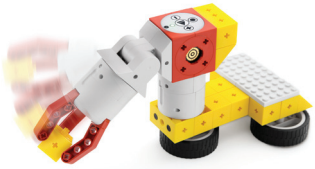
TINKER BOTS

WORKSHOP #1 "GRABBING"(without smartphone or tablet)
INTERACTIVE ROBOTIC WORKSHOP FOR CREATIVE KIDS



WHO, HOW, WHAT?

Participants: Kids aged 6 to 10 years old (1st to 4th grade)
Duration: 30 minutes
Number of participants: Max. 12 kids (kids will work in pairs)
Supervisor: 1 workshop leader, 2 assistants

Workshop material provided by Tinkerbots: 6 Sensoric Mega Sets, 6 baseplans for Grabberbase model, 1 Tinkerbots sample, box with LEGO building bricks, name tags and certificates for participants
Requirements for the location: Room with tables and chairs, power outlets for charging the Powerbrains, list of participants with names and ages
Level of difficulty: Easy to medium
Price of workshop: Upon request

EDUCATIONAL OBJECTIVES

Mechanical connections
- Functioning of each motion module: Turning (Twister), Bending (Pivot), Grabbing (Grabber)
- Action and reaction of different motion modules combined

Introdcution to coding
- 'Play & Record' mode: Teaching the robots manually by recoding a sequence of movements

Playfully constructing robots
- Building the models following a manual and free building (optional)

Social interactions
- Collaboration and problem solving within the team



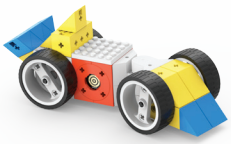
ACTIVITIES OF THE WORKSHOP

Introduction
- Introduction of the leader and assistants, name tags for all participants
- Introduction to robots and programming
- Instruction on how to put together the different modules
- Presentation of motion modules and Powerbrain, functioning of each module

Building the Grabberbase • Building the "Small Grabberbase' model following the manual and workshop leader's instruction
Teaching #1 • Teaching the Grabber how pick up an object and put it back down
Teaching #2 • Teaching the Grabber how to pick up a brick and throw it away
Free building • Customizing the Grabberbase model with LEGO and Cubie bricks
Presentation • Each teams presents its robots and shows the movements it has taught the robot, every participant receives a certificate as robot constructor
End • Summary, Giving-out of certificates and goodbyes

TINKER BOTS

WORKSHOP #2 "DRIVING & STEERING" (with smartphone or tablet)
INTERACTIVE ROBOTIC WORKSHOP FOR CREATIVE KIDS



WHO, HOW, WHAT?

Participants: Kids aged 6 to 10 years old (1st to 4th grade)
Duration: 30 minutes
Number of participants: Max. 12 kids (kids will work in pairs)
Supervisor: 1 workshop leader, 2 assistants

Workshop material provided by Tinkerbots: 6 Advanced Builder Sets, 1 Tinkerbots sample, box with LEGO building bricks, 6 smartphones or tablets, tape for creating a racing track, name tags and certificates for participants
Requirements for the location: Room with tables and chairs, power outlets for charging the Powerbrains, space to race the cars on the floor, list of participants with names and ages
Level of difficulty: Easy to medium
Price of workshop: Upon request

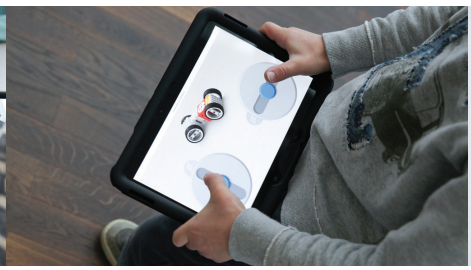
EDUCATIONAL OBJECTIVES

Mechanical connections
- Functioning of each motion module: Accelerating (Motor), Bending and steering (Pivot)
- Action and reaction of different motion modules combined

Introdcution to coding
- 'Play & Record' mode: Teaching the robots manually by recoding a sequence of movements

Playfully constructing robots
- Building the models following a manual and free building (optional)

Social interactions
- Collaboration and problem solving within the team

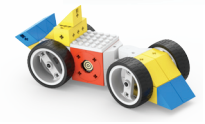

ACTIVITIES OF THE WORKSHOP

Introduction
- Introduction of the leader and assistants, name tags for all participants
- Introduction to robots and programming
- Instruction on how to put together the different modules
- Presentation of motion modules and Powerbrain, functioning of each module

Building the Racer • Building the "Racer' model following the manual and workshop leader's instruction
Teaching #1 • Teaching the Racer how to drive in the form of an 8 (two loops)
Steering via app • Remotely controlling the Racer through our App, using the Gyro-steering, driving in the form of an 8
Free building • Customizing the Racer model with LEGO and Cubie bricks
Presentation and Race • Each teams presents its robots and races through the track (stopping the time), every participant receives a certificate as robot constructor
End • Summary, Giving-out of certificates and goodbyes

TINKER BOTS

WORKSHOP #3 "GRABBING & DRIVING" (without smartphone or tablet)
INTERACTIVE ROBOTIC WORKSHOP FOR CREATIVE KIDS



WHO, HOW, WHAT?

Participants: Kids aged 6 to 10 years old (1st to 4th grade)
Duration: 60 minutes
Number of participants: Max. 12 kids (kids will work in pairs)
Supervisor: 1 workshop leader, 2 assistants

Workshop material provided by Tinkerbots: 6 Sensoric Mega Sets, 6 baseplans for Grabberbase model, 1 Tinkerbots sample, box with LEGO building bricks, name tags and certificates for participants
Requirements for the location: Room with tables and chairs, power outlets for charging the Powerbrains, list of participants with names and ages
Level of difficulty: medium
Price of workshop: Upon request

EDUCATIONAL OBJECTIVES

Mechanical connections
• Functioning of each motion module: Turning (Twister), Bending (Pivot), Grabbing (Grabber), Accelerating (Motor)
• Action and reaction of different motion modules combined
Introdcution to coding
• 'Play & Record' mode: Teaching the robots manually by recoding a sequence of movements
Playfully constructing robots
• Building the models following a manual and free building (optional)
Social interactions
• Collaboration and problem solving within the team

ACTIVITIES OF THE WORKSHOP

Introduction
• Introduction of the leader and assistants, name tags for all participants
• Introduction to robots and programming
• Instruction on how to put together the different modules
• Presentation of motion modules and Powerbrain, functioning of each module
Building the Grabberbase • Building the "Small Grabberbase' model following the manual and workshop leader's instruction
Teaching #1 • Teaching the Grabber how pick up an object and put it back down
Building the Racer • Take apart the Grabberbase and build the Racer model following the manual
Teaching #2 • Teaching the Racer how to drive in the form of an 8 (two loops)
Free building and combining the Grabber and Racer • Customizing the models with LEGO and Cubie bricks, free combination of the two models (How can the Racer and Grabber be connected?)
Presentation • Each team presents its robot and explains its functions, every participant receives a certificate as robot constructor
End • Summary, Giving-out of certificates and goodbyes

WORKSHOP #4 "CREATIVITY WITH SENSORS"
(with smartphone or tablet)
INTERACTIVE ROBOTIC WORKSHOP FOR CREATIVE KIDS

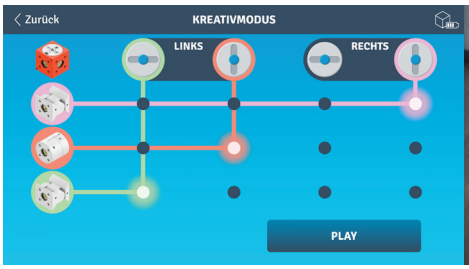
WHO, HOW, WHAT?

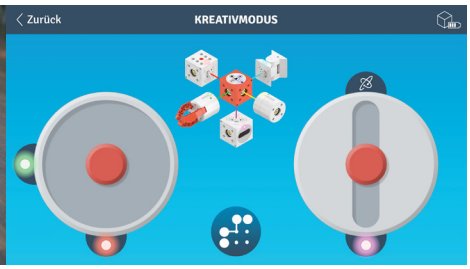
Participants: Kids aged 8 to 10 years old (3rd to 4th grade)
Duration: 60 minutes
Number of participants: Max. 12 kids (kids will work in pairs)
Supervisor: 1 workshop leader, 2 assistants

Workshop material provided by Tinkerbots: 6 Sensoric Mega Sets, 1 Tinkerbots sample, box with LEGO building bricks, name tags and certificates for participants, cards with missions
Requirements for the location: Room with tables and chairs, power outlets for charging the Powerbrains, list of participants with names and ages
Level of difficulty: Medium to hard
Price of workshop: Upon request

EDUCATIONAL OBJECTIVES

Mechanical connections
• Functioning of each motion module: Turning (Twister), Bending (Pivot), Grabbing (Grabber), Accelerating (Motor), Controlling (IR Sensor)
• Action and reaction of different motion modules combined
Coding
• Combining the modules per App, Understanding of programming, Controlling via sensors
Playfully constructing robots
• Building the models following a manual and free building (optional)
Social interactions
• Collaboration and problem solving within the team



ACTIVITIES OF THE WORKSHOP

Introduction
• Introduction of the leader and assistants, name tags for all participants
• Introduction to robots and programming
• Instruction on how to put together the different modules
• Presentation of motion modules and Powerbrain, functioning of each module
• Presentation of the model (Teaching) and explication of the app
Free building of a model, introduction of the 'mission
• With the help of the workshop leader and assistants: What do I want my robot to be able to do, how shall it move, how do I want to control it? In what kind of environment can the robot be?
(missioncards: Moon landscape, Farm, Construction site)
Controlling via Appn
• Combining different motion modules in the creative mode, steering and switching modules, steering through the IR sensor (optional re-building the model, customizing it with LEGO bricks)
Presentation • Each teams presents its robot and explains its functions, every participant receives a certificate as robot constructor
End • Summary, Giving-out of certificates and goodbyes