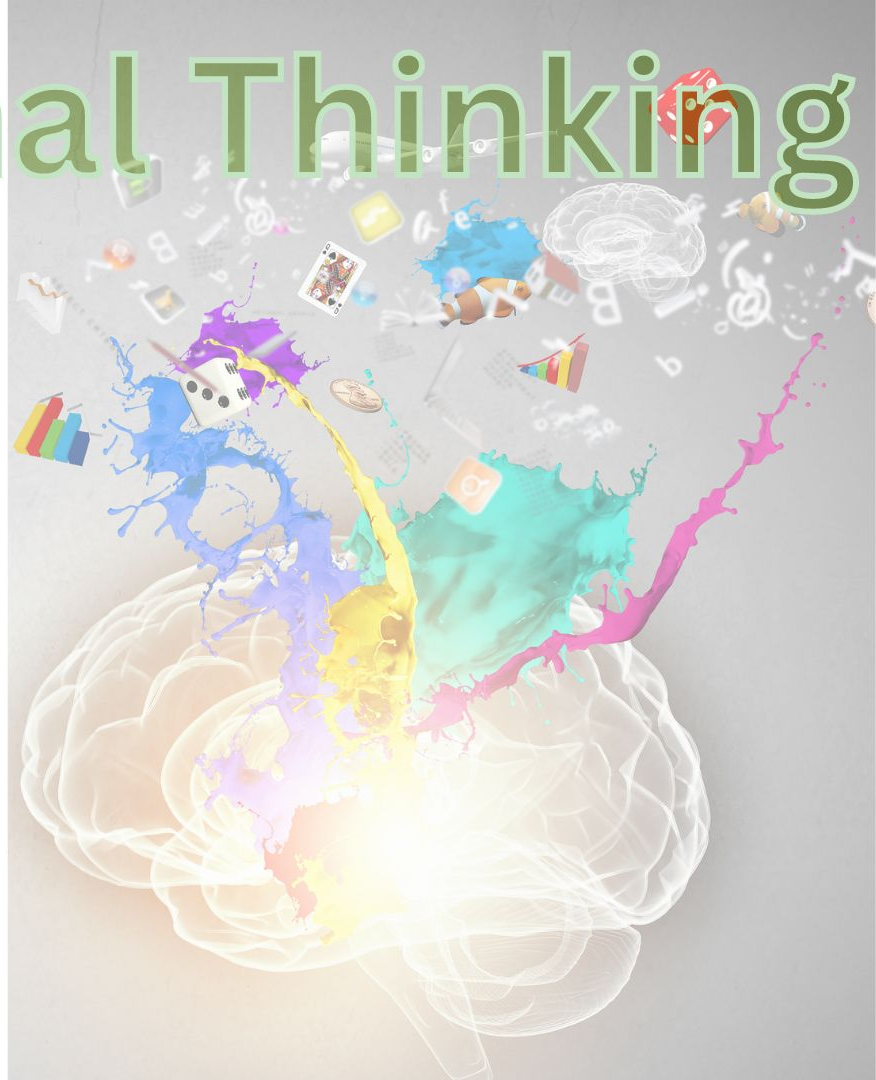
Computational Thinking

Decomposition

Pattern Recognition

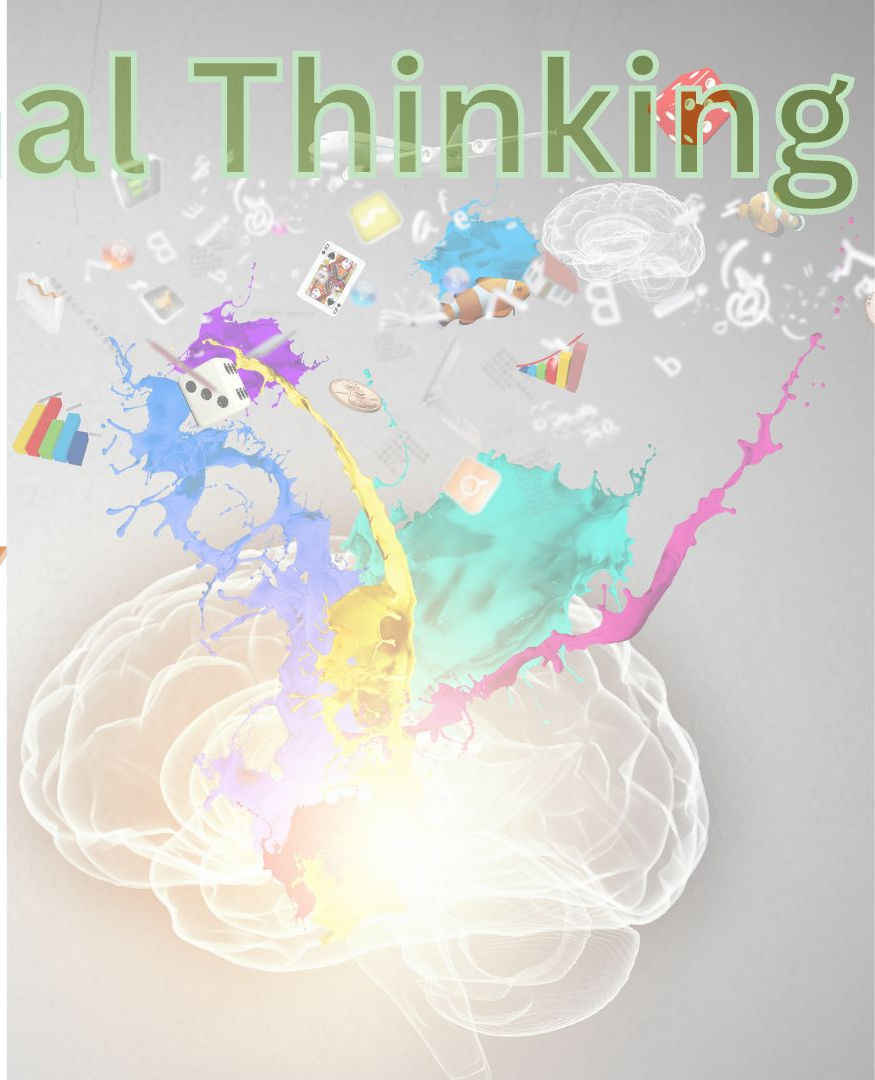
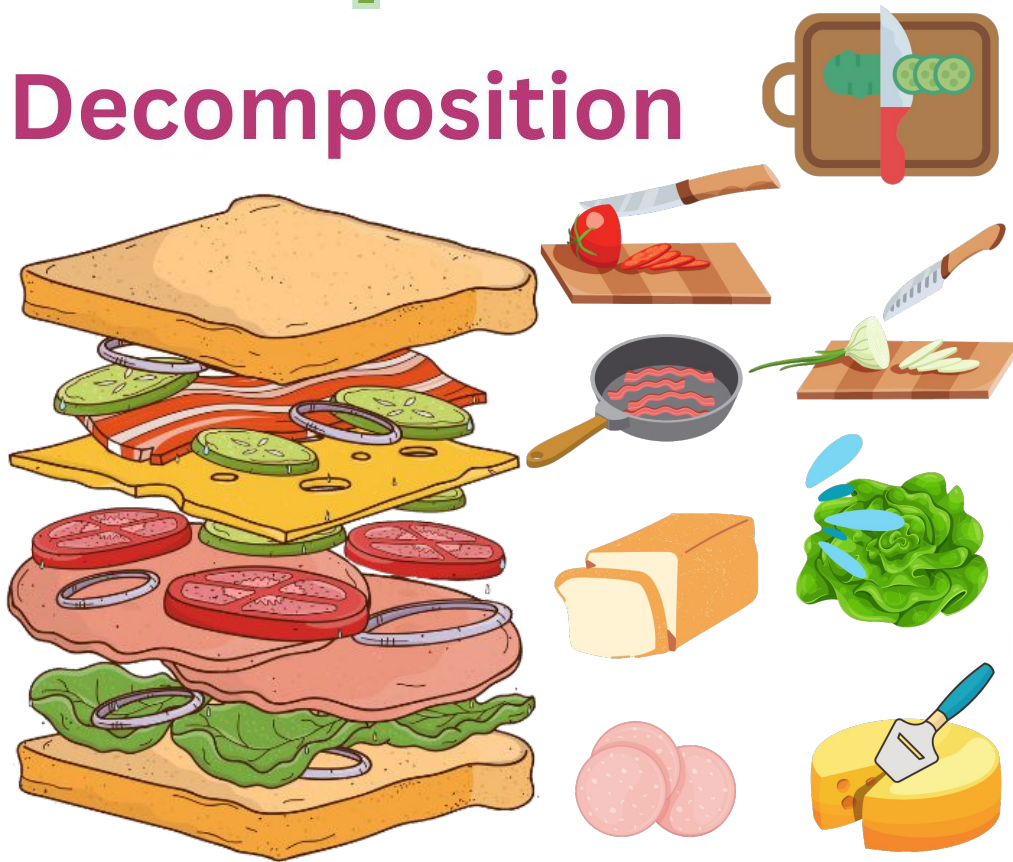
Pattern Abstraction

Algorithm Design



Computational Thinking

Decomposition

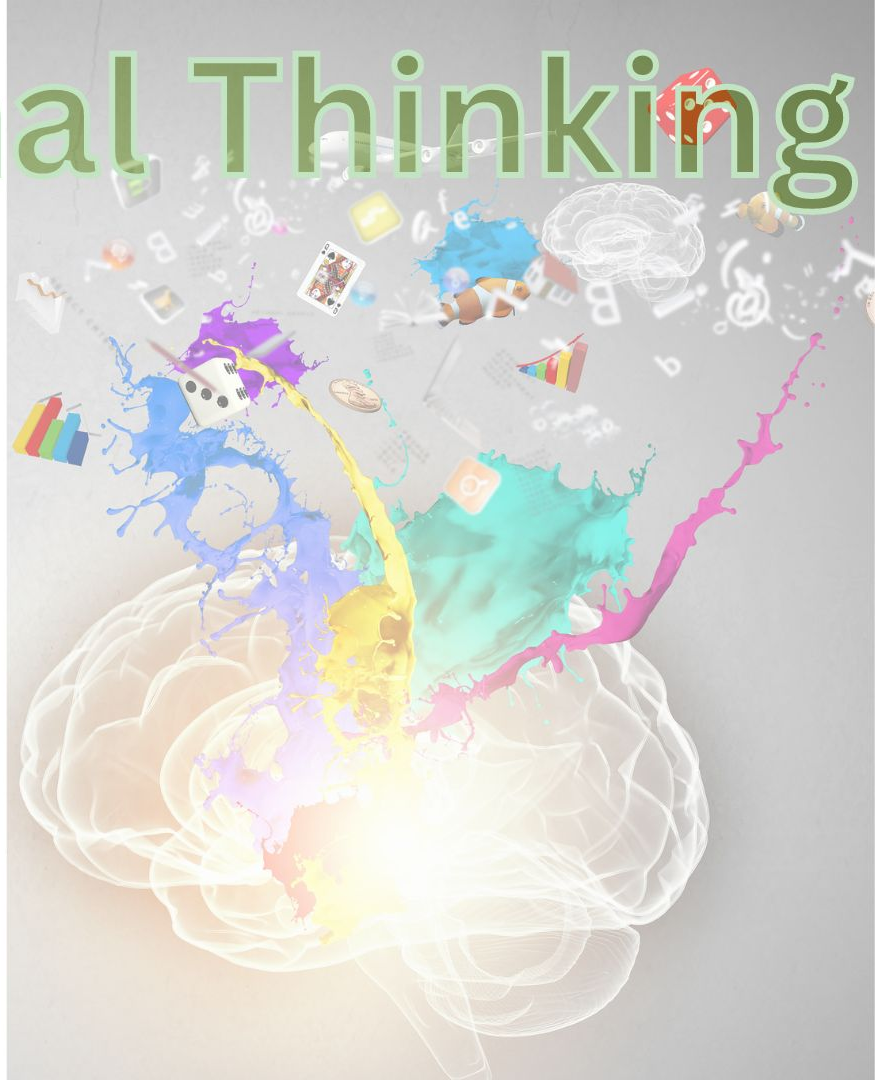
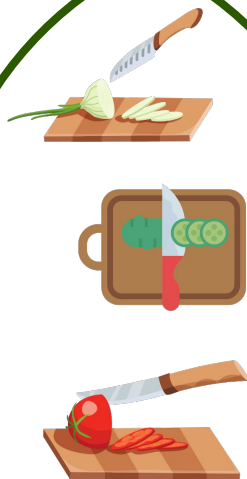
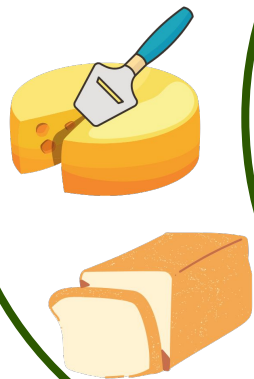


Computational Thinking

Pattern Recognition

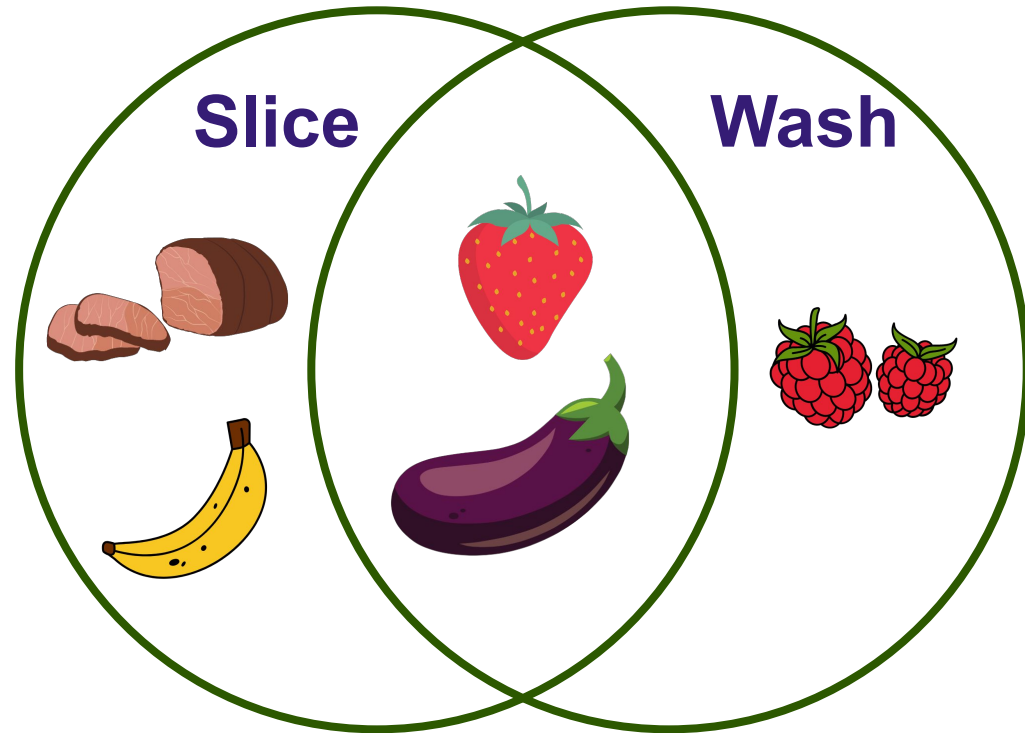
Slice

Wash



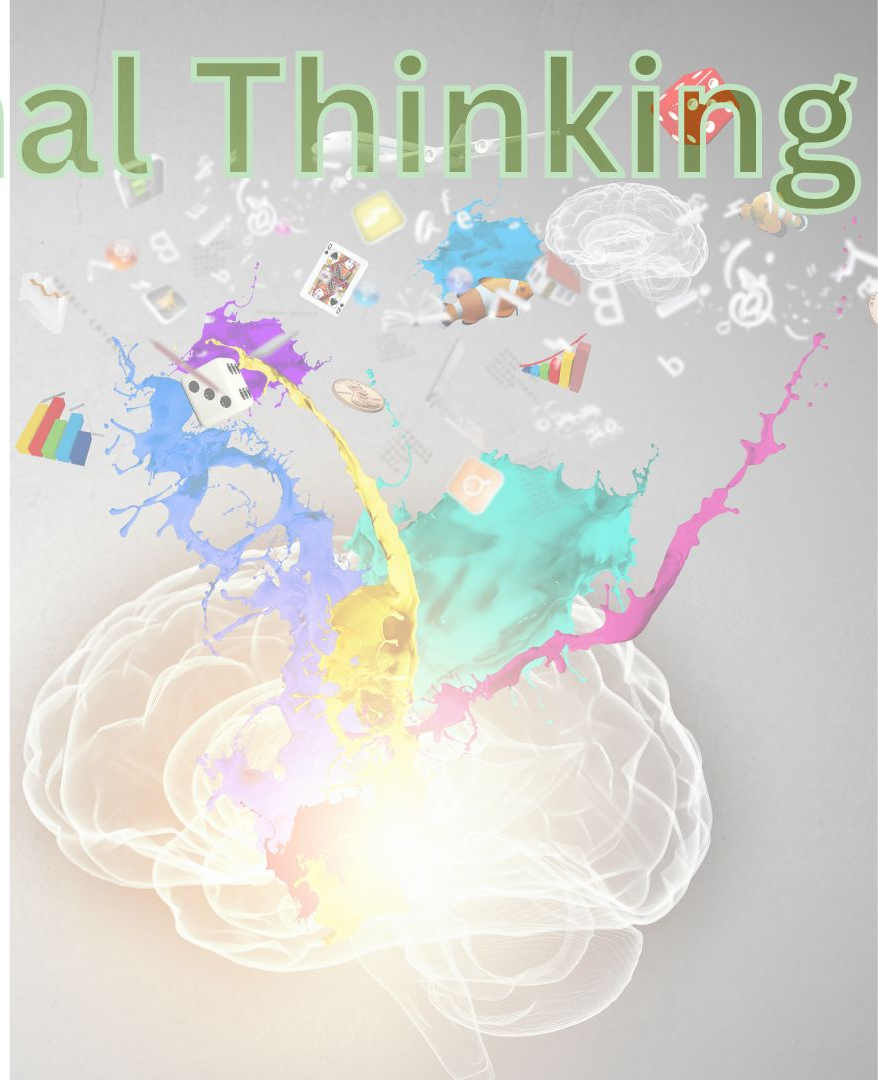
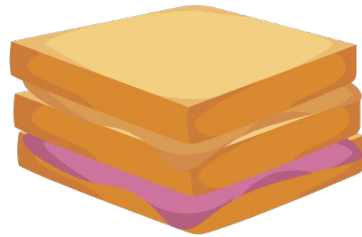
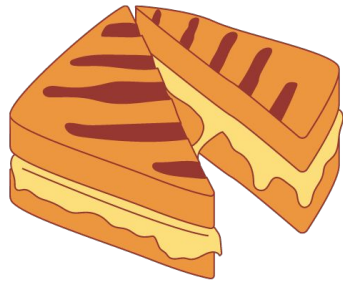
Computational Thinking

Pattern Abstraction



Computational Thinking

Pattern Abstraction



Computational Thinking

Algorithm Design

1. First prepare ingredients
 - a. If it is a fruit or vegetable then wash it
 - b. If it is raw meat then cook it
 - c. If it is in a package then open it
 - d. If it is big then slice it
2. Layer the ingredients
 - a. Start with a piece of bread
 - b. Repeat adding next ingredient until done
 - c. End with a piece of bread



Ears

To listen to the ideas of others

Eyes

To make observations

Mouth

To collaborate & share your conclusions with others

Hands

To do experiments & record observations

Curious Mind

To make predictions & hypothesis. To think deeply about the world.

Strong Heart

To be brave and take chances!

Tools

Beakers, Chromebooks, pencils, magnifying glasses & more

Feet

To move safely



Ears

To listen to the ideas of others

Eyes

To make observations

Mouth

To collaborate & share your conclusions with others

Hands

To do experiments & record observations

Curious Mind

To make predictions & hypothesis. To think deeply about the world.

Strong Heart

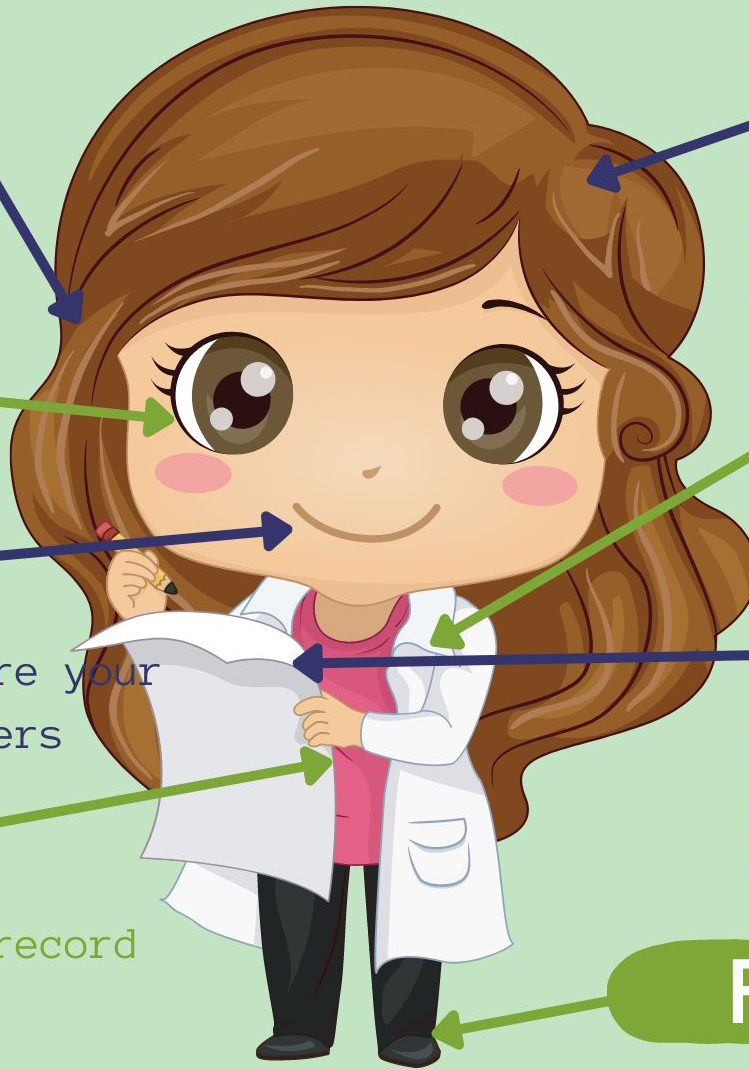
To be brave and take chances!

Tools

Beakers, Chromebooks, pencils, magnifying glasses & more

Feet

To move safely



Ears

To listen to the ideas of others

Eyes

To make observations

Mouth

To collaborate & share your conclusions with others

Tools

Beakers, Chromebooks, pencils, magnifying glasses & more

Curious Mind

To make predictions & hypothesis. To think deeply about the world.

Strong Heart

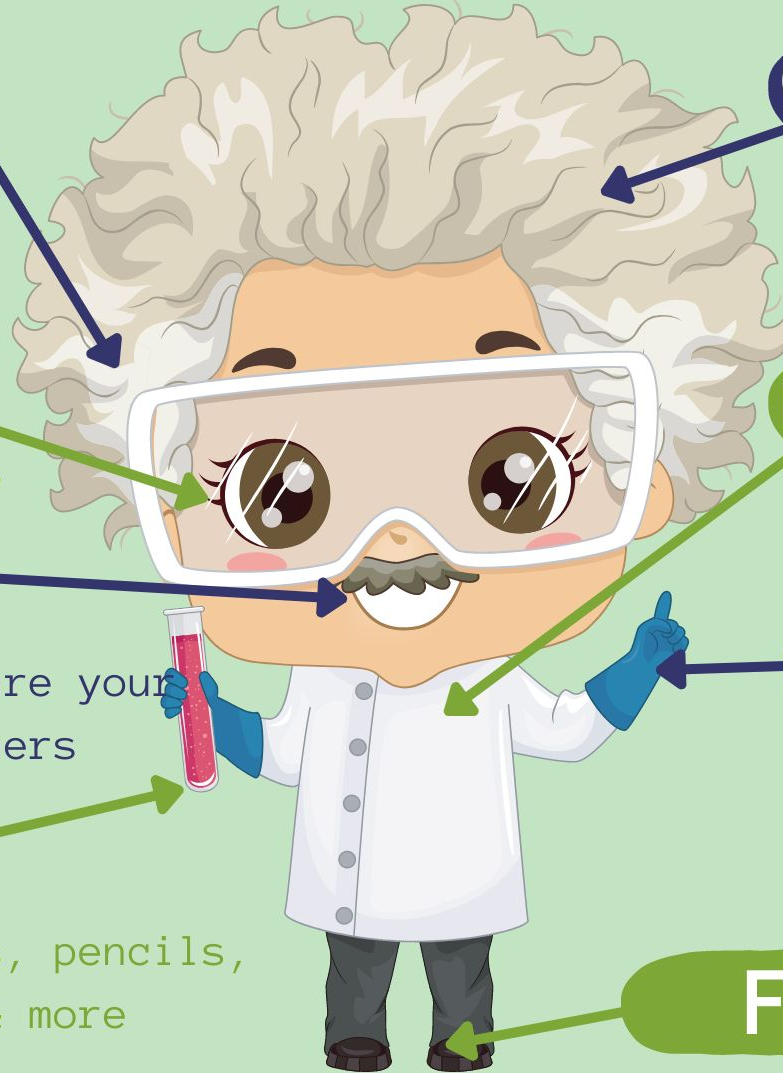
To be brave and take chances!

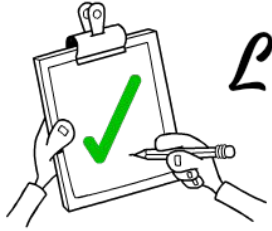
Hands

To do experiments & record observations

Feet

To move safely





Learning Outcomes

K

Children interpret instructions in the learning environment.



1

Students investigate instructions and their influence on actions and outcomes.



2

Students apply creativity when designing instructions to achieve a desired outcome.



3

Students investigate creativity and its relationship to computational thinking.



4

Students investigate and apply design in the context of computer science and technology.



5

Students create and justify a design that could be used by a human or machine to address a challenge.



6

Students create and refine computational artifacts through the use of design and abstraction.

Attack of the Kidbots

Classroom routines

Learning instructions

Other subject areas

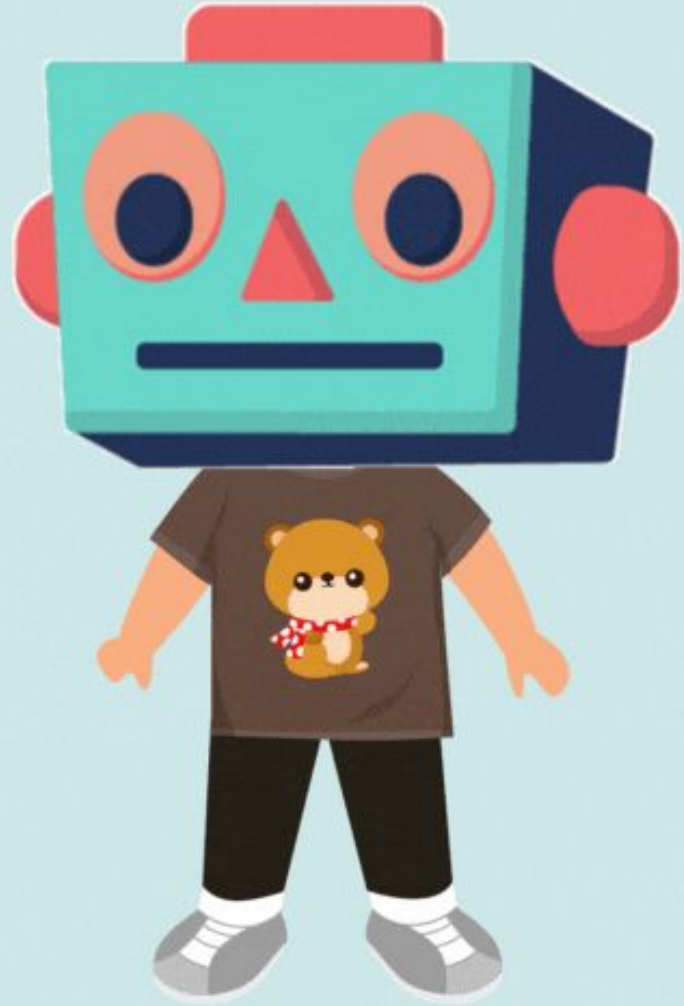
Outside of school

Community

Family

The world

In nature



Coding Knowledge

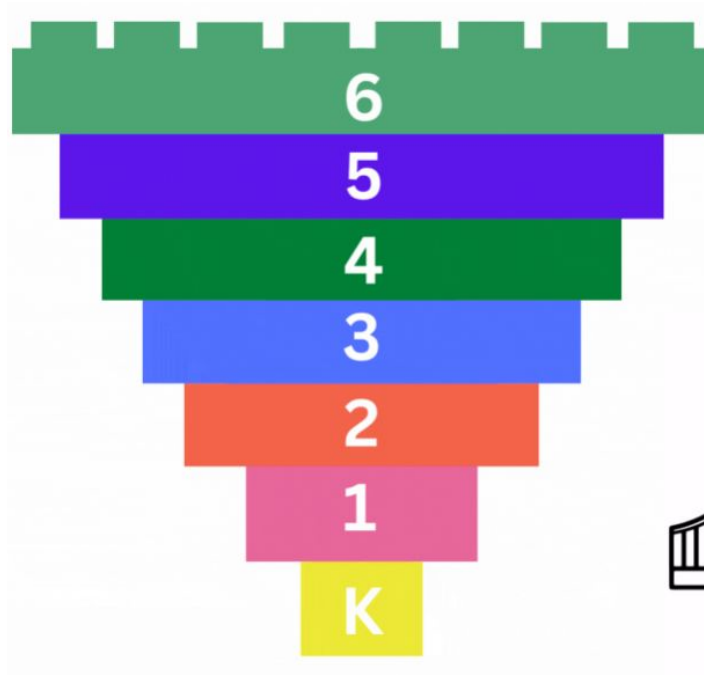
Grade 2

Debugging is the process of identifying and removing errors in a set of instructions to achieve a desired outcome.

Debugging can increase the reliability of instructions.

Many daily activities include repeated steps, such as

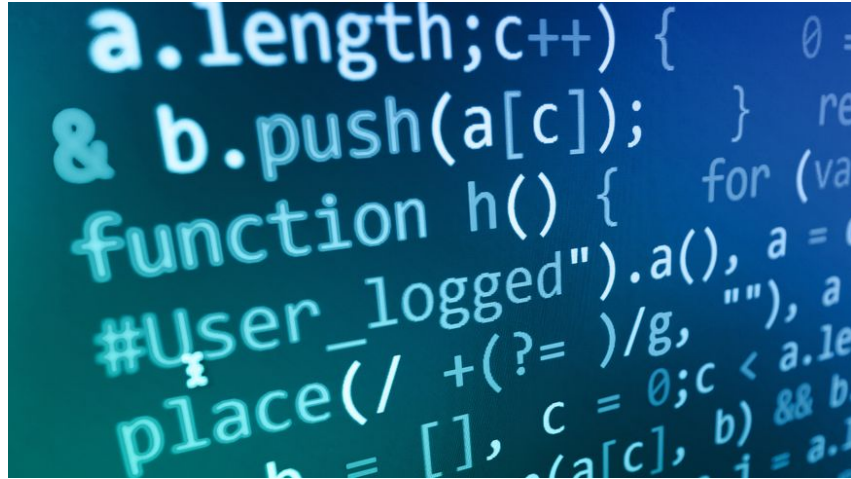
- brushing teeth
- tying one shoe and then using the same process on the other shoe



Bridging Gaps

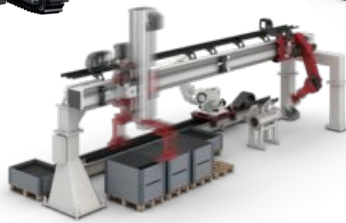
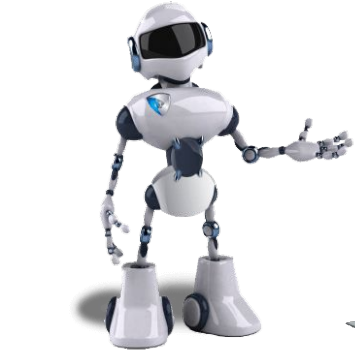
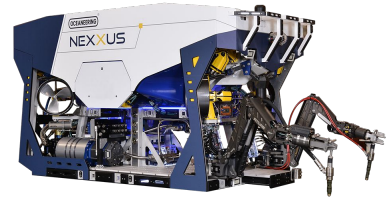
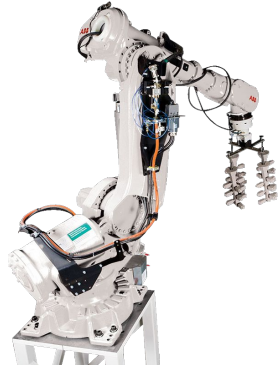


Coding consists of many languages that computers understand.



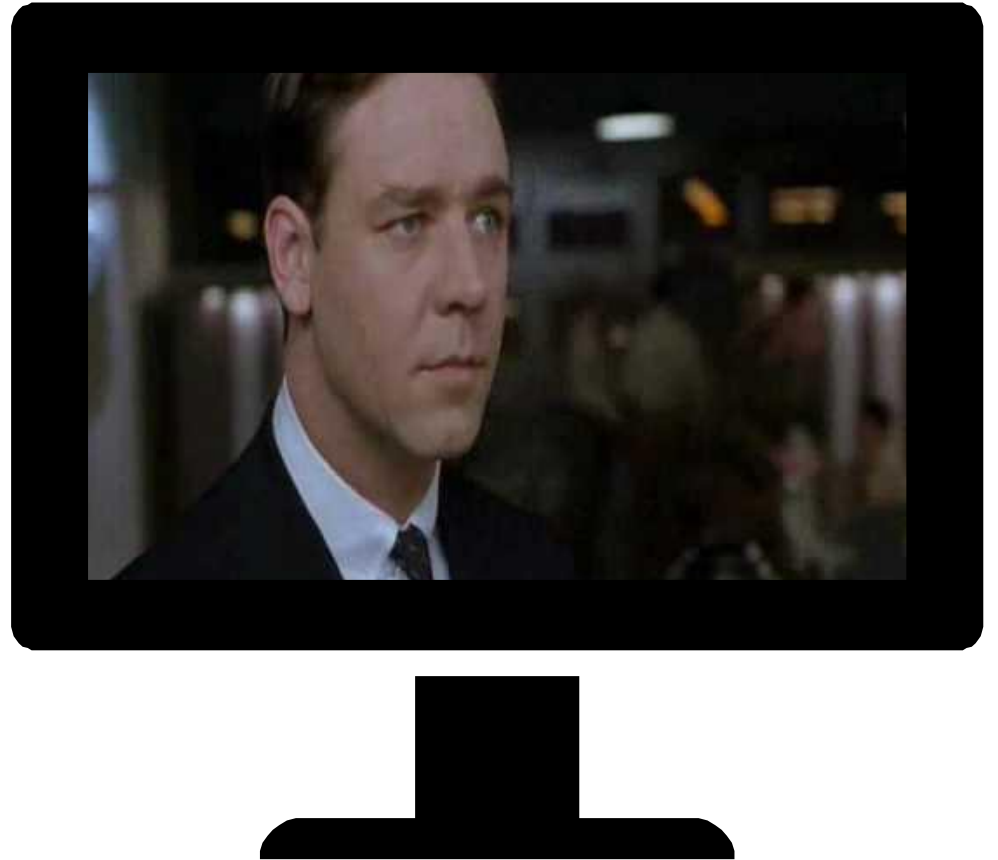


ROBOTS!!!



Coding

What we think it is...



Computer Science Vocabulary

Algorithm

A set of instructions to be followed, especially by a computer.

Event

The condition that starts or stops an algorithm.

Input

The instructions that are given to a human or machine.

Output

The outcome of the instructions.

Loop

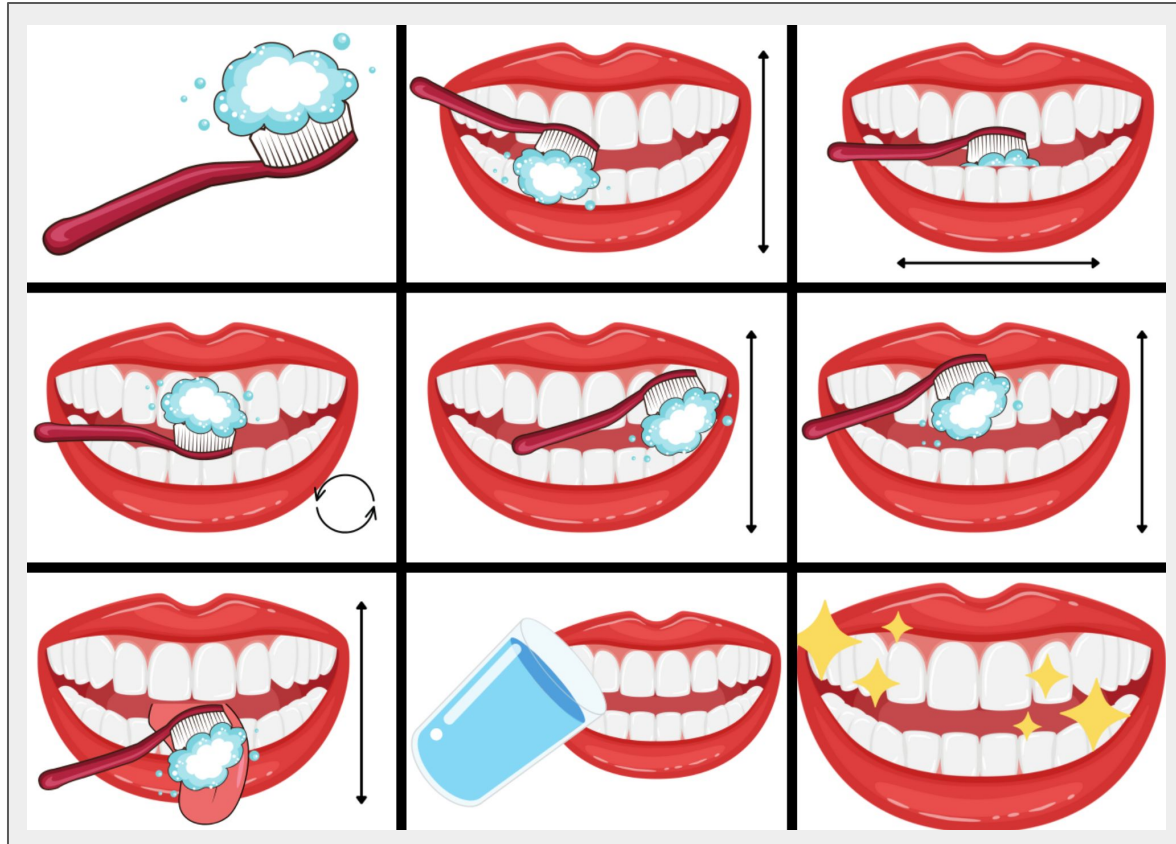
An algorithm or part of an algorithm that repeats a certain number of times, forever or until a condition is met.

Debug

Finding and fixing an error or mistake in a set of instructions (Algorithm)

grade 2

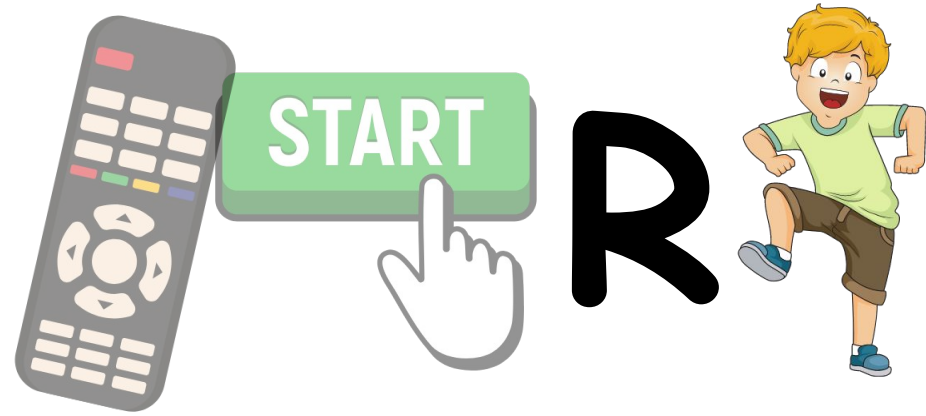
What Coding Really is



EVENT



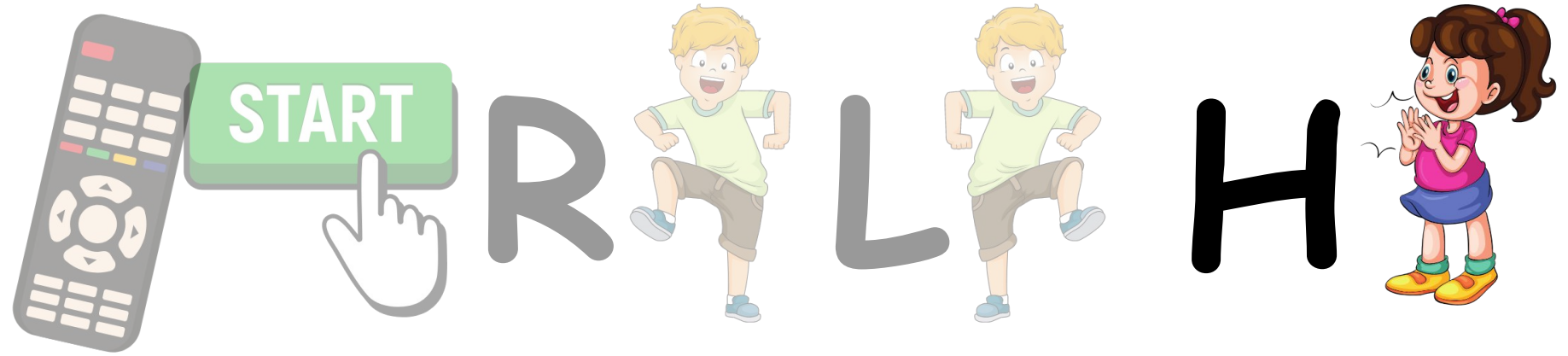
INPUT / OUTPUT



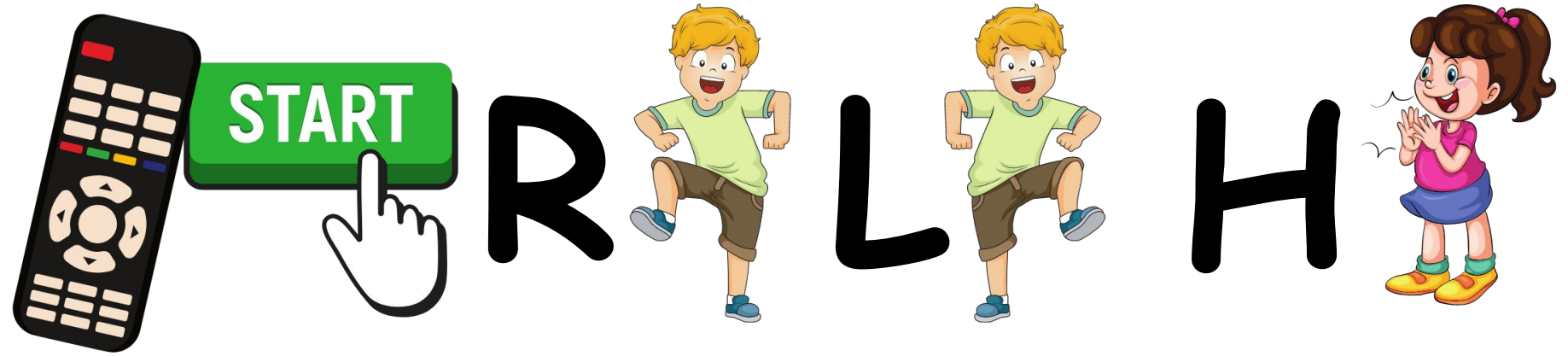
ALGORITHM



ALGORITHM



ALGORITHM



START



R

H

START



L

H

START



L

H

R

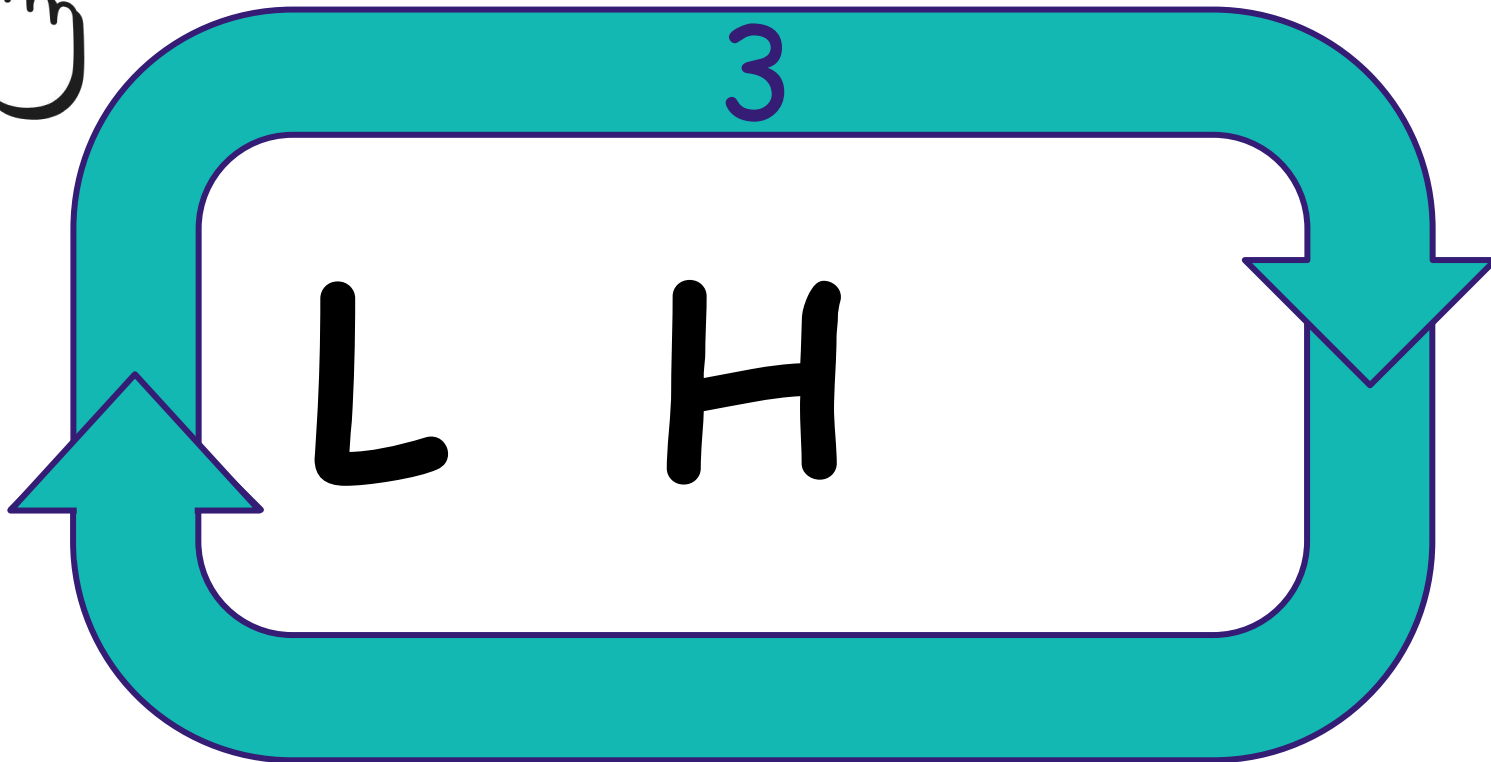
LOOP



START



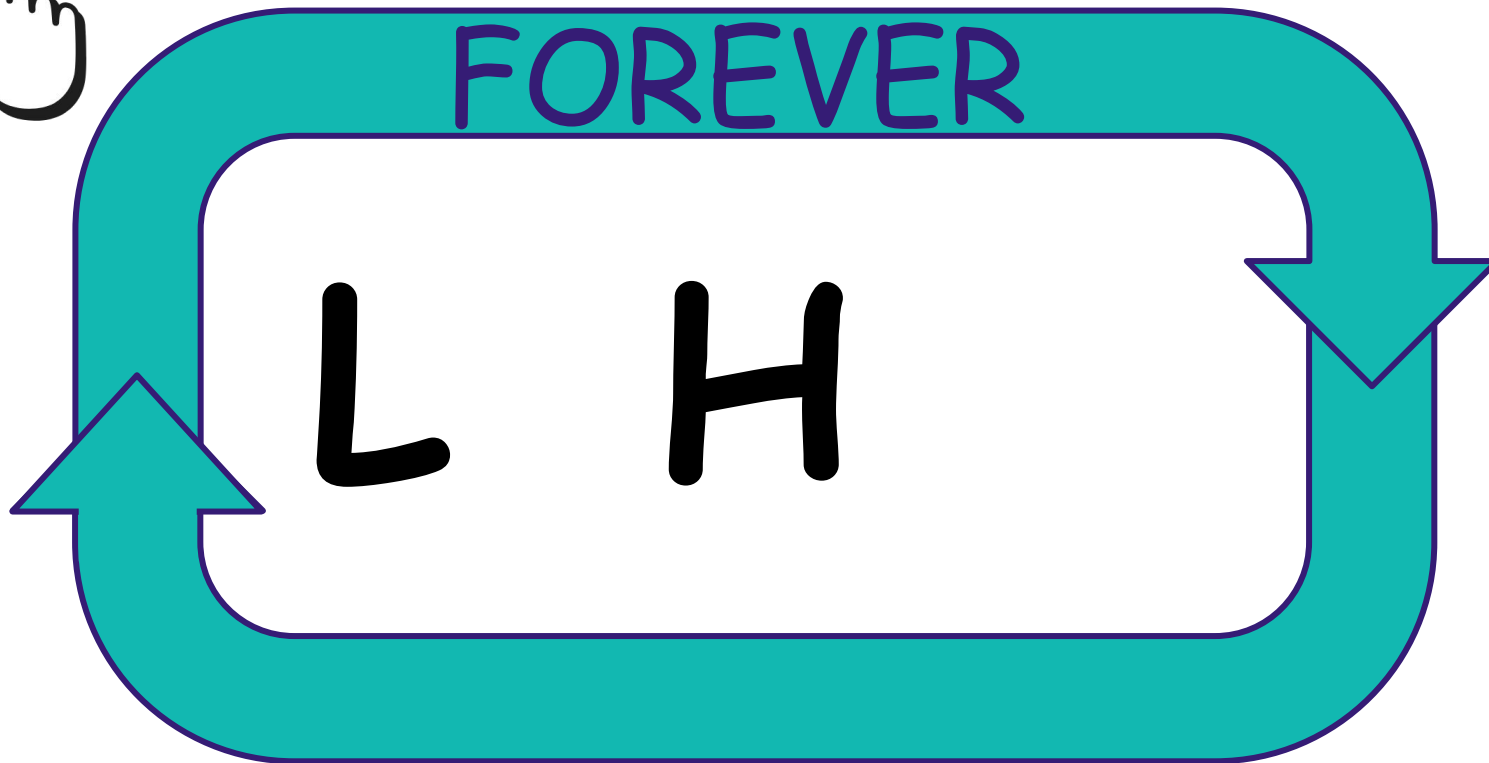
LOOP



START



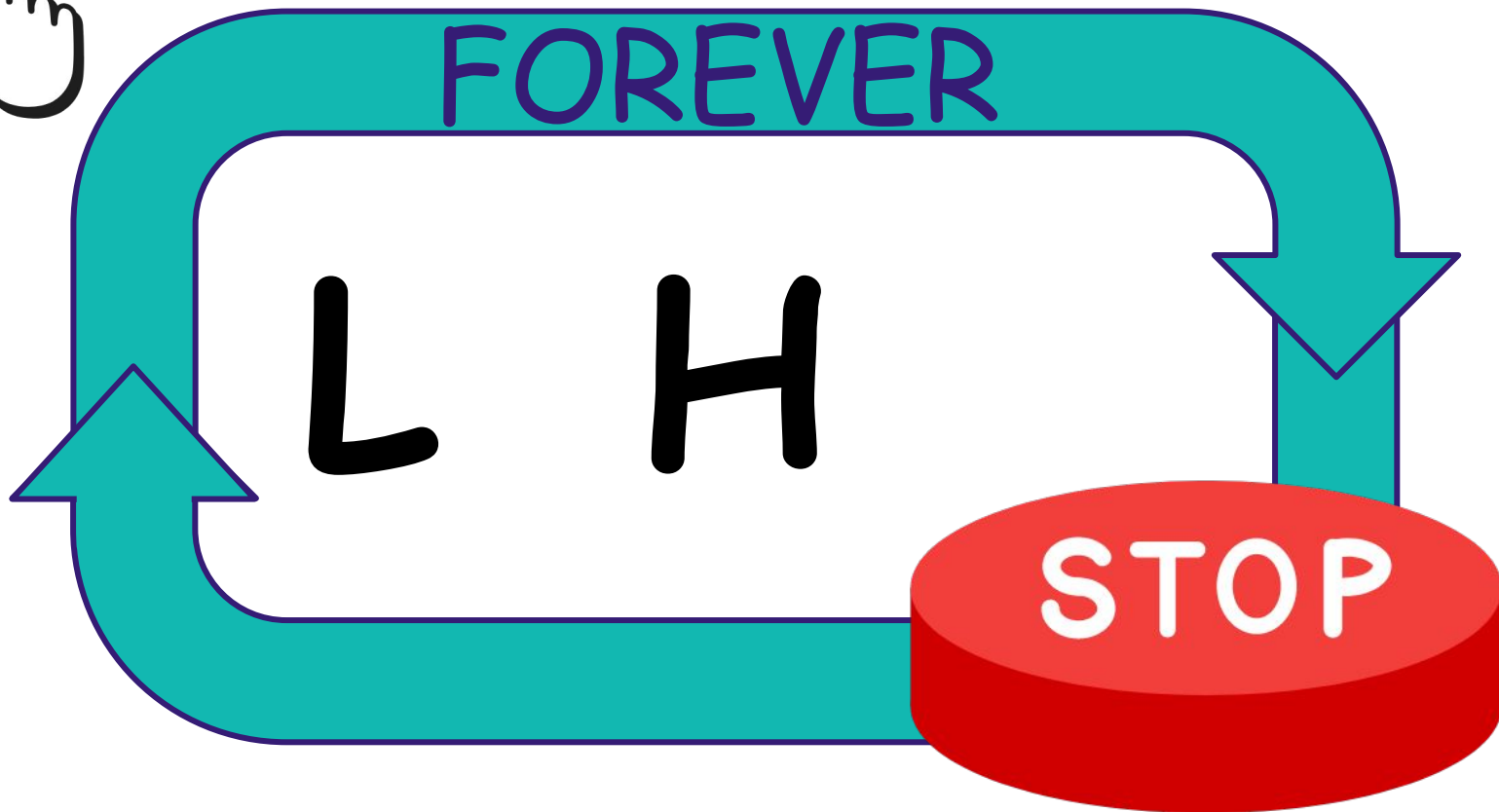
LOOP



START



LOOP



START



LOOP

FOREVER

R L H



START

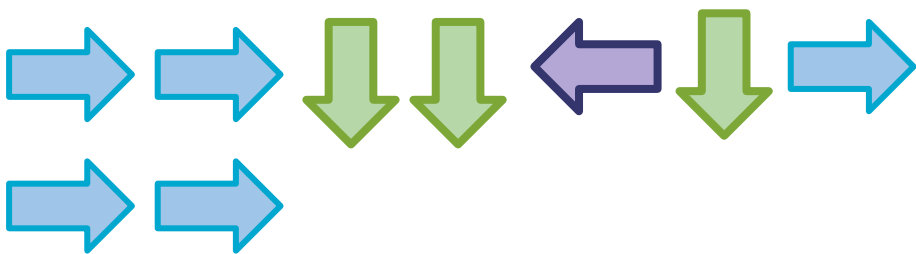


EVENT

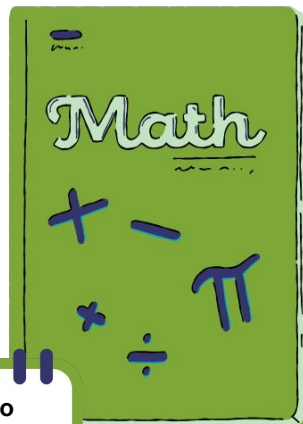
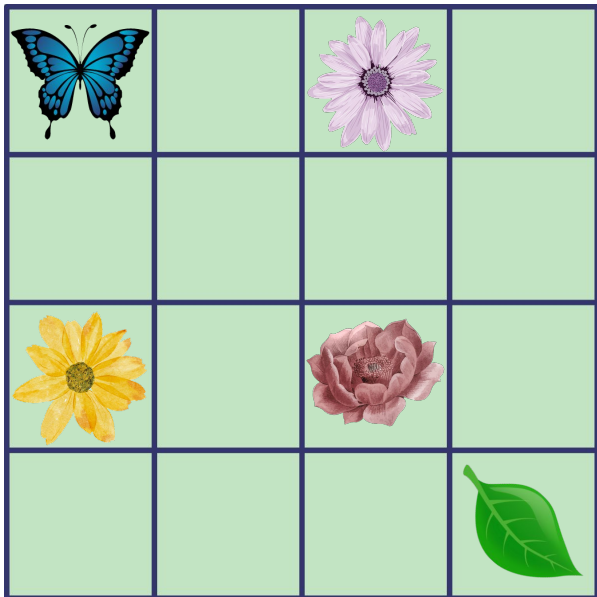
FOREVER

STOP





Will this set of instructions get the butterfly to all 3 flowers and end at the leaf?




Create a set of instructions for counting by 2's.


Can you use a "repeat" to make it more refined?

Trade with a friend and check each other's instructions

Collaborate to design an algorithm to solve a problem.



SKILLS & PROCEDURES



2, 4, 6, 8,
10, 11, 13,
15, 17, 19

Max was skip counting by 2's but he made a mistake somewhere.

Can you find the mistake? What did Max do wrong? Can you fix his mistake?





KNOWLEDGE

A computational artifact is anything created by a human using a computer, such as

- computer programs and code images
- audio video
- presentations
- web pages



Design can be used to create **algorithms** and translate them into **code**.

Code is any language that can be understood by and run on a computer.

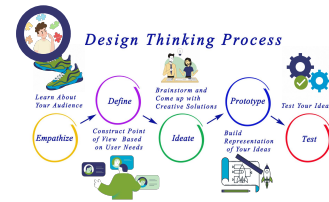
There are many ways to **code**, including using **visual block-based languages**.

Visual block-based languages are a form of **code** in which prepared chunks of instructions are in drag-and-drop blocks that fit together like puzzle pieces to design a program.

A computer cannot think for itself and must rely on **code** for all that it does. A **loop** is a repetition of instructions used in an **algorithm**.

Design process can be influenced by various factors, including

- safety
- functionality
- usability
- reliability
- efficiency
- aesthetics



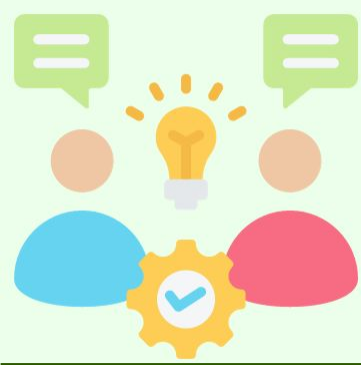
Functionality is the quality of being useful to do the job for which something was designed.

Usability is the degree of ease with which something can be used to achieve an outcome.

Design processes that support the development of multiple iterations include

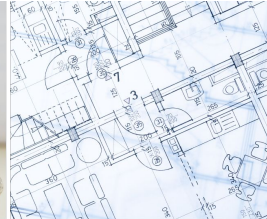
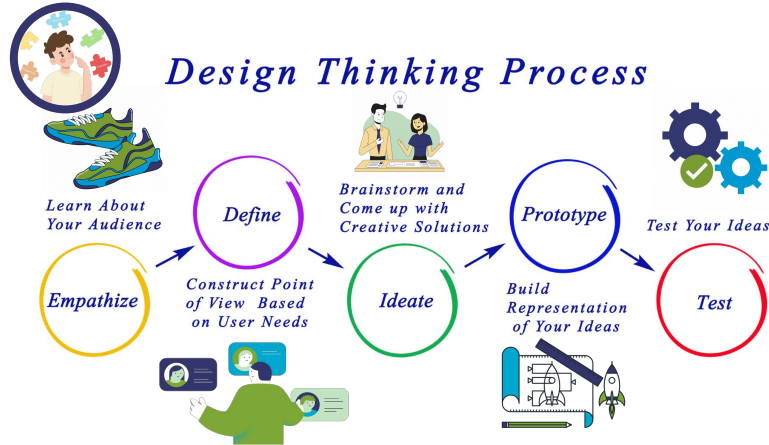
- enhancing
- refining

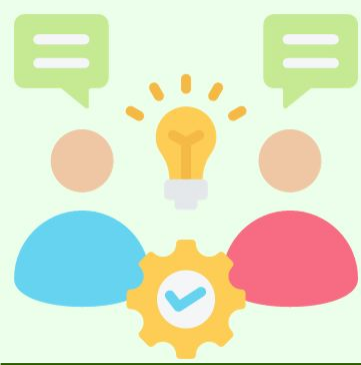
Design can be improved through collaboration.



UNDERSTANDING

Design can be used by humans or machines to meet needs.





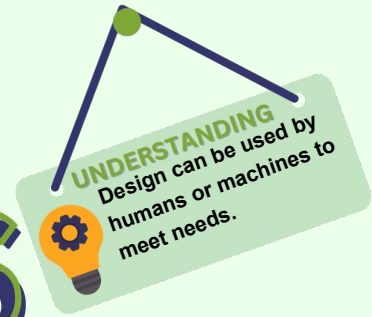
UNDERSTANDING

Design can better meet needs through the development of multiple iterations.





SKILLS & PROCEDURES



Engage in the design process to create computational artifacts.



Relate a block of code to an outcome or a behaviour.



Explain what will happen when single or multiple blocks of code are executed.



Translate a given algorithm to code using a visual block-based language.

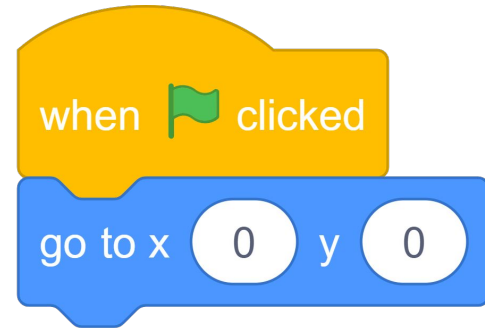
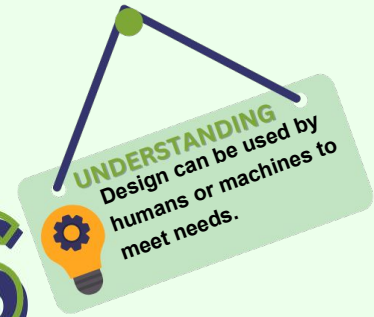


Design an algorithm that includes a loop and translate it into code.









SKILLS & PROCEDURES





Relate a block of code to an outcome or a behaviour.

 SKILLS & PROCEDURES 



Explain what will happen when single or multiple blocks of code are executed.

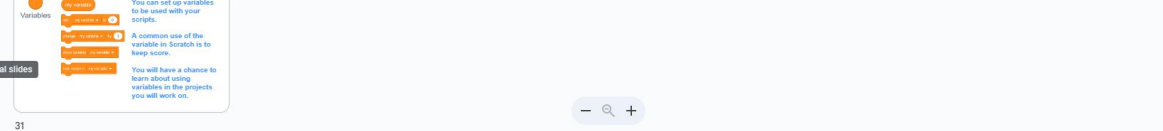
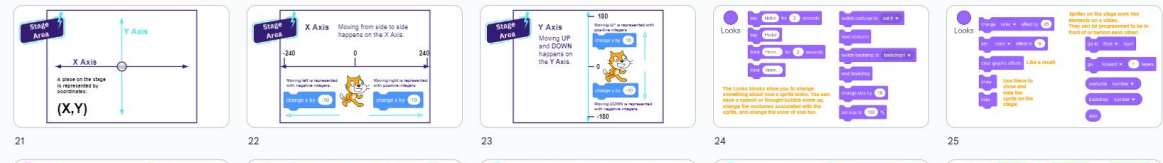
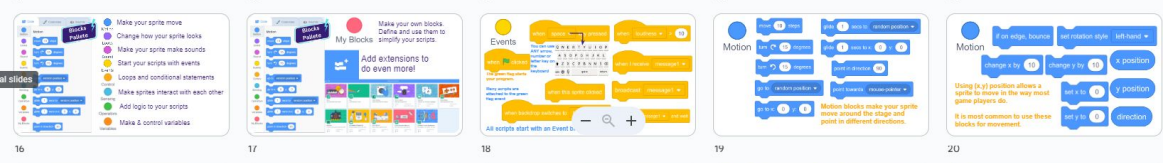
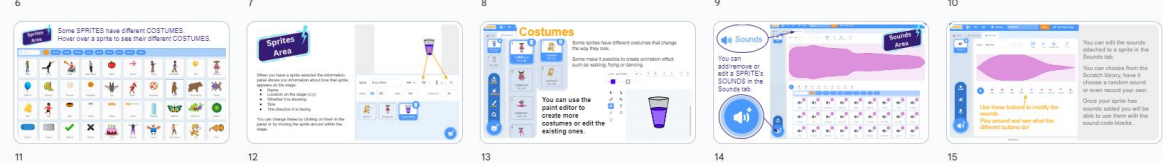
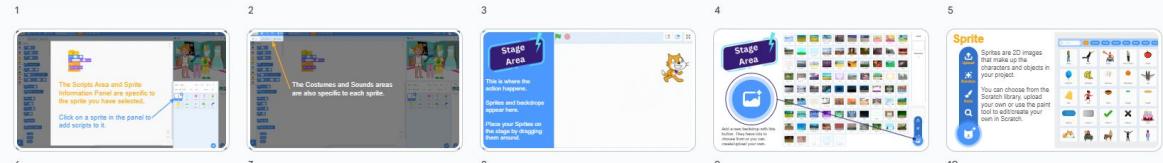
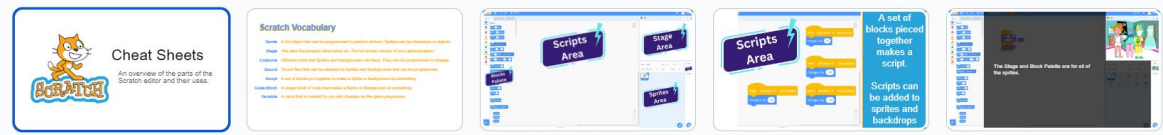
 SKILLS & PROCEDURES 

Translate a given algorithm to code using a visual block-based language.

 SKILLS & PROCEDURES 

Design an algorithm that includes a loop and translate it into code.

 SKILLS & PROCEDURES 



<https://bit.ly/ScratchCheatCards>



1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30

all slides

all slides

SCRATCH

scratch.mit.edu

IDEAS



What will you create?

Choose a tutorial

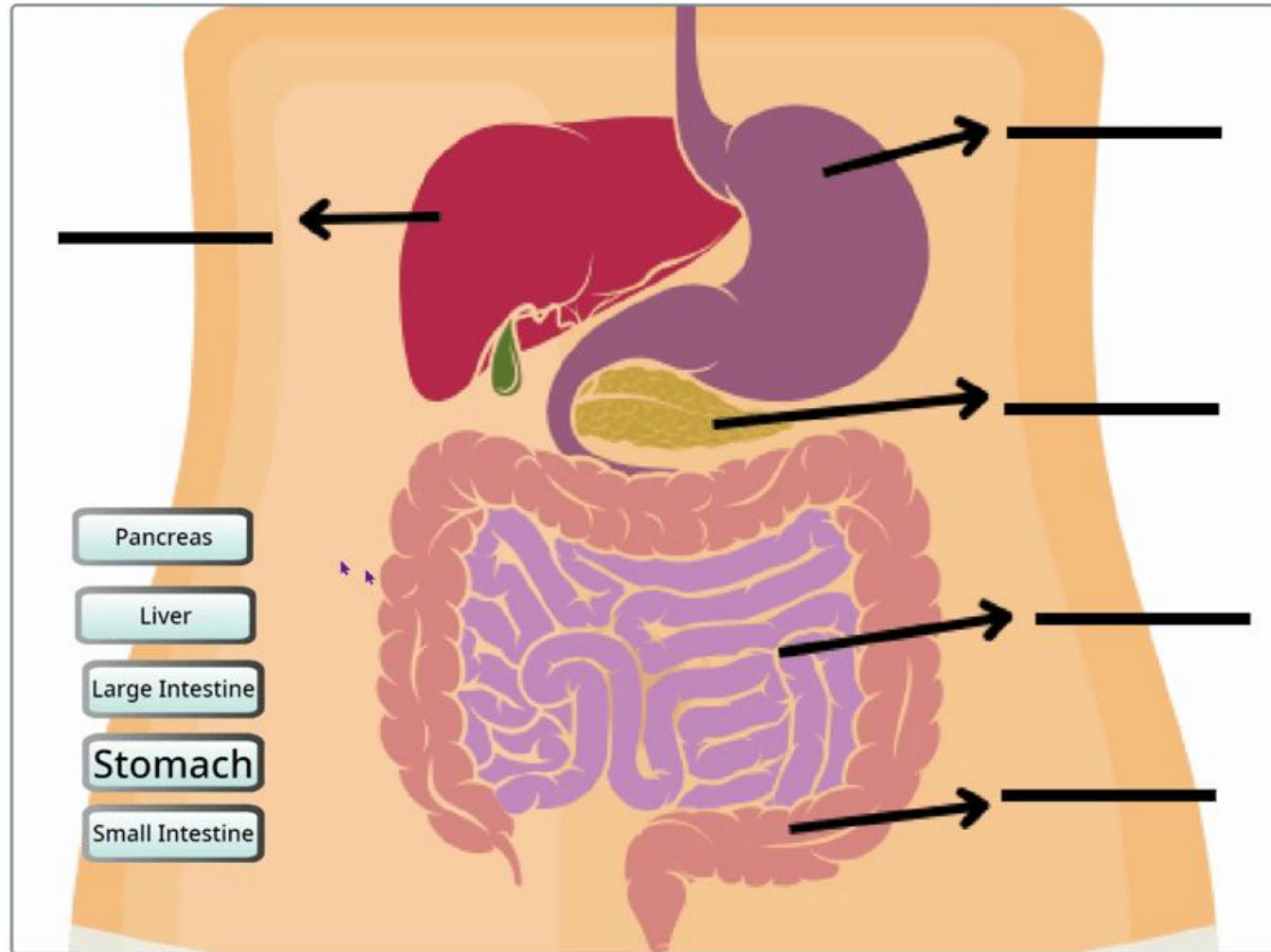


Getting Started

New to Scratch? Try the Getting Started tutorial.

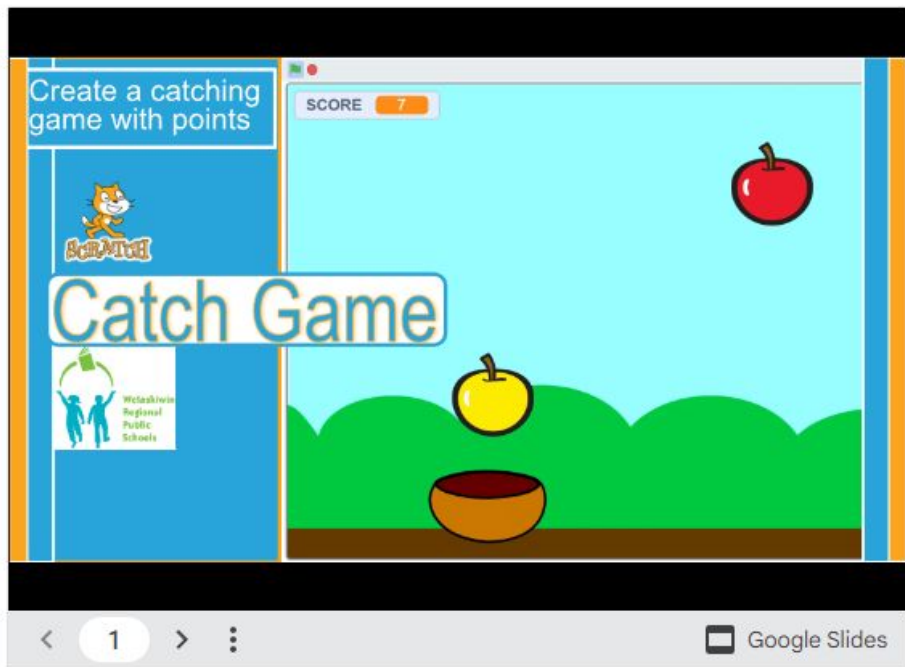
Try It!

[etwithmrsd.com](https://www.etwithmrsd.com)

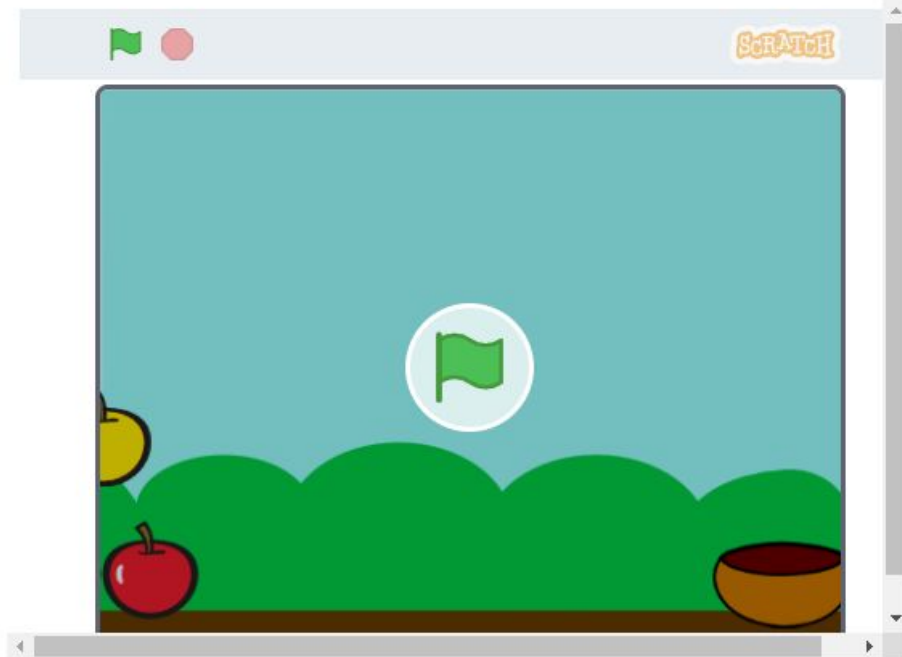


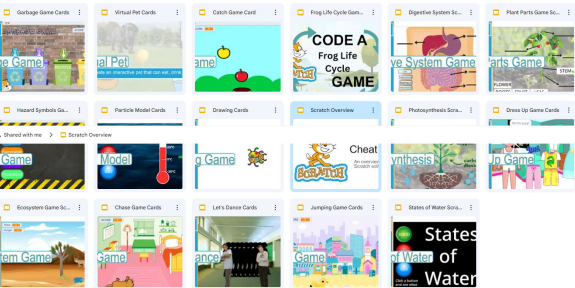
CATCH GAME

Instructions



Example





Relate a block of code to an outcome or a behaviour.

SKILLS & PROCEDURES

Explain what will happen when single or multiple blocks of code are executed.

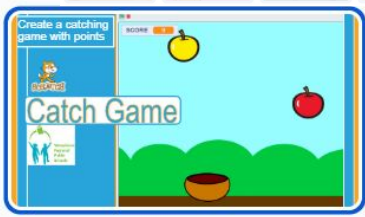
SKILLS & PROCEDURES

Translate a given algorithm to code using a visual block-based language.

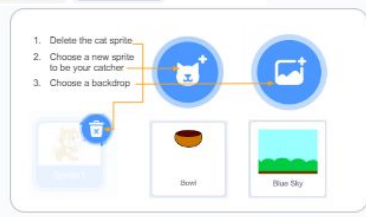
SKILLS & PROCEDURES

Design an algorithm that includes a loop and translate it into code.

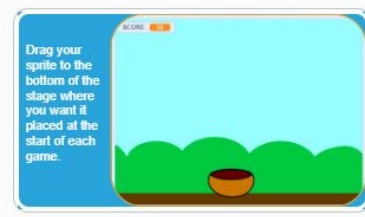
SKILLS & PROCEDURES



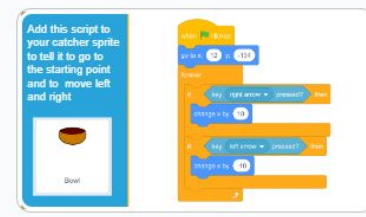
1



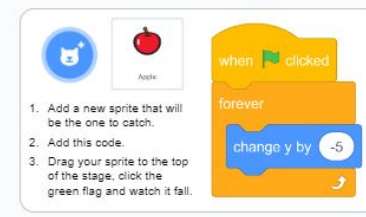
2



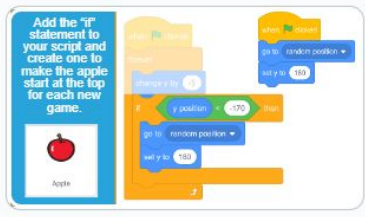
3



4



5



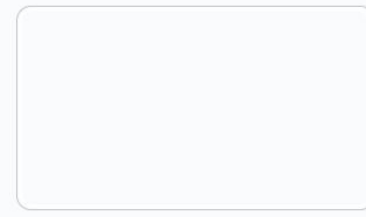
6



7



8



9



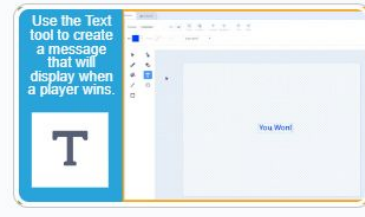
10



11



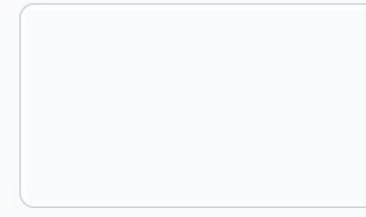
12



13



14



15

CODE.ORG

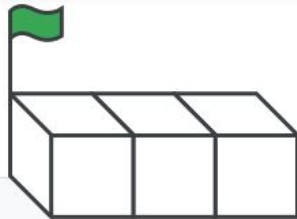
Curriculum Catalog



Find the perfect fit for your learning environment:
Code.org courses, tutorials, and more designed for all
ages and experience levels.

<p>ARTIFICIAL INTELLIGENCE 11 AI and Machine Learning Grades: 6-12 Duration: Quarter</p> <p>Quick View Assign</p>	<p>ARTIFICIAL INTELLIGENCE 11 AI for Oceans Grades: 3-12 Duration: Lesson</p> <p>Quick View Assign</p>	<p>DATA 11 AP CSA Consumer Review Lab Grades: 9-12 Duration: Month</p> <p>Quick View Assign</p>	<p>PROGRAMMING CS Fundamentals: Course B Grades: 1-2 Duration: Month</p> <p>Quick View Assign</p>	<p>PROGRAMMING CS Fundamentals: Course C Grades: 2-3 Duration: Month</p> <p>Quick View Assign</p>	<p>GAMES AND ANIMATIONS 12 CS Fundamentals: Course D Grades: 3-4 Duration: Month</p> <p>Quick View Assign</p>	<p>PROGRAMMING Code Break Grades: 8-12 Duration: Month</p> <p>Quick View Assign</p>	<p>PROGRAMMING Code Break for Younger Students Grades: K-7 Duration: Month</p> <p>Quick View Assign</p>	<p>GAMES AND ANIMATIONS 11 Code Your Own Sports Game Grades: 2-12 Duration: Lesson</p> <p>Quick View Assign</p>	<p>GAMES AND ANIMATIONS 11 Computer Science A Grades: 9-12 Duration: School Year</p> <p>Quick View Assign</p>	<p>ARTIFICIAL INTELLIGENCE 12 Computer Science Discoveries Grades: 6-12 Duration: School Year</p> <p>Quick View Assign</p>	<p>CYBERSECURITY 14 Computer Science Principles Grades: 9-12 Duration: School Year</p> <p>Quick View Assign</p>
<p>DATA 11 AP CSA Data Lab Grades: 9-12 Duration: Month</p> <p>Quick View Assign</p>	<p>PROGRAMMING AP CSA Magpie Lab Grades: 9-12 Duration: Week</p> <p>Quick View Assign</p>	<p>PROGRAMMING Accelerated Intro to CS Course Grades: 4-8 Duration: Month</p> <p>Quick View Assign</p>	<p>INTERNET 14 CS Fundamentals: Course E Grades: 4-5 Duration: Quarter</p> <p>Quick View Assign</p>	<p>INTERNET 14 CS Fundamentals: Course F Grades: 5 Duration: Quarter</p> <p>Quick View Assign</p>	<p>PROGRAMMING CS Fundamentals: Express Course Grades: 3-8 Duration: Quarter</p> <p>Quick View Assign</p>	<p>ART AND DESIGN 11 Code with Anna and Elsa Grades: 2-12 Duration: Lesson</p> <p>Quick View Assign</p>	<p>ENGLISH LANGUAGE ARTS 14 Coding Book Covers Grades: 3-5 Duration: Week</p> <p>Quick View Assign</p>	<p>HISTORY 14 Coding Interactive Maps Grades: 3-6 Duration: Week</p> <p>Quick View Assign</p>	<p>PROGRAMMING Counting Activity Grades: 3-5 Duration: Lesson</p> <p>Quick View Assign</p>	<p>PROGRAMMING Course 1 Grades: K-1 Duration: Month</p> <p>Quick View Assign</p>	<p>PROGRAMMING Course 2 Grades: 3-5 Duration: Month</p> <p>Quick View Assign</p>
<p>ART AND DESIGN 11 Artist Grades: 2-12 Duration: Lesson</p> <p>Quick View Assign</p>	<p>CYBERSECURITY Blockchain Grades: 7-12 Duration: Month</p> <p>Quick View Assign</p>	<p>PROGRAMMING CS Fundamentals: Course A Grades: K-1 Duration: Month</p> <p>Quick View Assign</p>	<p>PROGRAMMING CS Fundamentals: Pre-reader Express Grades: K-3 Duration: Month</p> <p>Quick View Assign</p>	<p>GAMES AND ANIMATIONS 11 Choose Your Team and Make a Basketball Game Grades: 2-12 Duration: Lesson</p> <p>Quick View Assign</p>	<p>PROGRAMMING Classic Maze Grades: 2-12 Duration: Lesson</p> <p>Quick View Assign</p>	<p>MATH 12 Coding a Geometric Star Quilt Grades: 3-8 Duration: Week</p> <p>Quick View Assign</p>	<p>ENGLISH LANGUAGE ARTS 14 Coding a Time Capsule Grades: 3-8 Duration: Week</p> <p>Quick View Assign</p>	<p>ENGLISH LANGUAGE ARTS 13 Coding with Poetry Grades: 3-8 Duration: Week</p> <p>Quick View Assign</p>	<p>PROGRAMMING Course 3 Grades: 3-5 Duration: Month</p> <p>Quick View Assign</p>	<p>PROGRAMMING Course 4 Grades: 4-5 Duration: Month</p> <p>Quick View Assign</p>	<p>PHYSICAL COMPUTING 13 Creating Apps with Devices (Circuit Playground) Grades: 6-12 Duration: Quarter</p> <p>Quick View Assign</p>

Google CS First



Get started with CS First

Coding instructions like hints, highlights, and text-to-speech live inside *Scratch for CS First*



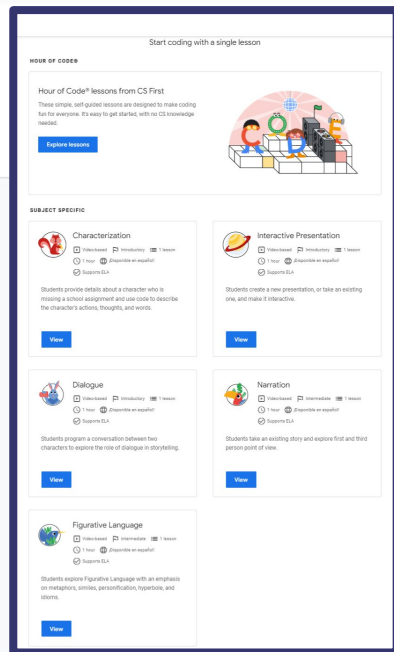
Welcome to CS First

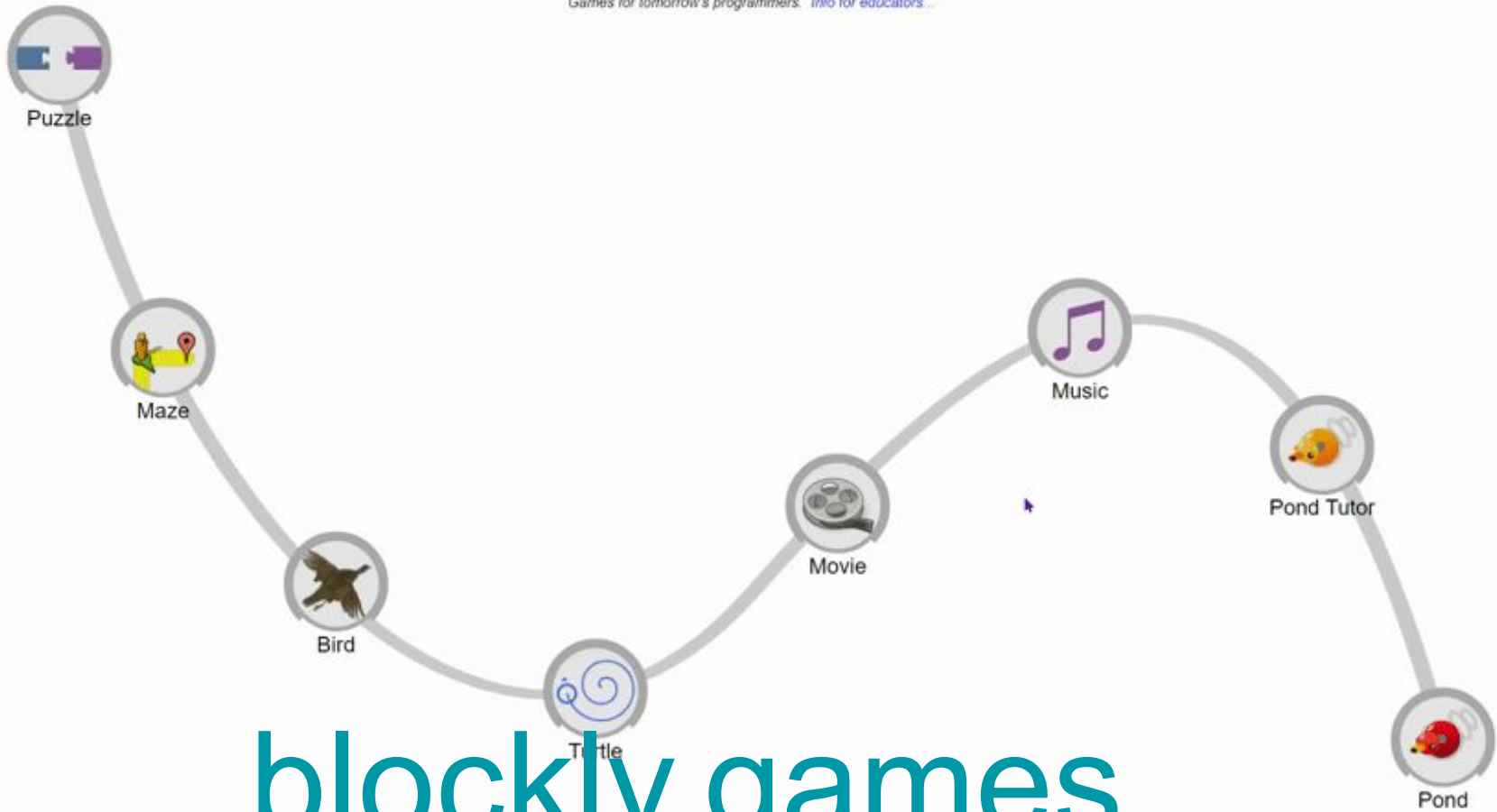
Text-based Introductory 4 lessons

4–6 hours

Students go on a first journey through Scratch for CS First with four fun projects that introduce the core elements of Scratch and foundational coding skills.

View





blockly.games

Toys!!!

Your ATA Library

 The Alberta Teachers' Association

Kits in Your ATA Library

Makerkits A-D

Makerkits E-G

Makerkits H-L

Makerkits M-O

Makerkits P-S

Makerkits T-Z



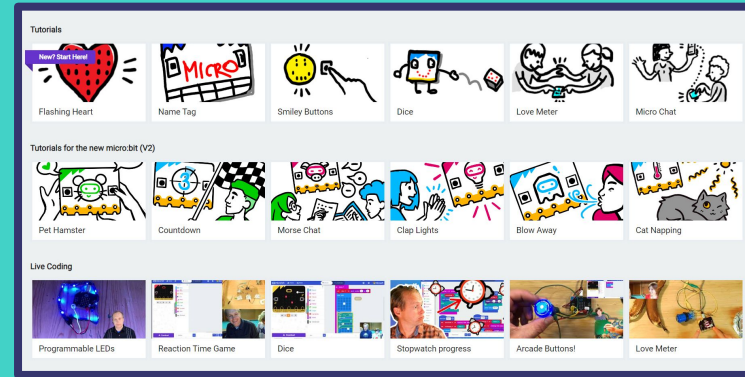
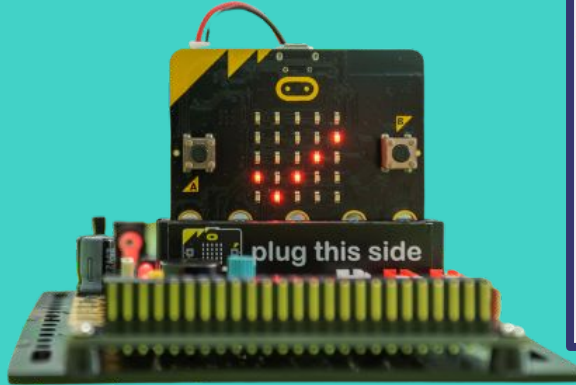
Toys!!!

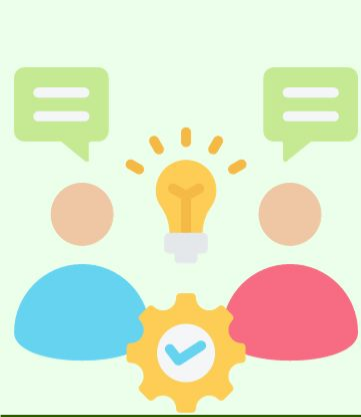
I highly recommend!



Sphero Minis

micro:bits





SKILLS & PROCEDURES

UNDERSTANDING
Design can better meet needs through the development of multiple iterations.

Discuss examples of designs that have been enhanced or refined to better meet needs.

 SKILLS & PROCEDURES 

Evaluate an artifact based on various factors.

 SKILLS & PROCEDURES 

Design an artifact to meet a need.

 SKILLS & PROCEDURES 

Propose enhancements and refinements to an artifact in collaboration with others.

 SKILLS & PROCEDURES 

Develop multiple iterations of an artifact.

 SKILLS & PROCEDURES 

Earth Systems:

Create a plan to implement a conservation practice in a local community.

REDUCE YOUR CARBON FOOTPRINT

SMALL ACTIONS, BIG IMPACT!

Energy-Efficient Lifestyle:

- Unplug electronics when not in use.
- Adjust your thermostat to conserve energy.
- Opt for energy-saving appliances and LED lights.
- Use natural light and open windows for ventilation.

Sustainable Transportation:

- Walk or bike for short distances.
- Combine multiple errands into one trip.
- Opt for fuel-efficient vehicles or electric cars.
- Choose public transportation, carpooling, or biking.

Smart Energy Consumption:

- Switch to renewable energy providers.
- Use energy-efficient insulation in your home.
- Minimize air conditioning and heating usage.
- Harness solar energy with rooftop solar panels.

Reduce, Reuse, Recycle:

- Cut down on single-use plastics.
- Recycle paper, plastic, glass, and aluminum.
- Compost food waste and use it for gardening.
- Embrace reusable bags, bottles, and containers.

Water Conservation:

- Collect rainwater for watering gardens.
- Fix leaks and dripping faucets promptly.
- Water plants efficiently, avoiding excessive irrigation.
- Take shorter showers and install water-saving devices.

Conscious Consumerism:

- Choose eco-friendly and sustainable products.
- Prioritize quality over quantity when purchasing items.
- Repair and repurpose items instead of discarding them.
- Support companies with transparent and ethical practices.

Sustainable Food Choices:

- Support sustainable farming practices.
- Opt for locally sourced, organic produce.
- Reduce meat consumption and try plant-based meals.
- Minimize food waste through mindful shopping and meal planning.



understand your users needs

DESIGN THINKING BRAINSTORM LOG

EMPATHIZE:

DEFINE:

IDEATE:

PROTOTYPE:

Develop a bunch of awesome ideas! Nothing is too crazy!

return to your users for feedback

TEST:

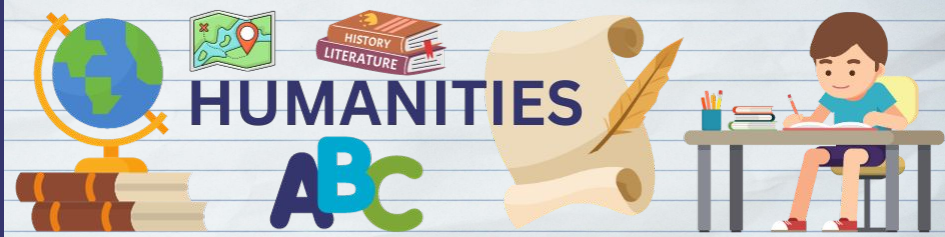




FINE ARTS

Plan & Design a piece of art for

- ★ classmate
- ★ school staff member
- ★ family member
- ★ character from a story or novel

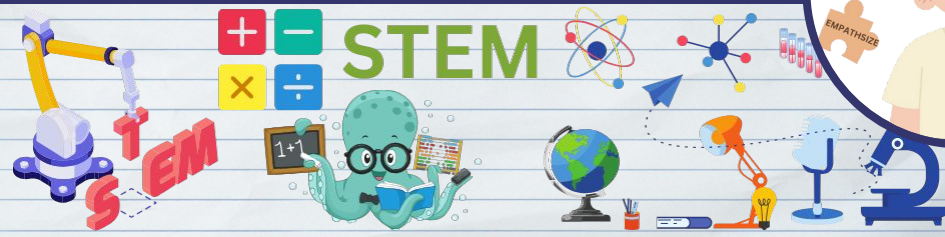


HUMANITIES

ABC

Plan & Create a piece of writing for:

- ★ A call to action
- ★ A proposal
- ★ Another person
- ★ Persuading



STEM

Plan & Create:

- ★ 3D model to share with younger students
- ★ slide presentation to show parents
- ★ computer program for classmates
- ★ poster presentation for parent council



PHYSICAL EDUCATION & WELLNESS

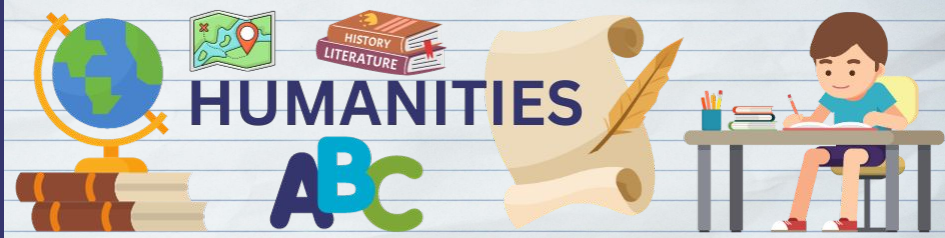
Plan & Create:

- ★ a warm up for another class
- ★ a fundraiser for a cause
- ★ a meal plan for a family



FINE ARTS

Interview or survey the audience/customer to find out what they like and don't like.



HUMANITIES

ABC

Research the cause and do interviews to find out the important information.



STEM

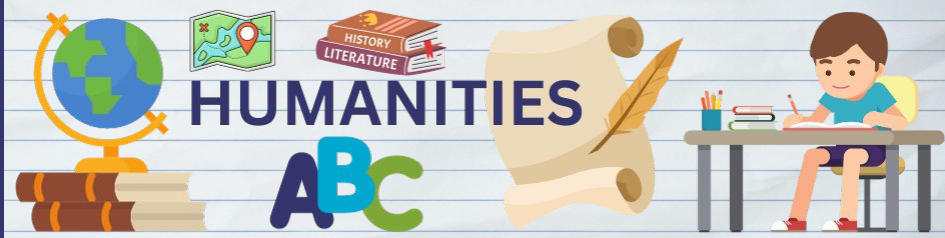
PHYSICAL EDUCATION & WELLNESS

Think about the things you found interesting when you were in a younger grade.

Use the provided information to figure out what kinds of meals everyone in the family will love.



Take the information you got from your audience and use that to decide what kind of art you will make.



Decide what information needs to be included in your writing to meet your purpose.



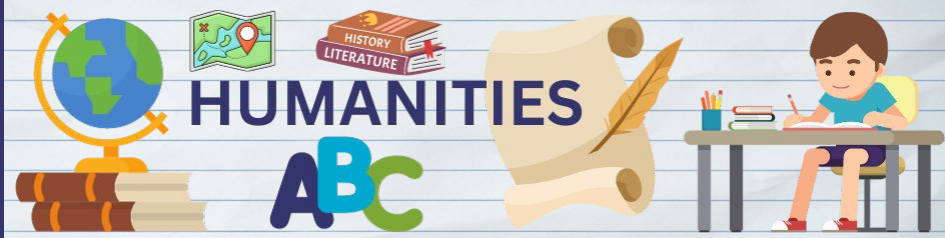
Decide what kind of project you are going to make based on what you know about younger students.

Determine generally what kinds of foods to include and avoid in the meal plan.



FINE ARTS

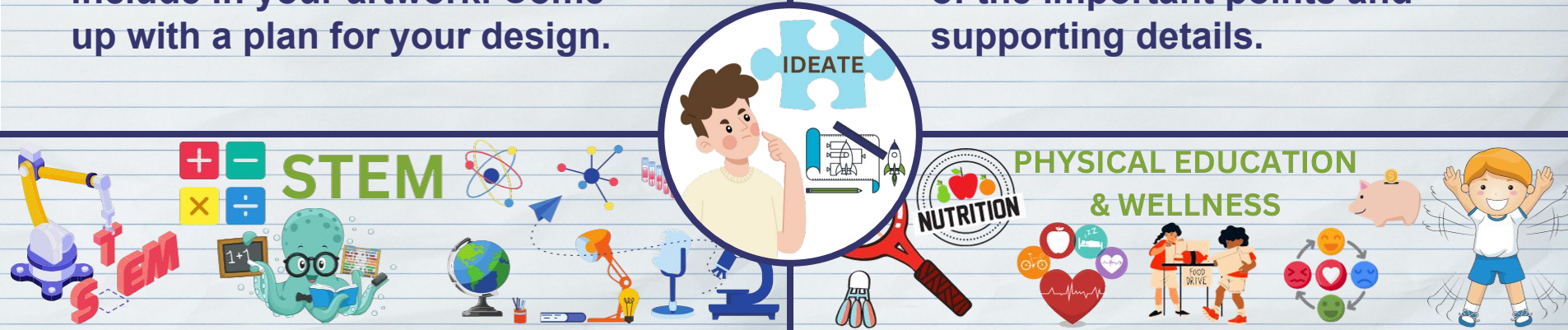
Brainstorm ideas for what to include in your artwork. Come up with a plan for your design.



HUMANITIES

ABC

Plan your writing including all of the important points and supporting details.



STEM

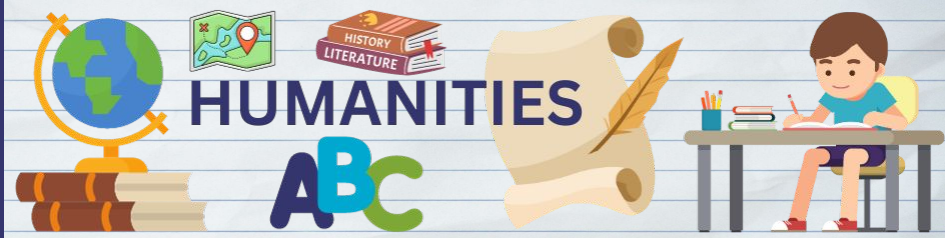
Generate ideas for how to make your project appealing to younger students and show the information you need to show.

PHYSICAL EDUCATION & WELLNESS

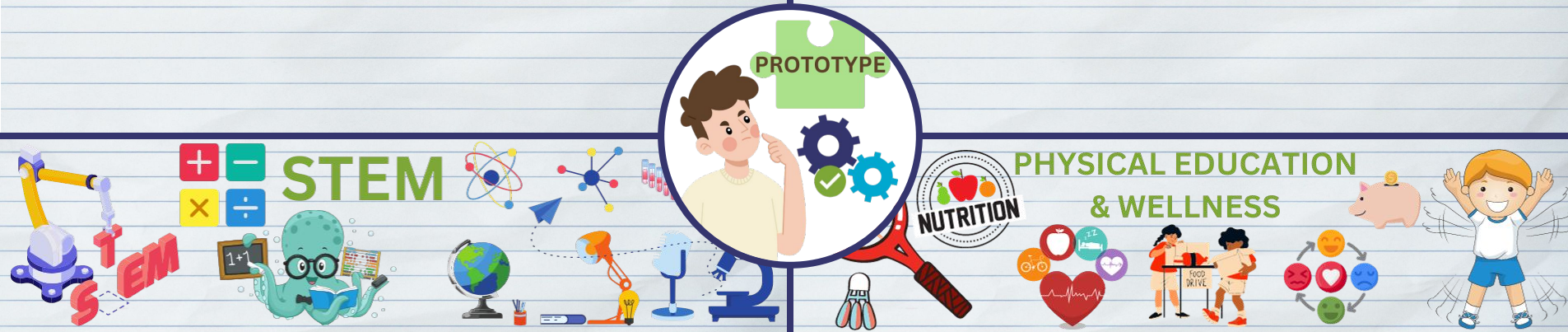
Find lots of meal options and ideas that include the family's favourite foods and none they don't like.



Create the artwork!



Do a rough draft of the writing.

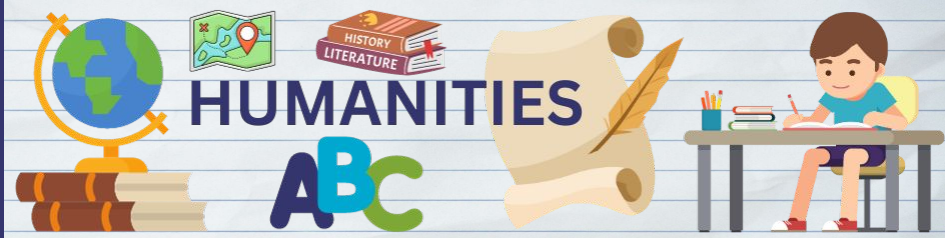


Build your project!

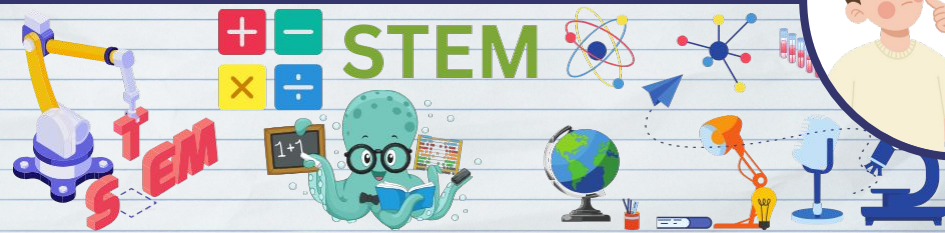
Create a 7 day meal plan with 3 meals per day and 2 snacks.



Ask your audience for feedback on your artwork.



Ask your audience or a classmate to read your writing and give you feedback.



Ask a classmate for feedback on your project. Do they think the younger kids will like it? Did you miss any information?

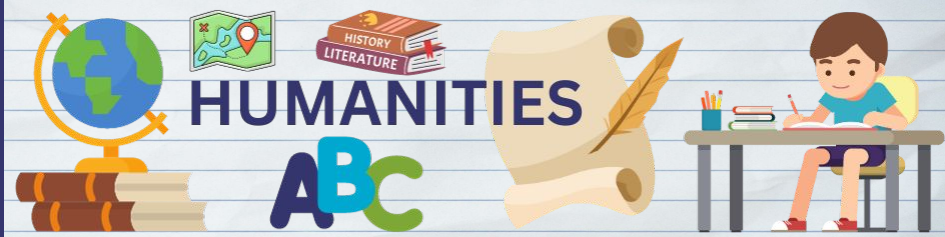


Have a classmate look at your meal plan and provide you feedback.



FINE ARTS

Can you write a set of instructions for how to complete the artwork you made?



HUMANITIES

ABC

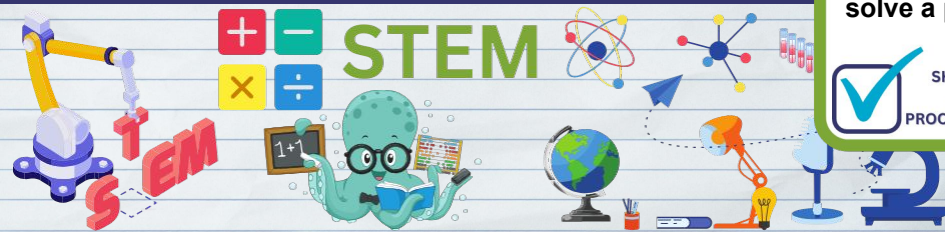
Can you come up with instructions that another student could follow to write on the same topic or a different one?



Collaborate to design an algorithm to solve a problem.



SKILLS & PROCEDURES



STEM

Can you write a set of instructions for how to build your project so another student could do it?



PHYSICAL EDUCATION & WELLNESS

Can you come up with a set of instructions for how to create a meal plan for a family for a week?