



Curriculum Outline

The ACG Curriculum Consists of 5 Courses

3 Block Coding Courses



2 JavaScript Courses



Block Coding

ACG's 3 Block Coding Courses consist of 24 Missions that teach students to apply various concepts including "sequence" and "repetition".

Our patented OOBBC (object-oriented block coding) is uniquely structured to familiarize students with text coding, helping them transition to the next level of writing code.



Course 1: Block Coding Elementary



Target Age 6 ~ 10

Learning Time - 185 min.

5 Missions

Mission 1

Space - A - Go Go!



Space adventure
for beginners.

Event, Sequence

Astronomy

Industry, Innovation
and Infrastructure

Mission 3

Hungry Robot



The giant robot that
can eat up recyclable
trash!

Event, Sequence,
Variable

Technology

Responsible
consumption and
production

Mission 2

Obstacle Astro



Intruders from the
graveyard orbit. What
is their identity?

Event, Sequence,
Coordinate

Astronomy

Climate Action

Mission 4

Big Trouble in Little Garden



Find out what caused
the roses to become
sick!

Event, Variable,
Coordinate

Biology

Life on Land

Mission 5

Big Trouble in Little Garden - Double Trouble



Where's the ladybug?

Event, Variable,
Coordinate, Physics

Biology

Life on land

Course 2: Block Coding Basic



Target Age 8 ~ 11

Learning Time : 545 min.

13 Missions

Mission 1 Game Over



Team Astro goes inside the computer to save OT2.

Event, coordinate, variable

Technology
Engineering

Industry,
Innovation and
Infrastructure

Mission 3 Turtle Steps



Team Astro, save the endangered sea turtles!

Event, Sequence, Physics

Biology

Life Below Water

Mission 2 Game Over - Challenge



Rescue OT2 before it's too late!

Event, Sequence, Speed

Engineering

Industry,
Innovation and
Infrastructure

Mission 4 Hail Alert



The plane might crash due to a hailstorm!

Event, Sequence, Coordinate, Physics

Climatology

Partnerships for the Goals

Mission 5

Save the Submarine



How will Astro lift up a marine probe has sunk?

Event, Variable,
Sequence,
Coordinate

Astronomy

Industry,
Innovation and
Infrastructure

Mission 7

Stormy Night



Thunder and lightning in the mountains. The lamas are in danger!

Event, Variable,
Sequence

Climatology

Partnerships for
the Goals

Mission 6

Snow and Slide



An avalanche has occurred at the top of a mountain!

Sequence, Event,
Variable, Frame

Climatology

Industry,
Innovation and
Infrastructure

Mission 8

Tornado Rush



Everyone will be in danger if the tornado isn't taken care of!

Event, Variable,
Sequence

Climatology

Partnerships for
the Goals

Mission 9 Icy Escape



After the glacier collapsed, the penguins are lost!

Event, Variable, Physics

Biology

Climate Action

Mission 11 The Sinkhole - Deeper



The exit is nowhere to be found. Perhaps the key is inside the yarn!

Event, Array, Coordinate

Geology

Decent Work and Economic Growth

Mission 10 The Sinkhole



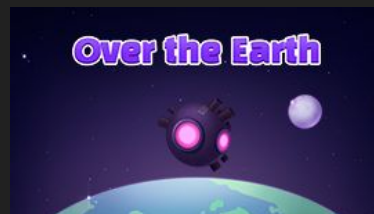
It's a sinkhole! Will Astro Kitty be able to find a way out?

Event, Coordinate, Sequence

Geology

Decent Work and Economic Growth

Mission 12 Over the Earth



Let's throw the antimatter thruster into outer space!

Event, sequence, physics, variable

Engineering

Industry, Innovation and Infrastructure

Mission 13

Speed Express



The world's fastest train, the Blue Express. It has one flaw... It can't stop!!

Sequence, Event, Speed, Variable, If Statement

Physics

Industry, Innovation and Infrastructure

Course 3: Block Coding Advanced



Target Age 9 ~ 12

Learning Time - 245 min.

6 Missions

Mission 1
Cast Away



Suzu fell onto a deserted island. She needs to escape!

if /else Statement,
Variable

Chemistry

Industry,
Innovation and
Infrastructure

Mission 3
Termite Kingdom -
Mightier



There are ferocious soldiers around the queen!

Event,
if Statement,
sequence

Biology

Life on Land

Mission 2
Termite Kingdom



Astro Kitty is the king of the termite kingdom!

Event, Sequence,
Physics

Biology

Life on Land

Mission 4
Fungus Jump!



An ancient fungus has swallowed Dr. Blunt! How will Team Astro escape?

Operator,
if Statement,
Variable

Biology

Life on Land

Mission 5

Plasma Meltdown



The sun's plasma is about to hit the spaceship!

Variable, Clone, Coordinate, Event

Physics

Partnerships for the Goals

Mission 6

Plasma Meltdown - Stronger



The plasma is right in front of us. What is Astro's solution?

Loop statement

Physics

Partnerships for the Goals

Block Coding Overview

Course	CSTA	Mission	IT	STEM	SDG
Elementary	1A-AP-09 1A-AP-10	Space A - Go Go	Event, sequence	Astronomy - Planets and space development	Goal 9. Industry, Innovation and Infrastructure
		Obstacle Astro	Sequence, event, coordinate	Astronomy - Formation of the stars	Goal 13. Climate Action
		Hungry Robot	Sequence, event, variable	Technology - The role of satellites	Goal 12. Responsible consumption and production
		Big Trouble in Little Garden	Event, coordinate, variable	Biology - Insect ecology	Goal 15. Life on Land
		Big Trouble in Little Garden - Double Trouble	Event, coordinate, physics, variable	Biology - Insect ecology	Goal 15. Life on Land
Basic	1A-AP-11 1A-AP-12	Game Over	Event, coordinate, variable	Engineering - Computers and viruses	Goal 9. Industry, Innovation and Infrastructure
		Game Over - Challenge	Event, sequence, speed	Engineering - Computers and viruses	Goal 9. Industry, Innovation and Infrastructure
		Turtle Steps	Event, sequence, physics	Biology - Ocean ecology	Goal 14. Life Below Water
		Hail Alert	Event, sequence, coordinate, physics	Climatology - How hail is formed	Goal 17. Partnerships for the Goals
		Save the Submarine	Event, variable, sequence, coordinate	Chemistry - Changes in the properties of water according to heat	Goal 8. Decent Work and Economic Growth
		Snow and Slide	Sequence, event, variable, frame	Climatology - How an avalanche occurs	Goal 9. Industry, Innovation and Infrastructure
		Stormy Night	Event, variable, sequence	Climatology - How lightning is created	Goal 17. Partnerships for the Goals
		Tornado Rush	Event, variable, sequence	Engineering - Conductors and nonconductors	Goal 17. Partnerships for the Goals
		Toy Escape	Event, variable, physics	Climatology - How a tornado is formed	Goal 13. Climate Action
		The Sinkhole	Event, coordinate, sequence	Biology - Polar ecosystem	Goal 8. Decent Work and Economic Growth
		The Sinkhole - Deeper	Event, array, coordinate	Geology - How sinkholes are formed	Goal 8. Decent Work and Economic Growth
		Over the Earth	Event, sequence, physics, variable	Geology - How sinkholes are formed	Goal 9. Industry, Innovation and Infrastructure
		Speed Express	Event, sequence, physics, variable	Engineering - The principles and roles of a cooling system	Goal 9. Industry, Innovation and Infrastructure
			Sequence, event, speed, variable, if conditions	Math - Arithmetics Physics - Momentum and velocity	Goal 9. Industry, Innovation and Infrastructure
Advanced	1B-AP-09 1B--AP-10 1B-AP-11	Cast Away	if ~ else conditions, variable	Chemistry - The movement of the air depending on the temperature	Goal 9. Industry, Innovation and Infrastructure
		Termite Kingdom	Event, sequence, physics	Biology - Termite ecology	Goal 15. Life on Land
		Termite Kingdom - Mightier	Event, if conditions, sequence	Biology - Termite ecology	Goal 15. Life on Land
		Fungus Jump!	comparison operator, event, if conditional statement, variable	Biology - Fungal ecology	Goal 15. Life on Land
		Plasma Meltdown	Variable, duplicate, coordinate, event	Physics - Plasma and magnetic fields	Goal 17. Partnerships for the Goals
		Plasma Meltdown - Stronger	Loop statements	Physics - Plasma and magnetic fields	Goal 17. Partnerships for the Goals

JavaScript

ACG's 2 JavaScript Courses consist of 12 different Missions that teach students advanced concepts such as "functions" and "arrays".

With the help of ACG's auto-fill feature, students who may be new to text coding can easily select the desired command to input.



Course 4: JavaScript Advanced



Target Age 10 ~ 13

Learning Time - 360 min.

8 Missions

Mission 1 Bobo's Secret



A gorilla kidnapped
a child?!

Event, Sequence

Astronomy

Industry,
Innovation and
Infrastructure

Mission 3 Sandy Crash



A sandstorm is
sweeping over the city!

Event, Coordinate,
Random number

Climatology

Climate Action

Mission 2 Under the Wave



What has happened
to the coral reef?

Coordinate

Biology

Life Below Water

Mission 4 Paleozoic Dash



An island ruled by
insects?

Event, coordinate, if
Statmenet, variable

Biology

Life on Land

Mission 5

Mission: Disarm the Sonic Wave



What is the machine that is tormenting the whale?

Variable, if /else Statement, vent

Astronomy

Industry, Innovation and Infrastructure

Mission 7

Action! Poison Mountain



So many withered leaves... What happened on this mountain?

if Statement, variable, Operator, Event

Chemistry

Responsible consumption and production

Mission 6

Jumping Satellite



Team Astro faces an unprecedented crisis trying to make repairs!

Variable, if/ else Statement, Operator

Technology

Climate Action

Mission 8

Action! Poison Mountain - Blast



A giant explosion is imminent! Astro has a powerful secret weapon.

Global variable, if Statement, Operator

Chemistry

Responsible consumption and production

Course 5: JavaScript Mastery



Target Age 10 ~ 13

Learning Time - 180 min.

4 Missions

Mission 1

Island of Peril



Clean the ocean before
the turtles swallow the
trash in the sea.

Function

Biology

Life Below Water

Mission 3

Dr. Serene's
Newly Engineered Plants

Dr. Serene has created
a new flower. What's
the name?

Variable, Array,
Random number

Technology

Industry,
Innovation and
Infrastructure

Mission 2

OT2's Healthy Advice



OT2 presents today's
health advice.

Variable, Array,
Random number

Technology

Industry,
Innovation and
Infrastructure

Mission 4

Storm of Fire



The world is engulfed
in flames. Keep
everyone safe!

Function, Clone, if
Statement,
Variable, Operator

Geology

Partnerships for
the Goals

JavaScript Overview

Course	CSTA	Mission	IT	STEM	SDG
Advanced	1B- AP- 11 2-AP-11	Bobo's Secret	Event, coordinate, sequence	Biology - Habits of the mountain gorilla	Goal 15. Life on Land
		Under the Wave	Event, coordinate, sequence	Biology - Coral Reef ecology	Goal 14. Life Below Water
		Sandy Crash	Event, coordinate, random number	Climatology - How sandstorms are formed Engineering - Solving problems through a scientific approach	Goal 13. Climate Action
		Paleozoic Dash	Event, coordinate, random number, if conditional statement, variable	Biology - Paleozoic climate	Goal 15. Life on Land
		Mission : Disarm the Sonic Wave	Variable, if ~ else conditional statement, event	Biology - Animals using ultrasound	Goal 14. Life Below Water
		Jumping Satellite	Variable, if ~ else conditional statement, arithmetic operator, event	Technology - Role of satellites	Goal 13. Climate Action
		Action! Poison Mountain	Conditional statement, variable, arithmetic operator, event	Chemistry - Flame reactions to metal elements	Goal 12. Responsible consumption and production
		Action! Poison Mountain - Blast	Global variable, conditional statement, arithmetic operator, event	Chemistry - Flame reactions to metal elements	Goal 12. Responsible consumption and production
Mastery	1B-AP-12 2-AP-12 3-AP-14	Island of Peril	Function	Biology - Impact of marine pollution on the ecosystem	Goal 14. Life Below Water
		OT2's Healthy Advice	Variable, array, random number	Technology - Artificial intelligence	Goal 9. Industry, Innovation and Infrastructure
		Dr. Serene's Newly Engineered Plants	Variable, array, random number	Technology - Plant engineering	Goal 9. Industry, Innovation and Infrastructure
		Storm of Fire	Function, cloning, if conditional statement, variable, operator	Geology - Volcanic activity	Goal 17. Partnerships for the Goals

